



NRL/FR/6364--11-10,212

Prioritization of the Oral (Ingestive) Hazard of Industrial Chemicals

THOMAS E. SUTTO

*Materials and Sensors Branch
Materials Science and Technology Division*

October 28, 2011

Approved for public release; distribution is unlimited.

REPORT DOCUMENTATION PAGE

Form Approved
OMB No. 0704-0188

Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing this collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports (0704-0188), 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number. **PLEASE DO NOT RETURN YOUR FORM TO THE ABOVE ADDRESS.**

1. REPORT DATE (DD-MM-YYYY) 28-10-2011		2. REPORT TYPE Formal Report		3. DATES COVERED (From - To)	
4. TITLE AND SUBTITLE Prioritization of the Oral (Ingestive) Hazard of Industrial Chemicals				5a. CONTRACT NUMBER	
				5b. GRANT NUMBER	
				5c. PROGRAM ELEMENT NUMBER	
6. AUTHOR(S) Thomas E. Sutto				5d. PROJECT NUMBER	
				5e. TASK NUMBER	
				5f. WORK UNIT NUMBER	
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) Naval Research Laboratory Materials Science and Technology Divison, Code 6364 4555 Overlook Avenue, SW Washington, DC 20375-5320				8. PERFORMING ORGANIZATION REPORT NUMBER NRL/FR/6364--11-10,212	
9. SPONSORING / MONITORING AGENCY NAME(S) AND ADDRESS(ES) Joint Project Manager for Protection Joint Project Manager – Protection 50 Tech Parkway, Suite 301 Stafford, VA 22556				10. SPONSOR / MONITOR'S ACRONYM(S) JPM-P	
				11. SPONSOR / MONITOR'S REPORT NUMBER(S)	
12. DISTRIBUTION / AVAILABILITY STATEMENT Approved for public release; distribution is unlimited.					
13. SUPPLEMENTARY NOTES					
14. ABSTRACT This report has been prepared for the Joint Project Manager for Protection (JPM-P) to document the prioritization of the potential oral (ingestive) hazard of industrial chemicals.					
15. SUBJECT TERMS Toxic industrial chemicals Oral Poisons Prioritization Ingestive					
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT	18. NUMBER OF PAGES	19a. NAME OF RESPONSIBLE PERSON
a. REPORT	b. ABSTRACT	c. THIS PAGE			Thomas E. Sutto
Unclassified	Unclassified	Unclassified	UU	80	19b. TELEPHONE NUMBER (include area code) 202-404-2097

This page intentionally left blank

CONTENTS

ACRONYMS AND ABBREVIATIONS	v
EXECUTIVE SUMMARY	E-1
1 INTRODUCTION	1
2 THE NRL ICA PRIORITIZATION PROCESS.....	2
2.1 Development of the Database.....	3
2.1.1 Toxic (Operational) Hazard Score.....	3
2.1.2 Relative Probability Score.....	5
2.2 Generation of the Critical Oral Toxic Hazard List	6
2.3 Class-based Analysis of the Critical Oral Toxic Hazard List.....	8
2.3.1 NRL Class-based Approach	8
2.4 Downselection to the High Priority Oral Toxic Hazard List.....	9
3 CONCLUSIONS	10
APPENDIX — NRL ICA Oral (Ingestive) Hazard Database and Prioritization Results	on CD

FIGURES

Fig. 1 — Flow chart of the NRL ICA prioritization process	2
---	---

TABLES

Table 1 — Oral Toxicity Scoring	3
Table 2 — Reactivity Scoring.....	4
Table 3 — Physical State Scoring.....	4
Table 4 — Global Production Scoring.....	5
Table 5 — Global Distribution Scoring	6
Table 6 — Critical Oral (Ingestive) Hazard List	7
Table 7 — High Priority Oral (Ingestive) Hazard List	10

ACRONYMS AND ABBREVIATIONS

C	Degrees Centigrade
CAMEO	Computer-Aided Management of Emergency Operations (EPA and NOAA computer program available online)
CAS	Chemical Abstracts Service
CFR	Code of Federal Regulations
CHPPM	(U.S. Army) Center for Health Promotion and Preventative Medicine
DHS	Department of Homeland Security
DWCP	Directory of World Chemical Producers
EPA	Environmental Protection Agency
F	Degrees Fahrenheit
ICA	Industrial Chemical Assessment
ITF	International Task Force
JPEO-CBD	Joint Program Executive Office for Chemical and Biological Defense Programs
JPM-IP	Joint Project Manager for Individual Protection
JPM-P	Joint Project Manager for Protection (New identity of JPM-IP)
L	Liters
LD	Lethal Dose
NFPA	National Fire Protection Association
NOAA	National Oceanic and Atmospheric Administration
NRL	Naval Research Laboratory
R&D	Research and Development
RTECS	Registry of Toxic Effects of Chemical Substances
T&E	Test and Evaluation
TIC	Toxic Industrial Chemical

EXECUTIVE SUMMARY

This report has been prepared for the Joint Project Manager for Protection (JPM-P) of the Joint Program Executive Office for Chemical and Biological Defense Programs (JPEO-CBD) to document the risk management strategy adopted to prioritize and assess the potential oral (ingestive) hazard of industrial chemicals to the warfighter.

The Naval Research Laboratory (NRL) developed this prioritization using the scoring algorithm they derived and tested and the Industrial Chemical Assessment (ICA) database they created in 2008 (published in 2010). For the present study, NRL assessed 373 of the chemicals in the original NRL ICA database — those for which oral toxicity data is available — and also expanded this primary list of chemicals to include those in the Department of Homeland Security’s “Chemicals of Interest” list (6 CFR 27, Appendix to Part 27). This added 221 more chemicals to the original list of 373. However, oral toxicity data could be found for only 95 of the additional chemicals, bringing the total number of chemicals in the Oral Toxicity portion of the updated database to 468. The database containing the chemical and scoring data used to assess the oral hazard is detailed in this report’s Appendix.

Table E1 shows, in alphabetical order, the 12 high priority oral (ingestive) hazard chemicals. It is important to note that this is not a threat list. These chemicals have been selected, through the prioritization process, as representative chemicals for research, development, test, and evaluation since it not possible to test against all of the thousands of potentially hazardous industrial chemicals. Crucial to this prioritization is NRL’s development and implementation of a class-based analysis to ensure that the threat of industrial chemicals is comprehensively assessed.

This study focuses on the oral military hazard of industrial chemicals. This effort also lays out a common approach for assessment of other hazards such as inhalation and ocular, percutaneous, explosive, and radiological military hazards, which will be documented in follow-on reports.

Table E1 — High Priority Oral (Ingestive) Hazard Chemicals

High Priority Oral Hazard Chemicals		
#	Chemical	CAS Number
1	Arsenic Trioxide (Arsenic compound)	1327-53-3
2	Chlorpyrifos (organophosphorus ins.)	2921-88-2
3	Endosulfan (organochloride/sulfite ester pesticide.)	115-29-7
4	Fenpropathrin (carboxylate pesticide)	39515-41-8
5	Iodine (Oxidizer)	7553-56-2
6	Mercuric chloride (Mercury compound)	7487-94-7
7	Methomyl (Carbamate pesticide)	16752-77-5
8	Pentachlorophenol (Oxidizer)	87-86-5
9	Phosphorus (Reducer)	7723-14-0
10	Sodium cyanide (Cyanide compound)	143-33-9
11	Sodium hydroxide (Reducer)	1310-73-2
12	Thallium sulfate (Thallium compound)	7446-18-6

PRIORITIZATION OF THE ORAL (INGESTIVE) HAZARD OF INDUSTRIAL CHEMICALS

1 INTRODUCTION

This report has been prepared for the Joint Project Manager for Protection (JPM-P)¹ of the Joint Program Executive Office for Chemical and Biological Defense Programs (JPEO-CBD) to document the risk management strategy adopted to prioritize and assess the potential oral (ingestive) hazard of industrial chemicals to the warfighter.

In 2008, the Naval Research Laboratory (NRL) was contracted by JPM-IP to analyze existing toxic industrial chemical (TIC) assessments, such as the International Task Force (ITF)-40 report,² and if necessary, co-develop an alternative approach to provide a comprehensive list of TICs that takes into account flammability, reactivity, and the different classes of chemicals in the world. The purpose was to develop a scientifically based prioritization of chemicals that selects a representative list of industrial chemicals for research and development (R&D) and test and evaluation (T&E) for chemical/biological defense systems.

NRL, in coordination with JPM-IP, compiled a database of 430 principal industrial chemicals and developed a scoring algorithm that allows for a documented, repeatable, systematic prioritization of these chemicals. This database and prioritization are called the NRL Industrial Chemical Assessment (NRL ICA).³ As part of this prioritization, a class-based analysis was used as a key risk mitigation strategy. The class-based analysis, defined by strict chemical terms relating to the formation or breaking of a chemical bond, was used to group like chemicals into representative classes, mitigating the risk of encountering chemicals in the operational environment that have not been assessed.

For the present study of oral hazards, 373 chemicals in the primary NRL ICA database were assessed, based on the availability of oral toxicity data. In addition, the database was expanded to include the Department of Homeland Security's "Chemicals of Interest" list.⁴ Oral toxicity data could be found for only 95 of the 221 additional chemicals, bringing the total number of chemicals in the Oral Toxicity portion of the updated database to 468 chemicals. This report documents the prioritization process using the updated list of chemicals. The chemical and scoring data are detailed in the Appendix.

¹ Formerly known as the Joint Project Manager for Individual Protection, JPM-IP.

² "Industrial Chemical Prioritization and Determination of Critical Hazards of Concern, Technical Annex and Supporting Documents for International Task Force (ITF)-40, Industrial Chemical Hazards: Medical and Operational Concerns," U.S. Army Center for Health Promotion and Preventive Medicine (USACHPPM) Report 47-EM-6154-03, November 2003, Aberdeen Proving Ground, MD (FOUO).

³ T.E. Sutto, "Toxic Industrial Chemicals: Global Assessment and Scientific Analysis," NRL/FR/6364--09-10,182, Naval Research Laboratory, Washington, DC, Feb. 2010.

⁴ 6 CFR Part 27, Chemical Facility Antiterrorism Standards, Appendix A to Part 27, DHS Chemicals of Interest. Published in the Federal Register Vol. 72, No. 223, Nov. 20, 2007, Part II, Department of Homeland Security.

This study focusing on the oral military hazard of industrial chemicals also lays out a common approach for assessing other hazards such as inhalation and ocular, percutaneous, explosive, and radiological military hazards. These will be documented in follow-on reports.

2 THE NRL ICA PRIORITIZATION PROCESS

The prioritization methodology developed in 2008 by NRL and JMP-IP includes criteria to account not only for toxicity but also for the environmental behavior of industrial chemicals. Previous efforts to assess the threat of industrial chemicals, such as the ITF-40 and its predecessor, the ITF-25, did not adequately discriminate between toxic threats and explosive/unstable hazards, so do not adequately describe industrial chemicals for the purposes of chemical/biological defense programs.

The NRL/JPM-IP prioritization approach consists of the following steps:

- Step 1: Development of the NRL ICA database
- Step 2: Generation of a Critical Hazard List
- Step 3: Class-based analysis of prioritization results
- Step 4: Downselection to a High Priority Hazard List

These steps are discussed in detail in the sections that follow. Figure 1 illustrates the overall process.

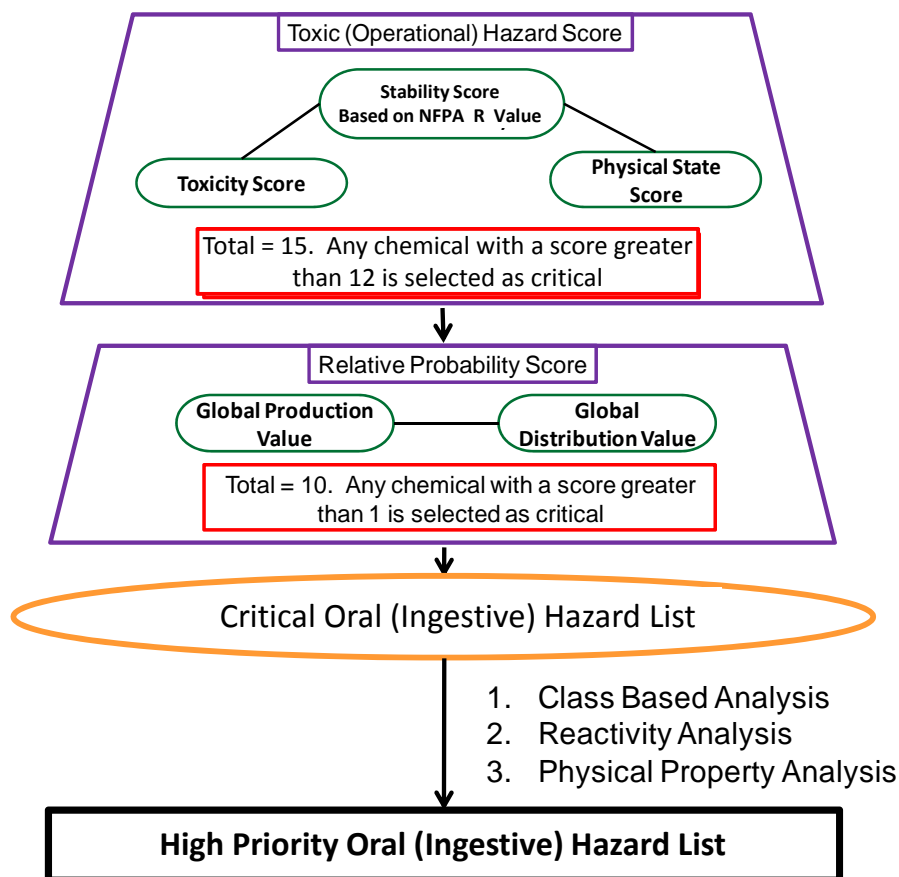


Fig. 1 — Flow chart of the NRL ICA prioritization process

2.1 Development of the Database

Because an analysis of the ITF-40 database revealed missing or incorrect data, the NRL ICA developed a new, comprehensive database, which for the oral hazard assessment contains 468 chemicals. Included in the NRL-ICA database are the raw data required to perform the prioritization (see the Appendix). The primary chemical data sources are the U.S. Environmental Protection Agency (EPA)/National Oceanic and Atmospheric Administration (NOAA) Computer-Aided Management of Emergency Operations (CAMEO) program, version 1.2.2, and the Registry of Toxic Effects of Chemical Substances (RTECS) database (2009). When necessary, this data is augmented by the 2007 Merck Index and peer-reviewed scientific literature. Chemicals are scored/prioritized according to their toxicity, stability, physical state, and production and distribution characteristics.

2.1.1 Toxic (Operational) Hazard Score

Each chemical is given a score from 0 to 5 as a means of ranking its toxicity, stability, and physical state. These scores are then combined to generate the Toxic (Operational) Hazard Score, which ranges from 0 to 15.

2.1.1.1 Toxicity Score

The oral toxicity of each chemical is based on oral Lethal Dose (LD) 50 data in mg/kg from the RTECS database. Because much of the data available is for rats, this is selected as the primary animal data source. When rat data is not available, the selection protocol is the following: rabbit, then mouse, then guinea pig. These oral toxicity values are plotted on a logarithmic scale and scores are assigned ranging from 0 to 5, where 5 is the most toxic. Table 1 shows the scoring criteria.

Table 1 — Oral Toxicity Scoring

Toxicity Range (in mg/kg)	Toxicity Score
Oral Toxicity \leq 10	5
10 < Oral Toxicity \leq 100	4
100 < Oral Toxicity \leq 1000	3
1000 < Oral Toxicity \leq 10,000	2
10,000 < Oral Toxicity \leq 100,000	1
100,000 < Oral Toxicity	0

2.1.1.2 Stability Score

Chemical stability scoring is used to assess reactivity of a chemical. Highly reactive chemicals receive a low score. The basis for this scoring is that chemicals with a high reactivity with air and water pose less of a toxic hazard. Previous work also incorporated a flammability factor in the stability score; however, since oral hazards primarily are focused on chemicals being placed in dilute quantities in water, soil, or food, flammability is not considered a critical factor for this prioritization. Reactivity in this case

means that an industrial chemical may react with either the atmosphere or the water present in the atmosphere, and either decompose or form another hazard — as in the case of titanium tetrachloride, which explodes on contact with water, generating an inhalation/oral/percutaneous hazard of hydrogen chloride.

The chemical stability score is calculated using the National Fire Protection Association (NFPA) reactivity (R) value. The NFPA values of reactivity increase as the reactivity of a chemical increases; therefore, in this prioritization process, reactivity values are placed on an inverted scale to agree with the assessment that increased reactivity should decrease the toxic operational score of a chemical. Because toxicity is assessed on a 5-point scale, the NFPA values are also placed on a 5-point scale. This scoring protocol is shown in Table 2.

Table 2 — Reactivity Scoring

NFPA Reactivity Value	Reactivity Score $\rightarrow (4-R) \times 1.25$
0	5
1	3.75
2	2.50
3	1.25
4	0

2.1.1.3 Physical State Score

The parameter of physical state is used to assess the ability to disperse a chemical to create an oral hazard. For this scoring, the physical state of a chemical is determined at ambient conditions (1 atm and 70 °F or 21 °C). Because oral hazards are focused on chemicals that can be placed in food or water, physical state rankings are the opposite of those for inhalation hazard assessments — for example, a solid is considered a greater potential oral hazard than a gas is, as shown in Table 3.

Table 3 — Physical State Scoring

Physical State	Physical State Score
Solid	5
Liquid	2.5
Gas	1

2.1.2 Relative Probability Score

One of the most problematic aspects of assessing the potential hazard of industrial chemicals in the operational environment lies in the great uncertainty surrounding the global chemical industry. Although there are several databases that allow an estimation of how much of a certain chemical is manufactured, these consist of only voluntarily submitted data with no follow-on inspections to verify the data. Since a detailed, thorough inspection of each chemical plant is not feasible, there remains a significant degree of uncertainty in determining the exact probability of encountering any one chemical. Therefore, a pseudo-probability function based on the production amount and distribution of a chemical is used to determine a total probability score. To represent global production amounts of a chemical, the total number of countries producing a chemical is used. To estimate the global distribution of a chemical, the total number of reported distribution sites for a chemical is used.

Here, data from the Directory of World Chemical Producers (DWCP) is used to determine both production and distribution scores. These two scores are then added to form the Relative Probability Score, which ranges from 0 to 10.

2.1.2.1 Global Production Score

The global production score is used to account for the bulk quantities of TICs being produced. The data regarding the number of countries involved in the production of a specific TIC is maintained in the DWCP and is used to assign a production score from 0 to 5, as shown in Table 4.

Table 4 — Global Production Scoring

Numbers of Producing Countries	Production Score
# of Countries ≥ 50	5
$40 \leq$ # of Countries < 50	4
$30 \leq$ # of Countries < 40	3
$20 \leq$ # of Countries < 30	2
# of Countries ≤ 20	1
# of Countries ≤ 10	0

2.1.2.2 Global Distribution Score

The global distribution score is based on the number of global production and distribution sites appearing in the DWCP. This approach ensures accountability for the higher availability of certain chemicals regardless of the quantity produced. The scoring criteria are shown in Table 5.

Table 5 — Global Distribution Scoring

Numbers of Sites Chemical is Available	Distribution Score
# of Sites ≥ 100	5
$50 < \# \text{ of Sites} < 100$	4
$10 < \# \text{ of Sites} \leq 50$	3
$5 < \# \text{ of Sites} \leq 10$	2
$0 < \# \text{ of Sites} \leq 5$	1
# of Sites = 0	0

2.1.2.3 Threat Score

A separate threat score is developed to account for actual incident data or other threat information for particular TICs. This score is placed in the probability section of the database but is not used to determine the Relative Probability Score, due to the subjective nature of this data.

2.2 Generation of the Critical Oral Toxic Hazard List

The next step in the prioritization approach is to use the previously described scores to generate a critical chemical list. Any chemical with a Toxic (Operational) Hazard Score greater than 12 and a Relative Probability Score greater than 1 is designated as critical. Table 6 shows the Critical Oral (Ingestive) Hazard Chemical List.

Table 6 — Critical Oral (Ingestive) Hazard List

Rank	Chemical	CAS Number	Toxic Hazard Score	Probability Section		Total Score
				Relative Probability Score	Threat Scores	
1	Sodium hydroxide	1310-73-2	12.75	10.00	0.50	23.25
2	Arsenic Trioxide	1327-53-3	14.00	4.00	5.00	23.00
3	Sodium cyanide	143-33-9	14.00	6.00	2.50	22.50
4	Methomyl	16752-77-5	13.00	3.00	5.00	21.00
5	Chlorpyrifos	2921-88-2	13.00	5.00	2.50	20.50
6	Potassium cyanide	151-50-8	14.00	4.00	2.50	20.50
7	Mercuric chloride	7487-94-7	15.00	3.00	2.50	20.50
8	Cobalt dichloride	7646-79-9	13.00	6.00	0.50	19.50
9	Iodine	7553-56-2	13.00	5.00	0.50	18.50
10	Sodium fluoride	7681-49-4	13.00	5.00	0.50	18.50
11	Endosulfan	115-29-7	13.00	4.00	0.50	17.50
12	Red mercuric oxide	21908-53-2	13.00	4.00	0.50	17.50
13	Dimethoate	60-51-5	13.00	4.00	0.50	17.50
14	Methyl parathion	298-00-0	14.00	3.00	0.50	17.50
15	Methamidophos	10265-92-6	14.00	3.00	0.50	17.50
16	Aldicarb	116-06-3	15.00	2.00	0.50	17.50
17	Methidathion	950-37-8	13.00	2.00	2.50	17.50
18	Phosphorus	7723-14-0	12.75	4.00	0.50	17.25
19	Camphor	76-22-2	13.00	4.00	0.00	17.00
20	Warfarin	81-81-2	14.00	3.00	0.00	17.00
21	Fenpropathrin	39515-41-8	13.00	3.00	0.50	16.50
22	Bifenthrin	82657-04-3	13.00	3.00	0.50	16.50
23	Azinphosmethyl	86-50-0	14.00	2.00	0.50	16.50
24	Phenamiphos	22224-92-6	14.00	2.00	0.50	16.50
25	2-chloroacetophenone	532-27-4	13.00	3.00	0.00	16.00
26	Dinitrobenzene	528-29-0; 99-65-	13.00	3.00	0.00	16.00
27	alpha-Chloroacetophenone	532-27-4	13.00	2.00	0.50	15.50
28	Thallium sulfate	7446-18-6	13.00	2.00	0.00	15.00
29	Pentachlorophenol	87-86-5	13.00	2.00	0.00	15.00

2.3 Class-based Analysis of the Critical Oral Toxic Hazard List

The next step in the prioritization process is to further downselect from the critical list of chemicals to a final, high priority hazard chemical list. For the prioritization of inhalation/ocular hazards, a class-based analysis based on chemical reactivity was used. However, for oral hazards, chemicals are instead grouped according to specific types of oral hazard species, as explained below.

2.3.1 NRL Class-based Approach

To mitigate the uncertainty in the probability section of the database, a class-based analysis is used to group the chemicals in the critical list. Part of the downselection process is to then select the highest scoring chemical within each class. The purpose is to ensure that representatives of all of the main chemical classes are selected for the high priority list; although a chemical may score low due to a low Toxic (Operational) Hazard Score or low Probability Score, it will still be represented in the final list. This class-based analysis is crucial to ensure that the risk management aspects of the prioritization approach select a high priority list of chemicals that can be used to represent the vast diversity of chemicals found in the global chemical industry.

The class-based analysis developed by NRL is based on fundamental oral hazard and chemical reactivity principles. The principal classes used to group chemicals according their oral hazard are described below.

- Poisonous cyanide-based compounds: These are compounds which when placed in food or water would generate poisonous cyanide. Examples of these types of compounds are sodium and potassium cyanide.
- Poisonous arsenic-based compounds: These are compounds that would result in arsenic contamination of food or water.
- Poisonous metal salts and mercury compounds: These are compounds such as mercuric chloride or cobalt chloride, which would result in food or water being contaminated with mercury or cobalt. It is important to note that pure mercury is not considered a high priority oral hazard due to the body's limited ability to convert it to a reactive mercury +1 or +2 compound.
- Organophosphorus types of pesticides: These are pesticides, such as parathion or malathion, that are similar in many ways to chemical warfare agents.
- Carbamate types of pesticides: These are pesticides that use a carbamate ester as their principal toxicity group.
- Carboxylic acid/ester-based pesticides: These are compounds that use a carboxylic acid or ketone as their principal toxicity group.
- Organohalide-based pesticides: These are compounds that are primarily organic compounds, such as lindane, which is 1,2,3,4,5,6-hexachlorocyclohexane.
- High scoring poisonous elements.

- **Poisonous oxidizing or reducing compounds:** These are compounds that can drastically alter the pH of water or food. Examples are phenolic compounds, which lower the pH, and sodium hydroxide, which raises the pH.

It should be noted that for the purposes of test and evaluation, other class-based approaches are possible.

2.4 Downselection to the High Priority Oral Toxic Hazard List

Based on the above considerations of the different groups of oral hazards, a final high priority hazard list is generated as explained below.

1. Sodium cyanide is selected as the representative cyanide compound.
2. Arsenic trioxide is selected as the poisonous arsenic compound.
3. Mercuric chloride is selected as the representative of the poisonous metal and/or mercury salts.
4. Thallium sulfate is selected as one of the more poisonous metal salts/elements.
5. Chlorpyrifos is selected as the highest scoring of the organophosphorus-based pesticides.
6. Methomyl is selected as the highest scoring representative of the carbamate-based pesticides.
7. Warfarin is selected as the representative of the carboxylic acid/ester-based pesticides.
8. Endosulfan is selected as the representative of the organohalide pesticides.
9. Phosphorus is selected as one of the more poisonous elements.
10. Iodine is selected as one of the higher scoring oxidizers and poisonous elements.
11. Sodium hydroxide is selected as one of the higher scoring poisonous reducing compounds.
12. Pentachlorophenol is selected as one of the higher scoring poisonous oxidizing compounds.

The 12 principal oral hazard chemicals are listed in Table 7. Note that scoring within this high priority list is not of primary importance, and the chemicals are simply listed in alphabetical order. Currently, there are no operational hazard assessments planned for these chemicals.

Table 7 — High Priority Oral (Ingestive) Hazard List

High Priority Oral Hazard Chemicals		
#	Chemical	CAS Number
1	Arsenic Trioxide (Arsenic compound)	1327-53-3
2	Chlorpyrifos (organophosphorus ins.)	2921-88-2
3	Endosulfan (organochloride/sulfite ester pesticide.)	115-29-7
4	Fenpropathrin (carboxylate pesticide)	39515-41-8
5	Iodine (Oxidizer)	7553-56-2
6	Mercuric chloride (Mercury compound)	7487-94-7
7	Methomyl (Carbamate pesticide)	16752-77-5
8	Pentachlorophenol (Oxidizer)	87-86-5
9	Phosphorus (Reducer)	7723-14-0
10	Sodium cyanide (Cyanide compound)	143-33-9
11	Sodium hydroxide (Reducer)	1310-73-2
12	Thallium sulfate (Thallium compound)	7446-18-6

3 CONCLUSIONS

This report details the steps taken by NRL for JPM-P to develop a comprehensive, scientific prioritization of industrial chemicals that may pose oral hazards. The main goal of this effort was to develop a high priority list of chemicals that comprehensively allows R&D and T&E to develop and test technologies for defensive purposes against industrial chemicals while significantly reducing the cost and burden of such activities.

NAVAL RESEARCH LABORATORY

NRL/FR/6364—11-10,212

**PRIORITIZATION OF THE ORAL (INGESTIVE) HAZARD
OF INDUSTRIAL CHEMICALS**

Thomas E. Sutto
Materials Science and Technology Division

APPENDIX

(distributed on CD-ROM only)

Oral (Ingestive) Hazard Database and Prioritization Results

Oral Toxicity LD 50 Values	A-1
Oral Toxicity Database	A-30
Critical Oral Hazard Chemicals	A-60
High Priority Oral Hazard Chemicals.....	A-61

Chemical		CAS Number	Oral Toxicity (LD 50) Report Species/units
1	Chlorine	7782-50-5	<i>TDLo - Lowest published toxic dose Oral Human 2.9 mg/kg Skin and Appendages - primary irritation (after topical exposure) VCVN5* "Vrednie chemicheskije veshstva. Neorganicheskie soedinienia elementov V-VII groopp" (Hazardous substances. Inorganic substances containing V-VII group elements), Bandman A.L. et al., Chimia, 1989. Volume(issue)/page/year: -,374,1989</i>
2	Ammonia TDLo	7664-41-7	<i>TDLo - Lowest published toxic dose Oral Human - man 15 uL/kg Gastrointestinal - changes in structure or function of esophagus AJEMEN American Journal of Emergency Medicine. (WB Saunders, Philadelphia, PA) V.1-1983. Volume(issue)/page/year: 3,320,1985</i>
3	Calcium chloride	10043-52-4	<i>LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 1 gm/kg Details of toxic effects not reported other than lethal dose value CNJMAQ Canadian Journal of Comparative Medicine and Veterinary Science. (Gardemvale, Quebec, Canada) V.4-32, 1940-68. For publisher information, see CJVRE9. Volume(issue)/page/year: 12,216,1948</i>
4	Sodium hydroxide #(E3)	1310-73-2	<i>LDLo - Lowest published lethal dose Oral Human 1.57 mg/kg Behavioral - anorexia (human) Nutritional and Gross Metabolic - body temperature increase Skin and Appendages - primary irritation (after topical exposure) VCVN1* "Vrednie chemicheskije veshstva. Neorganicheskie soedinienia elementov I-IV groopp" (Hazardous substances. Inorganic substances containing I-IV group elements), Filov V.A., Chimia, 1988. Volume(issue)/page/year: -,37,1998</i>
5	Arsenic Trioxide	1327-53-3	<i>LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 10 mg/kg Details of toxic effects not reported other than lethal dose value VCVN5* "Vrednie chemicheskije veshstva. Neorganicheskie soedinienia elementov V-VII groopp" (Hazardous substances. Inorganic substances containing V-VII group elements), Bandman A.L. et al., Chimia, 1989. Volume(issue)/page/year: -,88,1993 <i>LDLo - Lowest published lethal dose Oral Human - man 123 mg/kg Brain and Coverings - other degenerative changes Gastrointestinal - nausea or vomiting Liver - other changes JFSCAS Journal of Forensic Sciences, (American Soc. for Testing and Materials, 1916 Race St., Philadelphia, PA 19103) V.1-1956. Volume(issue)/page/year: 36,1163,1992</i></i>
6	Sodium cyanide #(T3)	143-33-9	<i>LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 4.7 mg/kg Behavioral - tetany Behavioral - ataxia Lungs, Thorax, or Respiration - respiratory obstruction VCVN1* "Vrednie chemicheskije veshstva. Neorganicheskie soedinienia elementov I-IV groopp" (Hazardous substances. Inorganic substances containing I-IV group elements), Filov V.A., Chimia, 1988. Volume(issue)/page/year: -,342,1988 <i>LDLo - Lowest published lethal dose Oral Human - woman 40 mg/kg Gastrointestinal - other changes FSINDR Forensic Science International. (Elsevier Scientific Pub. Ireland Ltd., POB 85, Limerick, Ireland) V.12-1978. Volume(issue)/page/year: 38,173,1988 LDLo - Lowest published lethal dose Oral Human 2800 ug/kg Details of toxic effects not reported other than lethal dose value NTIS** National Technical Information Service. (Springfield, VA 22161) Formerly U.S. Clearinghouse for Scientific & Technical Information. Volume(issue)/page/year: OTS0528336 LDLo - Lowest published lethal dose Oral Human - man 6557 ug/kg Behavioral - fluid intake Gastrointestinal - gastritis APTQ6 Acta Pharmacologica et Toxicologica. (Copenhagen, Denmark) V.1-59, 1945-86. For publisher information, see PHTOEH Volume(issue)/page/year: 1,18,1945 LDLo - Lowest published lethal dose Oral Human 2857 ug/kg Details of toxic effects not reported other than lethal dose value 34ZIAG "Toxicology of Drugs and Chemicals," Deichmann, W.B., New York, Academic Press, Inc., 1969 Volume(issue)/page/year: -,191,1969</i></i>
7	Ammonium Chloride	12125-02-9	<i>LDLo - Lowest published lethal dose Oral Human - infant 2 gm/kg Cardiac - other changes AJEMEN American Journal of Emergency Medicine. (WB Saunders, Philadelphia, PA) V.1-1983. Volume(issue)/page/year: 6,506,1988 LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 1650 mg/kg Details of toxic effects not reported other than lethal dose value 28ZPAK "Sbornik Vystledku Toxikologickeho Vysetreni Latek A Pripavku," Marhold, J.V., Institut Pro Vychovu Vedouicin Pracovniku Chemickeho Prumyclu Praha, Czechoslovakia, 1972 Volume(issue)/page/year: -,15,1972</i>
8	Copper sulfate #(T3)	7758-98-7	<i>LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 300 mg/kg Details of toxic effects not reported other than lethal dose value USXXAM United States Patent Document. (U.S. Patent Office, Box 9, Washington, DC 20231) Volume(issue)/page/year: #6770674 LDLo - Lowest published lethal dose Oral Human - woman 47320 uL/kg Gastrointestinal - hypermotility, diarrhea Liver - hepatitis (hepatocellular necrosis), diffuse Kidney/Ureter/Bladder - changes in tubules (including acute renal failure, acute tubular necrosis) NPRNAY Nephron. (S. Karger Pub., Inc., 79 Fifth Ave., New York, NY 10003) V.1-1964. Volume(issue)/page/year: 15,74,1975 LDLo - Lowest published lethal dose Oral Human - man 857 mg/kg Gastrointestinal - nausea or vomiting ATXKA8 Archiv fuer Toxikologie. (Berlin, Fed. Rep. Ger.) V.15-31, 1954-74. For publisher information, see ARTODN. Volume(issue)/page/year: 17,20,1958 LDLo - Lowest published lethal dose Oral Human 50 mg/kg Behavioral - somnolence (general depressed activity) Kidney/Ureter/Bladder - changes in tubules (including acute renal failure, acute tubular necrosis) Blood - hemorrhage JAMAAP JAMA, Journal of the American Medical Association. (AMA, 535 N. Dearborn St., Chicago, IL 60610) V.1-1883. Volume(issue)/page/year: 235,801,1976</i>
9	Methomyl	16752-77-5	<i>LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 76 mg/kg Details of toxic effects not reported other than lethal dose value SPEADM Special Publication of the Entomological Society of America, (4603 Calvert Rd., College Park, MD 20740) Volume(issue)/page/year: 78-1,11,1978 LD - Lethal dose Oral Human 12 mg/kg Brain and Coverings - other degenerative changes Peripheral Nerve and Sensation - flaccid paralysis without anesthesia (usually neuromuscular blockage) Biochemical - Enzyme inhibition, induction, or change in blood or tissue levels - true cholinesterase HBPOT* Handbook of pesticide toxicology. Robert Krieger ed. Academic press, 2001 Volume(issue)/page/year: 2,1097,2001</i>

Chemical		CAS Number	Oral Toxicity (LD 50) Report Species/units
10	Mercuric chloride #(T3 of Hg)	7487-94-7	<p>LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 1 mg/kg Details of toxic effects not reported other than lethal dose value PEMNDP Pesticide Manual. (The British Crop Protection Council, 20 Bridport Rd., Thornton Heath CR4 7QG, UK) V.1- 1968- Volume(issue)/page/year: 9,550,1991 LDLo - Lowest published lethal dose Oral Human - man 143 mg/kg Behavioral - excitement</p> <p>Kidney/Ureter/Bladder - changes in tubules (including acute renal failure, acute tubular necrosis)</p> <p>Blood - changes in leukocyte (WBC) count IGSBAL Igaku to Seibutsugaku. Medicine and Biology. (c/o Ogato Igaku Kagaku Kenkyusho, 2-3-5 Bakuro-cho, Nihonbashi, Chuo-ku, Tokyo 103, Japan) V.1- 1942- Volume(issue)/page/year: 2,48,1942</p> <p>LDLo - Lowest published lethal dose Oral Human - man 86 mg/kg Vascular - change in plasma or blood volume</p> <p>Gastrointestinal - ulceration or bleeding from stomach</p> <p>Gastrointestinal - necrotic changes JTCTDW Journal of Toxicology, Clinical Toxicology. (Marcel Dekker, 270 Madison Ave., New York, NY 10016) V.19- 1982- Volume(issue)/page/year: 26,189,1988</p> <p>LDLo - Lowest published lethal dose Oral Human 29 mg/kg Gastrointestinal - ulceration or bleeding from duodenum</p> <p>Gastrointestinal - ulceration or bleeding from large intestine</p> <p>Gastrointestinal - nausea or vomiting NEJMAG New England Journal of Medicine. (Massachusetts Medical Soc., 10 Shattuck St., Boston, MA 02115) V.198- 1928- Volume(issue)/page/year: 244,459,1951</p> <p>LDLo - Lowest published lethal dose Oral Human - man 14286 ug/kg Lungs, Thorax, or Respiration - dyspnea</p> <p>Gastrointestinal - nausea or vomiting</p> <p>Kidney/Ureter/Bladder - urine volume decreased YAKUD5 Gekkan Yakujii. Pharmaceuticals Monthly. (Yakugyo Jihosha, Inaoka Bldg., 2-36 Jinbo-cho, Kanda, Chiyoda-ku, Tokyo 101, Japan) V.1- 1959- Volume(issue)/page/year: 41,2383,1999</p>
11	Potassium cyanide #(T3)	151-50-8	<p>LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 5 mg/kg Details of toxic effects not reported other than lethal dose value ARTODN Archives of Toxicology. (Springer-Verlag, Heidelberg Pl. 3, D-1000 Berlin 33, Fed. Rep. Ger.) V.32- 1974- Volume(issue)/page/year: 54,275,1983</p> <p>LDLo - Lowest published lethal dose Oral Human 2857 ug/kg Details of toxic effects not reported other than lethal dose value 34ZIAG "Toxicology of Drugs and Chemicals," Deichmann, W.B., New York, Academic Press, Inc., 1969 Volume(issue)/page/year: -,191,1969</p>
12	Chlorpyrifos #(T3)	2921-88-2	<p>LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 82 mg/kg Details of toxic effects not reported other than lethal dose value TXAPA9 Toxicology and Applied Pharmacology. (Academic Press, Inc., 1 E. First St., Duluth, MN 55802) V.1- 1959- Volume(issue)/page/year: 14,515,1969 TDLo - Lowest published toxic dose Oral Human - man 300 mg/kg Peripheral Nerve and Sensation - paresthesis</p> <p>Behavioral - muscle weakness</p> <p>Behavioral - coma ARTODN Archives of Toxicology. (Springer-Verlag, Heidelberg Pl. 3, D-1000 Berlin 33, Fed. Rep. Ger.) V.32- 1974- Volume(issue)/page/year: 59,176,1986</p>
13	Sodium bicarbonate #(T3)	144-55-8	<p>LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 4220 mg/kg Details of toxic effects not reported other than lethal dose value TXAPA9 Toxicology and Applied Pharmacology. (Academic Press, Inc., 1 E. First St., Duluth, MN 55802) V.1- 1959- Volume(issue)/page/year: 6,726,1964 TDLo - Lowest published toxic dose Oral Human - man 20 mg/kg/SD (intermittent) Gastrointestinal - nausea or vomiting</p> <p>Nutritional and Gross Metabolic - changes in potassium</p> <p>Nutritional and Gross Metabolic - metabolic acidosis AJEMEN American Journal of Emergency Medicine. (WB Saunders, Philadelphia, PA) V.1- 1983- Volume(issue)/page/year: 12,57,1994</p>
14	Silica #(T3)	7631-86-9	<p>TDLo - Lowest published toxic dose Oral Rodent - rat 120 gm/kg Gastrointestinal - hypermotility, diarrhea</p> <p>Gastrointestinal - other changes EPASR* United States Environmental Protection Agency, Office of Pesticides and Toxic Substances. (U.S. Environmental Protection Agency, 401 M St., SW, Washington, DC 20460) History unknown. Volume(issue)/page/year: #86940001000,1994</p>
15	Sodium Sulfate #(T3)	7757-82-6	<p>LD50 - Lethal dose, 50 percent kill Oral Rodent - mouse 5989 mg/kg Details of toxic effects not reported other than lethal dose value ENTOX* Encyclopedia of Toxicology: Reference Book, Elsevier, 2005</p> <p>Volume(issue)/page/year: ,110,2005</p>
16	Phosphoric acid *(T3)	7664-38-2	<p>LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 1.25 gm/kg Lungs, Thorax, or Respiration - acute pulmonary edema</p> <p>Liver - changes in liver weight VCVN5* "Vrednie chemicheskije veshstva. Neorganicheskie soedinienia elementov V-VII groopp" (Hazardous substances. Inorganic substances containing V-VII group elements), Bandman A.L. et al., Chimia, 1989, Volume(issue)/page/year: -,73,1993</p>
17	Mercury	7439-97-6	<p>TDLo - Lowest published toxic dose Oral Human - man 43 mg/kg Behavioral - tremor</p> <p>Liver - jaundice, other or unclassified</p> <p>Liver - other changes JTCTDW Journal of Toxicology, Clinical Toxicology. (Marcel Dekker, 270 Madison Ave., New York, NY 10016) V.19- 1982- Volume(issue)/page/year: 31,487,1993</p>
18	Cobalt dichloride #(T3)	7646-79-9	<p>LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 80 mg/kg Details of toxic effects not reported other than lethal dose value HYSAAV Hygiene and Sanitation (USSR). English translation of GISAAA. (Springfield, VA) 1964- 71. Discontinued. Volume(issue)/page/year: 36(1-3),277,1971</p> <p>LDLo - Lowest published lethal dose Oral Human - child 1500 mg/kg Details of toxic effects not reported other than lethal dose value 34ZIAG "Toxicology of Drugs and Chemicals," Deichmann, W.B., New York, Academic Press, Inc., 1969 Volume(issue)/page/year: -,182,1969</p> <p>TDLo - Lowest published toxic dose Oral Human - man 1042 mg/kg/13W (intermittent) Sense Organs and Special Senses (Eye) - optic nerve neuropathy</p> <p>Sense Organs and Special Senses (Eye) - visual field changes IJMDAI Israel Journal of Medical Sciences. (POB 1435, Jerusalem 91013, Israel) V.1- 1965- Volume(issue)/page/year: 8,61,1972</p>
19	Formaldehyde (Formalin solution-37% methanol) LDLo	50-00-0	<p>LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 100 mg/kg Details of toxic effects not reported other than lethal dose value FCTOD7 Food and Chemical Toxicology. (Pergamon Press Inc., Maxwell House, Fairview Park, Elmsford, NY 10523) V.20- 1982- Volume(issue)/page/year: 26,447,1988</p> <p>LDLo - Lowest published lethal dose Oral Human - woman 108 mg/kg Details of toxic effects not reported other than lethal dose value 29ZWAE "Practical Toxicology of Plastics," Lefaux, R., Cleveland, OH, Chemical Rubber Co., 1968 Volume(issue)/page/year: -,328,1968</p>
20	Dibasic sodium phosphate	10039-32-4	<p>LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 17000 mg/kg Details of toxic effects not reported other than lethal dose value USXXAM United States Patent Document. (U.S. Patent Office, Box 9, Washington, DC 20231) Volume(issue)/page/year: #6365129</p>

Chemical		CAS Number	Oral Toxicity (LD 50) Report Species/units
21	Hydrogen chloride LDLo	7647-01-0	LDLo - Lowest published lethal dose Oral Human - man 2857 ug/kg Vascular - BP lowering not characterized in autonomic section Lungs, Thorax, or Respiration - respiratory depression Gastrointestinal - changes in structure or function of esophagus MJAUAJ Medical Journal of Australia. (Australasian Medical Pub. Co. Ltd., 71-79 Arundel St., Glebe, N.S.W., Australia) V.1- 1914- Volume(issue)/page/year: 158,28,1993 LDLo - Lowest published lethal dose Oral Human - woman 420 uL/kg Behavioral - excitement Cardiac - pulse rate Kidney/Ureter/Bladder - hematuria JITOEX Japanese Journal of Toxicology. (Yakugyo Jihosha, Hokushin Bldg., 2-36 Jinbo-cho, Kanda, Chiyoda-ku, Tokyo, 101, Japan) V.1- 1988- Volume(issue)/page/year: 9,351,1996
22	Calcium Hydroxide #(T3)	1305-62-0	LD50 - Lethal dose , 50 percent kill Oral Rodent - rat 7340 mg/kg Details of toxic effects not reported other than lethal dose value AIHAAP American Industrial Hygiene Association Journal. (AIHA, 475 Wolf Ledges Pkwy., Akron, OH 44311) V.19- 1958- Volume(issue)/page/year: 30,470,1969
23	Hydrogen cyanide	74-90-8	LDLo - Lowest published lethal dose Oral Human 570 ug/kg Details of toxic effects not reported other than lethal dose value PCOC** Pesticide Chemicals Official Compendium, Association of the American Pesticide Control Officials, Inc., 1966. (Topeka, KS) Volume(issue)/page/year: -,596,1966
24	Nitric acid	7697-37-2	LDLo - Lowest published lethal dose Oral Human 430 mg/kg Details of toxic effects not reported other than lethal dose value YAKUD5 Gekkan Yakujii. Pharmaceuticals Monthly. (Yakugyo Jihosha, Inaoka Bldg., 2-36 Jinbo-cho, Kanda, Chiyoda-ku, Tokyo 101, Japan) V.1- 1959- Volume(issue)/page/year: 22,651,1980
25	Naphthalene #(T3)	91-20-3	LDLo - Lowest published lethal dose Oral Human - child 100 mg/kg Details of toxic effects not reported other than lethal dose value 28ZRAQ "Toxicology and Biochemistry of Aromatic Hydrocarbons," Gerarde, H., New York, Elsevier, 1960 Volume(issue)/page/year: -,228,1960 LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 490 mg/kg Details of toxic effects not reported other than lethal dose value 85GMAT "Toxicometric Parameters of Industrial Toxic Chemicals Under Single Exposure," Izmerov, N.F., et al., Moscow, Centre of International Projects, GKNT, 1982 Volume(issue)/page/year: -,89,1982
26	Toluene	108-88-3	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 636 mg/kg Details of toxic effects not reported other than lethal dose value NRTXDN Neurotoxicology. (Intox Press, Inc., POB 34075, Little Rock, AR 72203) V.1- 1979- Volume(issue)/page/year: 2,567,1981LDLo - Lowest published lethal dose Oral Human - man 719 uL/kg Cardiac - other changes Lungs, Thorax, or Respiration - acute pulmonary edema Liver - other changes FSINDR Forensic Science International. (Elsevier Scientific Pub. Ireland Ltd., POB 85, Limerick, Ireland) V.12- 1978- Volume(issue)/page/year: 41,255,1989 LDLo - Lowest published lethal dose Oral Human 50 mg/kg Details of toxic effects not reported other than lethal dose value YAKUD5 Gekkan Yakujii. Pharmaceuticals Monthly. (Yakugyo Jihosha, Inaoka Bldg., 2-36 Jinbo-cho, Kanda, Chiyoda-ku, Tokyo 101, Japan) V.1- 1959- Volume(issue)/page/year: 22,883,1980
27	Lindane * #(T3)	58-89-9	LDLo - Lowest published lethal dose Oral Human 840 mg/kg Details of toxic effects not reported other than lethal dose value YAKUD5 Gekkan Yakujii. Pharmaceuticals Monthly. (Yakugyo Jihosha, Inaoka Bldg., 2-36 Jinbo-cho, Kanda, Chiyoda-ku, Tokyo 101, Japan) V.1- 1959- Volume(issue)/page/year: 34,1232,1992
28	Benzene	71-43-2	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 930 mg/kg Behavioral - tremor Behavioral - convulsions or effect on seizure threshold TXAPA9 Toxicology and Applied Pharmacology. (Academic Press, Inc., 1 E. First St., Duluth, MN 55802) V.1- 1959- Volume(issue)/page/year: 7,767,1965 LDLo - Lowest published lethal dose Oral Human - man 50 mg/kg Details of toxic effects not reported other than lethal dose value YAKUD5 Gekkan Yakujii. Pharmaceuticals Monthly. (Yakugyo Jihosha, Inaoka Bldg., 2-36 Jinbo-cho, Kanda, Chiyoda-ku, Tokyo 101, Japan) V.1- 1959- Volume(issue)/page/year: 22,883,1980
29	Iodine #(E3)	7553-56-2	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 14 gm/kg Details of toxic effects not reported other than lethal dose value DRFUD4 Drugs of the Future. (J.R. Prous, S.A., Apartado de Correos 540, 08080 Barcelona, Spain) V.1- 1975/76- Volume(issue)/page/year: 4,876,1979 LDLo - Lowest published lethal dose Oral Human 28 mg/kg Gastrointestinal - hypermotility, diarrhea Gastrointestinal - other changes 34ZIAG "Toxicology of Drugs and Chemicals," Deichmann, W.B., New York, Academic Press, Inc., 1969 Volume(issue)/page/year: -,330,1969
30	Sodium fluoride #(T3)	7681-49-4	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 31 mg/kg Details of toxic effects not reported other than lethal dose value HBPOT* Handbook of pesticide toxicology. Robert Krieger ed, Academic press, 2001 Volume(issue)/page/year: 2,1409,2001 LDLo - Lowest published lethal dose Oral Human 71 mg/kg Behavioral - tremor Musculoskeletal - changes in teeth and supporting structures Musculoskeletal - other changes 85KYAH "Merck Index; an Encyclopedia of Chemicals, Drugs, and Biologicals", 11th ed., Rahway, NJ 07065, Merck & Co., Inc. 1989 Volume(issue)/page/year: 11,1361,1989
31	Sodium dodecyl sulfate #(T3)	151-21-3	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 1288 mg/kg Details of toxic effects not reported other than lethal dose value FCTXAV Food and Cosmetics Toxicology. (London, UK) V.1-19, 1963-81. For publisher information, see FCTOD7. Volume(issue)/page/year: 5,763,1967

Chemical		CAS Number	Oral Toxicity (LD 50) Report Species/units
32	Paracetamol #(E3-phenol)	103-90-2	<p>LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 1944 mg/kg Details of toxic effects not reported other than lethal dose value USXXAM United States Patent Document. (U.S. Patent Office, Box 9, Washington, DC 20231) Volume(issue)/page/year: #4636513 LDLo - Lowest published lethal dose Oral Human - man 714 mg/kg Liver - other changes HUTODJ Human Toxicology. (Macmillan Press Ltd., Houndmills, Basingstoke, Hants., RG 21 2XS, UK) V.1- 1981- Volume(issue)/page/year: 1,25,1981 LDLo - Lowest published lethal dose Oral Human 143 mg/kg Behavioral - general anesthetic BMJOAE British Medical Journal. (British Medical Assoc., BMA House, Tavistock Sq., London WC1H 9JR, UK) V.1- 1857- Volume(issue)/page/year: 282,199,1981 LDLo - Lowest published lethal dose Oral Human 357 mg/kg Behavioral - anorexia (human) Behavioral - coma</p> <p>Gastrointestinal - nausea or vomiting LANCAO Lancet. (7 Adam St., London WC2N 6AD, UK) V.1- 1823- Volume(issue)/page/year: 1,66,1973 LDLo - Lowest published lethal dose Oral Human - woman 260 mg/kg Behavioral - coma</p> <p>Gastrointestinal - nausea or vomiting</p> <p>Kidney/Ureter/Bladder - changes in tubules (including acute renal failure, acute tubular necrosis) JAMAAP JAMA, Journal of the American Medical Association. (AMA, 535 N. Dearborn St., Chicago, IL 60610) V.1- 1883- Volume(issue)/page/year: 236,1874,1976 LDLo - Lowest published lethal dose Oral Human - man 143 mg/kg/24H (intermittent) Behavioral - anorexia (human) Liver - hepatitis (hepatocellular necrosis), zonal</p> <p>Liver - jaundice, other or unclassified AJMEAZ American Journal of Medicine. (Technical Pub., 875 Third Ave., New York, NY 10022) V.1- 1946- Volume(issue)/page/year: 74,349,1983</p> <p>LDLo - Lowest published lethal dose Oral Human - woman 650 mg/kg Vascular - BP lowering not characterized in autonomic section</p> <p>Vascular - other changes</p> <p>Nutritional and Gross Metabolic - metabolic acidosis AJEMEN American Journal of Emergency Medicine. (WB Saunders, Philadelphia, PA) V.1- 1983- Volume(issue)/page/year: 6,511,1988</p> <p>LDLo - Lowest published lethal dose Oral Human - child 50 mg/kg Cardiac - other changes</p> <p>Lungs, Thorax, or Respiration - acute pulmonary edema</p> <p>Kidney/Ureter/Bladder - changes in tubules (including acute renal failure, acute tubular necrosis) AJEMEN American Journal of Emergency Medicine. (WB Saunders, Philadelphia, PA) V.1- 1983- Volume(issue)/page/year: 6,510,1988</p> <p>LDLo - Lowest published lethal dose Oral Human - woman 400 mg/kg Behavioral - coma</p> <p>Liver - liver function tests impaired</p> <p>Nutritional and Gross Metabolic - metabolic alkalosis JTCTDW Journal of Toxicology, Clinical Toxicology.</p>
33	Sodium chloride #(T3)	7647-14-5	<p>LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 3000 mg/kg Details of toxic effects not reported other than lethal dose value VCVN1* "Vrednie chemicheskije veshstva. Neorganicheskie soedinenia elementov I-IV groopp" (Hazardous substances. Inorganic substances containing I-IV group elements), Filov V.A., <i>Chimija</i>, 1988. Volume(issue)/page/year: -36,1998</p> <p>LDLo - Lowest published lethal dose Oral Human - man 1 gm/kg Sense Organs and Special Senses (Eye) - effect, not otherwise specified</p> <p>Behavioral - changes in motor activity (specific assay)</p> <p>Nutritional and Gross Metabolic - changes in sodium MACPAJ Mayo Clinic Proceedings. (Room 1035, Plummer Bldg., Mayo Clinic, Rochester, MN 55905) V.39- 1964- Volume(issue)/page/year: 65,1587,1990</p>
34	Potassium Hydroxide #(T3)	1310-58-3	<p>LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 273 mg/kg Details of toxic effects not reported other than lethal dose value FAATDF Fundamental and Applied Toxicology. (Academic Press, Inc., 1 E. First St., Duluth, MN 55802) V.1-40, 1981-97. For publisher information, see TOSCF2 Volume(issue)/page/year: 8,97,1987</p>
35	Oxalic acid * #(T3)	144-62-7	<p>LDLo - Lowest published lethal dose Oral Human - woman 600 mg/kg Gastrointestinal - changes in structure or function of esophagus</p> <p>Gastrointestinal - hypermotility, diarrhea</p> <p>Gastrointestinal - other changes KYUYA6 Yakkyoku. Pharmacy. (Nanzando, 4-1-11, Yushima, Bunkyo-ku, Tokyo, Japan) V.1- 1950- Volume(issue)/page/year: 31,959,1980</p>
36	Sodium Nitrate #(T3)	7631-99-4	<p>LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 1267 mg/kg Details of toxic effects not reported other than lethal dose value GISAAA Gigiena i Sanitariya. For English translation, see HYSAAV. (VO Mehdunarodnaya Kniga, 113095 Moscow, USSR) V.1- 1936- Volume(issue)/page/year: 46(12),66,1981</p> <p>LDLo - Lowest published lethal dose Oral Human - child 22500 ug/kg Blood - methemoglobinemia-carboxyhemoglobin JTCTDW Journal of Toxicology, Clinical Toxicology. (Marcel Dekker, 270 Madison Ave., New York, NY 10016) V.19- 1982- Volume(issue)/page/year: 32,173,1994</p>
37	Ethyl alcohol #(T3)	64-17-5	<p>LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 7060 mg/kg Lungs, Thorax, or Respiration - other changes TXAPA9 Toxicology and Applied Pharmacology. (Academic Press, Inc., 1 E. First St., Duluth, MN 55802) V.1- 1959- Volume(issue)/page/year: 16,718,1970</p> <p>LDLo - Lowest published lethal dose Oral Human - child 2 gm/kg Lungs, Thorax, or Respiration - other changes</p> <p>Liver - fatty liver degeneration</p> <p>Blood - other changes ATXKA8 Archiv fuer Toxikologie. (Berlin, Fed. Rep. Ger.) V.15-31, 1954-74. For publisher information, see ARTODN. Volume(issue)/page/year: 17,183,1958</p> <p>LDLo - Lowest published lethal dose Oral Human 1400 mg/kg Behavioral - sleep</p> <p>Behavioral - headache</p> <p>Gastrointestinal - nausea or vomiting NPIRI* Raw Material Data Handbook, Vol.1: Organic Solvents, 1974. (National Assoc. of Printing Ink Research Institute, Francis McDonald Sinclair Memorial Laboratory, Lehigh Univ., Bethlehem, PA 18015) Volume(issue)/page/year: 1,44,1974</p> <p>LDLo - Lowest published lethal dose Subcutaneous Human - infant 19440 mg/kg Behavioral - convulsions or effect on seizure threshold</p> <p>Behavioral - coma</p> <p>Nutritional and Gross Metabolic - body temperature decrease AJCPAI American Journal of Clinical Pathology. (Lippincott/Harper, Journal Fulfillment Dept., 2350 Virginia Ave., Hagerstown, MD 21740) V.1- 1931- Volume(issue)/page/year: 5,466,1935</p>

Chemical		CAS Number	Oral Toxicity (LD 50) Report Species/units
38	Aldicarb *T#	116-06-3	<i>TDLo - Lowest published toxic dose Oral Human - woman 28 mg/kg/10D (intermittent) Cardiac - pulse rate Gastrointestinal - changes in structure or function of endocrine pancreas Nutritional and Gross Metabolic - body temperature decrease ICMED9 Intensive Care Medicine. (Springer-Verlag New York, Inc., Service Center, 44 Hartz Way, Secaucus, NJ 07094) V.3- 1977- Volume(issue)/page/year: 20,49,1994 TDLo - Lowest published toxic dose Oral Human 0.1 mg/kg Details of toxic effects not reported other than lethal dose value HBPTO* Handbook of pesticide toxicology. Robert Krieger ed, Academic press, 2001 Volume(issue)/page/year: 2,1097,2001 LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 0.46 mg/kg Details of toxic effects not reported other than lethal dose value HBPTO* Handbook of pesticide toxicology. Robert Krieger ed, Academic press, 2001 Volume(issue)/page/year: 2,1094,2001 TDLo - Lowest published toxic dose Oral Human 0.01 mg/kg Blood - other changes Biochemical - Enzyme inhibition, induction, or change in blood or tissue levels - true cholinesterase TOXID9 Toxicologist. (Soc. of Toxicology, Inc., 475 Wolf Lodge Parkway, Akron, OH 44311) V.1- 1981- Volume(issue)/page/year: 1,55,2001 TDLo - Lowest published toxic dose Oral Human - man 0.075 mg/kg Skin and Appendages - sweating TOXID9 Toxicologist. (Soc. of Toxicology, Inc., 475 Wolf Lodge Parkway, Akron, OH 44311) V.1- 1981- Volume(issue)/page/year: 1,56,2001 TDLo - Lowest published toxic dose Oral Human - man 0.025 mg/kg Blood - other changes Biochemical - Enzyme inhibition, induction, or change in blood or tissue levels - true cholinesterase TOXID9</i>
39	Strychnine Sulfate #(T3)	60-41-3	<i>LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 2600 ug/kg Details of toxic effects not reported other than lethal dose value JAPMA8 Journal of the American Pharmaceutical Association, Scientific Edition. (Washington, DC) V.29-49, 1940-60. For publisher information, see JPMSAE. Volume(issue)/page/year: 31,113,1942 LDLo - Lowest published lethal dose Oral Human - man 37 mg/kg Behavioral - convulsions or effect on seizure threshold Cardiac - pulse rate Lungs, Thorax, or Respiration - pleural thickening JATOD3 Journal of Analytical Toxicology. (Preston Pub. Inc., POB 48312, Niles, IL 60648) V.1- 1977- Volume(issue)/page/year: 10,120,1986</i>
40	Methyl parathion #(T3)	298-00-0	<i>LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 6010 ug/kg Details of toxic effects not reported other than lethal dose value 85JCAE "Prehled Prumyslove Toxikologie; Organické Latky," Marhold, J., Prague, Czechoslovakia, Avicenum, 1986 Volume(issue)/page/year: -,1155,1986</i>
41	Methamidophos	10265-92-6	<i>LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 7500 ug/kg Details of toxic effects not reported other than lethal dose value ARSIM* Agricultural Research Service, USDA Information Memorandum. (Beltsville, MD 20705) Volume(issue)/page/year: 20,7,1966 TDLo - Lowest published toxic dose Oral Human - man 1429 uL/kg Behavioral - general anesthetic Behavioral - muscle weakness Lungs, Thorax, or Respiration - respiratory stimulation ARTODN Archives of Toxicology. (Springer-Verlag, Heidelberg Pl. 3, D-1000 Berlin 33, Fed. Rep. Ger.) V.32- 1974- Volume(issue)/page/year: 73,296,1999 TDLo - Lowest published toxic dose Oral Human - man 257 mg/kg Peripheral Nerve and Sensation - fasciculations Sense Organs and Special Senses (Eye) - miosis (pupillary constriction) Skin and Appendages - sweating NEJIMAG New England Journal of Medicine. (Massachusetts Medical Soc., 10 Shattuck St., Boston, MA 02115) V.198- 1928- Volume(issue)/page/year: 306,125,1982 TDLo - Lowest published toxic dose Oral Human - woman 360 mg/kg Peripheral Nerve and Sensation - fasciculations Sense Organs and Special Senses (Eye) - miosis (pupillary constriction) Skin and Appendages - sweating NEJIMAG New England Journal of Medicine. (Massachusetts Medical Soc., 10 Shattuck St., Boston, MA 02115) V.198- 1928- Volume(issue)/page/year: 306,125,1982 TDLo - Lowest published toxic dose Oral Human - man 600 mg/kg Peripheral Nerve and Sensation - flaccid paralysis without anesthesia (usually neuromuscular blockage) Autonomic Nervous System - parasympatholytic Behavioral - coma TOXID9 Toxicologist. (Soc. of Toxicology, Inc., 475 Wolf Lodge Parkway, Akron, OH 44311) V.1- 1981- Volume(issue)/page/year: 14,390,1994 LD50 - Lethal dose, 50 percent kill Oral Rodent - r at 7500 ug/kg Details of toxic effects not reported other than</i>
42	Endosulfan	115-29-7	<i>LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 18 mg/kg Details of toxic effects not reported other than lethal dose value ARSIM* Agricultural Research Service, USDA Information Memorandum. (Beltsville, MD 20705) Volume(issue)/page/year: 20,9,1966 LDLo - Lowest published lethal dose Oral Human - man 260 mg/kg Brain and Coverings - changes in surface EEG Behavioral - convulsions or effect on seizure threshold Lungs, Thorax, or Respiration - fibrosis, focal (pneumoconiosis) JTCTDW Journal of Toxicology, Clinical Toxicology. (Marcel Dekker, 270 Madison Ave., New York, NY 10016) V.19- 1982- Volume(issue)/page/year: 36,345,1998</i>
43	Red mercuric oxide	21908-53-2	<i>LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 18 mg/kg Details of toxic effects not reported other than lethal dose value NTIS** National Technical Information Service. (Springfield, VA 22161) Formerly U.S. Clearinghouse for Scientific & Technical Information. Volume(issue)/page/year: PB214-270</i>
44	Methidathion #(T3)	950-37-8	<i>TDLo - Lowest published toxic dose Oral Human - man 93 mg/kg Sense Organs and Special Senses (Eye) - miosis (pupillary constriction) Sense Organs and Special Senses (Eye) - lacrimation Behavioral - coma HETOEA Human & Experimental Toxicology. (Macmillan Press Ltd., Brunel Road, Houndmills, Basingstoke, Hampshire, RG21 2XS, UK) V.9- 1990- Volume(issue)/page/year: 9,415,1990 LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 20 mg/kg Details of toxic effects not reported other than lethal dose value WRPCA2 World Review of Pest Control. (London, UK) V.1-10, 1962-71. Discontinued. Volume(issue)/page/year: 9,119,1970</i>
45	Dimethoate #(T3)	60-51-5	<i>LD50 - Lethal dose, 50 percent kill Oral Human 30 mg/kg Details of toxic effects not reported other than lethal dose value GUCHAZ Guide to the Chemicals Used in Crop Protection. (Information Canada, 171 Slater St., Ottawa, Ont., Canada) Volume(issue)/page/year: 6,209,1973</i>
46	Potassium fluoride #(T3)	7789-23-3	<i>LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 245 mg/kg Details of toxic effects not reported other than lethal dose value XEU/RAQ U.S. Atomic Energy Commission, University of Rochester, Research and Development Reports. (Rochester, NY) Volume(issue)/page/year: UR-154,1951</i>
47	Imidacloprid #(E3)	138261-41-3 (changed)	<i>LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 410 mg/kg Details of toxic effects not reported other than lethal dose value AGJAEF Agrochemicals Japan. (Japan Plant Protection Association, 1-43-11, Komagome, Toshima-ku, Tokyo 170, Japan) No.62- 1993- Volume(issue)/page/year: (63),15,1993</i>

Chemical		CAS Number	Oral Toxicity (LD 50) Report Species/units
48	Kerosene #(T3)	8008-20-6	LDLo - Lowest published lethal dose Oral Human - man 500 mg/kg Details of toxic effects not reported other than lethal dose value YAKUDS Gekkan Yakaji. Pharmaceuticals Monthly. (Yakugyo Jihosha, Inaoka Bldg., 2-36 Jinbo-cho, Kanda, Chiyoda-ku, Tokyo 101, Japan) V.1- 1959- Volume(issue)/page/year: 22,883,1980,
49	Acephate	30560-19-1	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 700 mg/kg Details of toxic effects not reported other than lethal dose value USXXAM United States Patent Document. (U.S. Patent Office, Box 9, Washington, DC 20231) Volume(issue)/page/year: #3716600
50	Copper oxychloride #(E3)	1332-40-7	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 700 mg/kg Details of toxic effects not reported other than lethal dose value USXXAM United States Patent Document. (U.S. Patent Office, Box 9, Washington, DC 20231) Volume(issue)/page/year: #6770674 LDLo - Lowest published lethal dose Oral Human 200 mg/kg Details of toxic effects not reported other than lethal dose value FAONAU FAO Nutrition Meetings Report Series. (Rome, Italy) No.7-57, 1948-77. Discontinued. Volume(issue)/page/year: 53A,43,1974
51	Lead Oxide (#T3)	1309-60-0	LDLo - Lowest published lethal dose Oral Mammal - dog 1400 mg/kg Details of toxic effects not reported other than lethal dose value HBAMAK "Abdernalden's Handbuch der Biologischen Arbeitsmethoden." (Leipzig, Ger. Dem. Rep.) Volume(issue)/page/year: 4,1289,1935
52	Sulfuric acid LD50	7664-93-9	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 2140 mg/kg Details of toxic effects not reported other than lethal dose value FERECAC Federal Register. (U.S. Government Printing Office, Supt. of Documents, Washington, DC 20402) V.1- 1936- Volume(issue)/page/year: 69,40781,2004
53	Zinc	7440-66-6	LDLo - Lowest published lethal dose Oral Rodent - mouse 5000 mg/kg Gastrointestinal - other changes Liver - other changes Kidney/Ureter/Bladder - changes in both tubules and glomeruli TOLED5 Toxicology Letters. (Elsevier Science Pub. B.V., POB 211, 1000 AE Amsterdam, Netherlands) V.1- 1977- Volume(issue)/page/year: 161,115,2006
54	Phosphorus	7723-14-0	Red: LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 11.5 mg/kg Details of toxic effects not reported other than lethal dose value VCVN5* "Vrednie chemicheskije veshstva. Neorganicheskie soedinenia elementov V-VII gropp" (Hazardous substances. Inorganic substances containing V-VII group elements), Bandman A.L. et al., Chimia, 1989. Volume(issue)/page/year: -,58,1993 White: LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 3030 ug/kg Behavioral - somnolence (general depressed activity) Behavioral - food intake (animal) Lungs, Thorax, or Respiration - other changes NTIS** National Technical Information Service. (Springfield, VA 22161) Formerly U.S. Clearinghouse for Scientific & Technical Information. Volume(issue)/page/year: AD-B011-150
55	Paraquat* (dichloride)	1910-42-5	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 57 mg/kg Details of toxic effects not reported other than lethal dose value RREVAH Residue Reviews. (Springer-Verlag New York, Inc., Service Center, 44 Hartz Way, Secaucus, NJ 07094) V.1- 1962- Volume(issue)/page/year: 10,97,1965
56	Lead nitrate	10099-74-8	LDLo - Lowest published lethal dose Oral Rodent - guinea pig 500 mg/kg Behavioral - convulsions or effect on seizure threshold Blood - pigmented or nucleated red blood cells Nutritional and Gross Metabolic - body temperature decrease AHBAAM Archiv fuer Hygiene und Bakteriologie. (Munich, Fed. Rep. Ger.) V.101-154, 1929-71. For publisher information, see ZHPMAT. Volume(issue)/page/year: 125,273,1941
57	Warfarin * #(T3)	81-81-2	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 1600 ug/kg Details of toxic effects not reported other than lethal dose value TXAPA9 Toxicology and Applied Pharmacology. (Academic Press, Inc., 1 E. First St., Duluth, MN 55802) V.1- 1959- Volume(issue)/page/year: 11,327,1967 LDLo - Lowest published lethal dose Oral Human 6667 mg/kg Details of toxic effects not reported other than lethal dose value YKYUA6 Yakkyoku. Pharmacy. (Nanzando, 4-1-11, Yushima, Bunkyo-ku, Tokyo, Japan) V.1- 1950- Volume(issue)/page/year: 28,329,1977
58	Camphor (synthetic) * #(T3)	76-22-2	LDLo - Lowest published lethal dose Oral Human - infant 70 mg/kg Sense Organs and Special Senses (Eye) - mydriasis (pupillary dilation) Behavioral - convulsions or effect on seizure threshold Gastrointestinal - changes in structure or function of salivary glands AJPAA4 American Journal of Pathology. (Lippincott/Harper. Journal Fulfillment Dept., 2350 Virginia Ave., Hagerstown, MD 21740) V.1- 1925- Volume(issue)/page/year: 30,857,1954 TDLo - Lowest published toxic dose Oral Human - child 51 mg/kg Behavioral - somnolence (general depressed activity) Behavioral - convulsions or effect on seizure threshold AJEMEN American Journal of Emergency Medicine. (WB Saunders, Philadelphia, PA) V.1- 1983- Volume(issue)/page/year: 7,41,1989
59	Aniline	62-53-3	TDLo - Lowest published toxic dose Oral Human - child 3125 mg/kg Lungs, Thorax, or Respiration - cyanosis JTCTDW Journal of Toxicology, Clinical Toxicology. (Marcel Dekker, 270 Madison Ave., New York, NY 10016) V.19- 1982- Volume(issue)/page/year: 26,357,1988 LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 250 mg/kg Details of toxic effects not reported other than lethal dose value JPETAB Journal of Pharmacology and Experimental Therapeutics. (Williams & Wilkins Co., 428 E. Preston St., Baltimore, MD 21202) V.1- 1909/10- Volume(issue)/page/year: 90,260,1947
60	Thiram * #(T3)	137-26-8	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 560 mg/kg Biochemical - Enzyme inhibition, induction, or change in blood or tissue levels - true cholinesterase TXAPA9 Toxicology and Applied Pharmacology. (Academic Press, Inc., 1 E. First St., Duluth, MN 55802) V.1- 1959- Volume(issue)/page/year: 11,546,1967
61	Sodium chlorate	7775-09-9	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 1200 mg/kg Details of toxic effects not reported other than lethal dose value HBPTO* Handbook of pesticide toxicology. Robert Krieger ed. Academic press, 2001 Volume(issue)/page/year: 2,1412,2001 LDLo - Lowest published lethal dose Oral Human 107.14 mg/kg Details of toxic effects not reported other than lethal dose value HBPTO* Handbook of pesticide toxicology. Robert Krieger ed, Academic press, 2001 Volume(issue)/page/year: 2,1412,2001 Blood - other hemolysis with or without anemia Blood - methemoglobinemia-carboxyhemoglobin 34ZIAG "Toxicology of Drugs and Chemicals," Deichmann, W.B., New York, Academic Press, Inc., 1969 Volume(issue)/page/year: -,539,1969

Chemical		CAS Number	Oral Toxicity (LD 50) Report Species/units
62	Acetic acid #(T3)	64-19-7	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 3310 mg/kg Details of toxic effects not reported other than lethal dose value DMDJAP Delaware State Medical Journal. (Wilmington, DE) V.1-32(1), 1929-60. For publisher information, see DSMJAA. Volume(issue)/page/year: 31,276,1959 TDLo - Lowest published toxic dose Oral Human 1470 ug/kg Gastrointestinal - changes in structure or function of esophagus Gastrointestinal - ulceration or bleeding from small intestine Gastrointestinal - ulceration or bleeding from large intestine AIHAAP American Industrial Hygiene Association Journal. (AIHA, 475 Wolf Ledges Pkwy., Akron, OH 44311) V.19- 1958- Volume(issue)/page/year: 33,624,1972
63	Methyl alcohol	67-56-1	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 5600 mg/kg Details of toxic effects not reported other than lethal dose value VCVGK* "Vrednie chemicheskije veshstva, galogen I kislород sodergashie organicheskie soedinenia". (Hazardous substances. Galogen and oxygen containing substances), Bandman A.L. et al., <i>Chimia</i> , 1994. Volume(issue)/page/year: -.87,1984 LDLo - Lowest published lethal dose Oral Human 143 mg/kg Sense Organs and Special Senses (Eye) - optic nerve neuropathy Lungs, Thorax, or Respiration - dyspnea Gastrointestinal - nausea or vomiting 34ZIAG "Toxicology of Drugs and Chemicals," Deichmann, W.B., New York, Academic Press, Inc., 1969 Volume(issue)/page/year: -.382,1969
64	p-Phenylene diamine * #(T3)	106-50-3	TDLo - Lowest published toxic dose Oral Human - man 71 mg/kg Behavioral - muscle weakness Lungs, Thorax, or Respiration - acute pulmonary edema Lungs, Thorax, or Respiration - dyspnea HUTODJ Human Toxicology. (Macmillan Press Ltd., Houndmills, Basingstoke, Hants., RG 21 2XS, UK) V.1- 1981- Volume(issue)/page/year: 8,345,1989 LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 80 mg/kg Details of toxic effects not reported other than lethal dose value JTEHD6 Journal of Toxicology and Environmental Health. (Hemisphere Pub., 1025 Vermont Ave., NW, Washington, DC 20005) V.1- 1975/76- Volume(issue)/page/year: 2,657,1977
65	Sodium sulfide #(T3)	1313-82-2	Sodium monosulfide: LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 208 mg/kg Details of toxic effects not reported other than lethal dose value GTPZAB Gigiena Truda i Professional'nye Zabollevaniya. Labor Hygiene and Occupational Diseases. (V/O Mezhunarodnaya Kniga, 113095 Moscow, USSR) V.1-36, 1957-1992. For publisher information, see MTPEEI Volume(issue)/page/year: 30(8),30,1986
66	Sodium fluoroacetate #(T3)	62-74-8	LDLo - Lowest published lethal dose Oral Human 714 ug/kg Details of toxic effects not reported other than lethal dose value ENTOX* Encyclopedia of Toxicology: Reference Book, Elsevier, 2005 Volume(issue)/page/year: .62,2005 LDLo - Lowest published lethal dose Unreported Human - man 5 mg/kg Brain and Coverings - recordings from specific areas of CNS Behavioral - convulsions or effect on seizure threshold Cardiac - other changes AJPEAG American Journal of Public Health and the Nation's Health. (New York, NY) V.18-60, 1928-70. For publisher information, see AJHEAA. Volume(issue)/page/year: 36,1427,1946 LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 100 ug/kg Details of toxic effects not reported other than lethal dose value AJPEAG American Journal of Public Health and the Nation's Health. (New York, NY) V.18-60, 1928-70. For publisher information, see AJHEAA. Volume(issue)/page/year: 36,1427,1946
67	Azinphosmethyl * #(T3)	86-50-0	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 7 mg/kg Biochemical - Enzyme inhibition, induction, or change in blood or tissue levels - true cholinesterase JPPMAB Journal of Pharmacy and Pharmacology. (Pharmaceutical Soc. of Great Britain, 1 Lambeth High St., London SE1 7JN, UK) V.1- 1949- Volume(issue)/page/year: 13,435,1961 LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 4 mg/kg Details of toxic effects not reported other than lethal dose value ENTOX* Encyclopedia of Toxicology: Reference Book, Elsevier, 2005 Volume(issue)/page/year: -.200,2005
68	Phenamiphos #(T3)	22224-92-6	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 8 mg/kg Details of toxic effects not reported other than lethal dose value BESAAT Bulletin of the Entomological Society of America. (Entomological Soc. of America, 4603 Calvert Rd., College Park, MD 20740) V.1- 1955- Volume(issue)/page/year: 15,116,1969
69	Fenprothrin #(AEGL-3 of Cyano group of the carboxylate family)	39515-41-8	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 18 mg/kg Details of toxic effects not reported other than lethal dose value PSSCBG Pesticide Science. (Blackwell Scientific Pub. Ltd., POB 88, Oxford, UK) V.1- 1970- Volume(issue)/page/year: 8,579,1977
70	Bifenthrin Tox est. on Pyr.	82657-04-3	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 54500 ug/kg Details of toxic effects not reported other than lethal dose value PEMNDP Pesticide Manual. (The British Crop Protection Council, 20 Bridport Rd., Thornton Heath CR4 7QG, UK) V.1- 1968- Volume(issue)/page/year: 9,73,1991
71	Atrazine *T3	1912-24-9	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 672 mg/kg Details of toxic effects not reported other than lethal dose value FAATDF Fundamental and Applied Toxicology. (Academic Press, Inc., 1 E. First St., Duluth, MN 55802) V.1-40, 1981-97. For publisher information, see TOSCF2 Volume(issue)/page/year: 7,299,1986
72	n-Butyl alcohol #(T3)	71-36-3	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 790 mg/kg Liver - fatty liver degeneration Kidney/Ureter/Bladder - other changes Blood - other changes SAMJAF South African Medical Journal. (Medical Assoc. of South Africa, Secy., P.O. Box 643, Cape Town, S. Africa) V.6- 1932- Volume(issue)/page/year: 43,795,1969 LDLo - Lowest published lethal dose Oral Human 428 mg/kg Details of toxic effects not reported other than lethal dose value VCVGK* "Vrednie chemicheskije veshstva, galogen I kislород sodergashie organicheskie soedinenia". (Hazardous substances. Galogen and oxygen containing substances), Bandman A.L. et al., <i>Chimia</i> , 1994. Volume(issue)/page/year: -.103,1984
73	Potassium orthophosphate #(T3 based on strontium orthophosphate)	7778-53-2	LDLo - Lowest published lethal dose Oral Rodent - rat 4640 mg/kg Behavioral - somnolence (general depressed activity) Gastrointestinal - other changes NTIS** National Technical Information Service. (Springfield, VA 22161) Formerly U.S. Clearinghouse for Scientific & Technical Information. Volume(issue)/page/year: OTS0571153
74	Potassium ferrocyanide #(T3)	13943-58-3	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 6400 mg/kg Details of toxic effects not reported other than lethal dose value GISAAA Gigiena i Sanitariya. For English translation, see HYSAAV. (V/O Mezhunarodnaya Kniga, 113095 Moscow, USSR) V.1- 1936- Volume(issue)/page/year: 51(4),23,1986

	Chemical	CAS Number	Oral Toxicity (LD 50) Report Species/units
75	Hydrogen fluoride TDLo	7664-39-3	TDLo - Lowest published toxic dose Oral Human - man 143 mg/kg Cardiac - arrhythmias (including changes in conduction) Vascular - BP lowering not characterized in autonomic section Kidney/Ureter/Bladder - changes in tubules (including acute renal failure, acute tubular necrosis) JTCTDW Journal of Toxicology, Clinical Toxicology. (Marcel Dekker, 270 Madison Ave., New York, NY 10016) V.19- 1982- Volume(issue)/page/year: 35,307,1997
76	Barium nitrate *T3	10022-31-8	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 355 mg/kg Details of toxic effects not reported other than lethal dose value 28ZPAK "Sbornik Vysledku Toxikologickeho Vysvetreni Latek A Pripravku," Marhold, J.V., Institut Pro Vychovu Vedoucic Pracovniku Chemickeho Prumyclu Praha, Czechoslovakia, 1972 Volume(issue)/page/year: -.10,1972 TDLo - Lowest published toxic dose Oral Human - man 83 mg/kg Peripheral Nerve and Sensation - paresthesia Behavioral - muscle weakness Nutritional and Gross Metabolic - changes in potassium JTCTDW Journal of Toxicology, Clinical Toxicology. (Marcel Dekker, 270 Madison Ave., New York, NY 10016) V.19- 1982- Volume(issue)/page/year: 38,254,2000
77	Cobalt (II) nitrate	10141-05-6	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 434 mg/kg Behavioral - somnolence (general depressed activity) Gastrointestinal - hypermotility, diarrhea Nutritional and Gross Metabolic - weight loss or decreased weight gain FCTOD7 Food and Chemical Toxicology. (Pergamon Press Inc., Maxwell House, Fairview Park, Elmsford, NY 10523) V.20- 1982- Volume(issue)/page/year: 20,311,1982
78	Ammonium persulfate *T3	7727-54-0	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 689 mg/kg Details of toxic effects not reported other than lethal dose value 85INAS "Documentation of the Threshold Limit Values and Biological Exposure Indices," 5th ed., Cincinnati, OH, American Conference of Governmental Industrial Hygienists, Inc., 1986 Volume(issue)/page/year: 5,468,1986
79	Potassium permanganate #(T3)	7722-64-7	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 750 mg/kg Details of toxic effects not reported other than lethal dose value VCVN5* "Vrednie chemicheskije veshstva. Neorganicheskie soedinenia elementov V-VII groopp" (Hazardous substances. Inorganic substances containing V-VII group elements), Bandman A.L. et al., Chimia, 1989. Volume(issue)/page/year: -.410,1989 LDLo - Lowest published lethal dose Oral Human - woman 100 mg/kg Vascular - BP lowering not characterized in autonomic section Liver - hepatitis (hepatocellular necrosis), diffuse Kidney/Ureter/Bladder - changes in tubules (including acute renal failure, acute tubular necrosis) HETOE Human & Experimental Toxicology. (Macmillan Press Ltd., Brunel Road, Houndmills, Basingstoke, Hampshire, RG21 2XS, UK) V.9- 1990- Volume(issue)/page/year: 15,259,1996 LDLo - Lowest published lethal dose Oral Human 71 mg/kg Details of toxic effects not reported other than lethal dose value VCVN5* "Vrednie chemicheskije veshstva. Neorganicheskie soedinenia elementov V-VII groopp" (Hazardous substances. Inorganic substances containing V-VII group elements), Bandman A.L. et al., Chimia, 1989. Volume(issue)/page/year: -.411,1989
80	Silver nitrate #(T3)	7761-88-8	LDLo - Lowest published lethal dose Unreported Human - man 29 mg/kg Details of toxic effects not reported other than lethal dose value 85DCAI "Poisoning; Toxicology, Symptoms, Treatments," 2nd ed., Arena, J.M., Springfield, IL, C.C. Thomas, 1970 Volume(issue)/page/year: 2,73,1970 LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 1173 mg/kg Behavioral - tetany Lungs, Thorax, or Respiration - cyanosis Gastrointestinal - hypermotility, diarrhea GTPZAB Gigiena Truda i Professional'nye Zabolevaniya. Labor Hygiene and Occupational Diseases. (V/O Mezhdunarodnaya Kniga, 113095 Moscow, USSR) V.1-36, 1957-1992. For publisher information, see MTPPEI Volume(issue)/page/year: 27(12),33,1983
81	Potassium nitrate #(T3)	7757-79-1	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 3750 mg/kg Details of toxic effects not reported other than lethal dose value NYKZAU Nippon Yakurigaku Zasshi. Japanese Journal of Pharmacology. (Nippon Yakuri Gakkai, c/o Kyoto Daigaku Igakubu Yakurigaku Kyoshitsu, Konoe-cho, Yoshida, Sakyo-ku, Kyoto 606, Japan) V.40- 1944- Volume(issue)/page/year: 81,469,1983
82	Difethialone (T3 based on warfarin)	104653-34-1	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 550 mg/kg Details of toxic effects not reported other than lethal dose value DEVEAA Defense des Vegetaux. (Federation Nationale des Groupements de Protection des Cultures, 149, rue de Bercy, 75595 Paris Cedex, 12, France) V.1- 1947- Volume(issue)/page/year: 43(255-256),21,1989
83	OMPA	152-16-9	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 5 mg/kg Details of toxic effects not reported other than lethal dose value WRPCA2 World Review of Pest Control. (London, UK) V.1-10, 1962-71. Discontinued. Volume(issue)/page/year: 9,119,1970 TDLo - Lowest published toxic dose Oral Human - man 643 ug/kg/30D (intermittent) Biochemical - Enzyme inhibition, induction, or change in blood or tissue levels - true cholinesterase TXAPA9 Toxicology and Applied Pharmacology. (Academic Press, Inc., 1 E. First St., Duluth, MN 55802) V.1- 1959- Volume(issue)/page/year: 14,603,1969
84	Deltamethrin #(I as in pyrethrum)	52918-63-5	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 9360 ug/kg Behavioral - somnolence (general depressed activity) Behavioral - convulsions or effect on seizure threshold Kidney/Ureter/Bladder - urine volume increased JEBIDP Journal of Environmental Biology. (Academy of Environmental Biology, India, 657/5, Civil Lines (South), Muzaffarnagar, 251001, India) V.1- 1980- Volume(issue)/page/year: 12,45,1991
85	Dichlorvos	62-73-7	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 17 mg/kg Details of toxic effects not reported other than lethal dose value JPIFAN Japan Pesticide Information. (Japan Plant Protection Assoc., 1-43-11, Komagome, Toshima-ku, Tokyo 170, Japan) No.1-61, 1969-92. For publisher information, see AGJAEF. Volume(issue)/page/year: (13),36,1972
86	2-chloroacetophenone *IDLH	532-27-4	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 50 mg/kg Details of toxic effects not reported other than lethal dose value TXAPA9 Toxicology and Applied Pharmacology. (Academic Press, Inc., 1 E. First St., Duluth, MN 55802) V.1- 1959- Volume(issue)/page/year: 17,295,1970
87	Cypermethrin #(I as in pyrethrum)	52315-07-8	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 57500 ug/kg Behavioral - somnolence (general depressed activity) Behavioral - convulsions or effect on seizure threshold Gastrointestinal - changes in structure or function of salivary glands JEBIDP Journal of Environmental Biology. (Academy of Environmental Biology, India, 657/5, Civil Lines (South), Muzaffarnagar, 251001, India) V.1- 1980- Volume(issue)/page/year: 11,331,1990 LDLo - Lowest published lethal dose Oral Human 1 gm/kg Details of toxic effects not reported other than lethal dose value 85GYAV "Pflanzenschutz- und Schadlingsbekämpfungsmittel: Abriss einer Toxikologie und Therapie von Vergiftungen," 2nd ed., Klimmer, O.R., Hattingen, Fed. Rep. Ger., Hundt-Verlag, 1971 Volume(issue)/page/year: -.142,1971

Chemical		CAS Number	Oral Toxicity (LD 50) Report Species/units
88	Dinitrobenzene* (o, m, p isomers) * #(T3)	528-29-0; 99-65-0; 100-25-4	<i>m</i> : LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 59500 ug/kg Behavioral - somnolence (general depressed activity) Lungs, Thorax, or Respiration - dyspnea Skin and Appendages - hair ATDAEI Acute Toxicity Data. Journal of the American College of Toxicology, Part B. (Mary Ann Liebert, Inc., 1651 Third Ave., New York, NY 10128) V.1- 1990- Volume(issue)/page/year: 1,168,1992 <i>o</i> : X <i>p</i> : LDLo - Lowest published lethal dose Oral Rodent - rat 50 mg/kg Sense Organs and Special Senses (Eye) - effect, not otherwise specified Behavioral - somnolence (general depressed activity) Lungs, Thorax, or Respiration - dyspnea NTIS** National Technical Information Service. (Springfield, VA 22161) Formerly U.S. Clearinghouse for Scientific & Technical Information. Volume(issue)/page/year: OTS0546024
89	Quinone #(T3)	106-51-4	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 130 mg/kg Details of toxic effects not reported other than lethal dose value FEPRA7 Federation Proceedings, Federation of American Societies for Experimental Biology. (Bethesda, MD) V.1-46, 1942-87. Volume(issue)/page/year: 8,348,1949
90	Carbaryl * #(T3)	63-25-2	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 230 mg/kg Biochemical - Enzyme inhibition, induction, or change in blood or tissue levels - true cholinesterase TXAPA9 Toxicology and Applied Pharmacology. (Academic Press, Inc., 1 E. First St., Duluth, MN 55802) V.1- 1959- Volume(issue)/page/year: 11,546,1967 LDLo - Lowest published lethal dose Oral Human - woman 5 gm/kg Autonomic Nervous System - parasympatholytic Cardiac - change in rate Nutritional and Gross Metabolic - other changes HETOEA Human & Experimental Toxicology. (Macmillan Press Ltd., Brunel Road, Houndmills, Basingstoke, Hampshire, RG21 2XS, UK) V.9- 1990- Volume(issue)/page/year: 11,373,1992
91	Chloroform	67-66-3	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 300 mg/kg Details of toxic effects not reported other than lethal dose value ENTOX* Encyclopedia of Toxicology: Reference Book, Elsevier, 2005 Volume(issue)/page/year: -561,2005 LDLo - Lowest published lethal dose Oral Human - man 2514 mg/kg Behavioral - muscle contraction or spasticity Cardiac - other changes Kidney/Ureter/Bladder - changes in tubules (including acute renal failure, acute tubular necrosis) AJEMEN American Journal of Emergency Medicine. (WB Saunders, Philadelphia, PA) V.1- 1983- Volume(issue)/page/year: 6,507,1988
92	2,4-D * #(T3)	94-75-7	Acetic acid : LD50 - Lethal dose, 50 percent kill Oral Rodent - rat >300 mg/kg Details of toxic effects not reported other than lethal dose value ENTOX* Encyclopedia of Toxicology: Reference Book, Elsevier, 2005 Volume(issue)/page/year: -569,2005 LDLo - Lowest published lethal dose Oral Human 80 mg/kg Gastrointestinal - nausea or vomiting Behavioral - coma Behavioral - somnolence (general depressed activity) ARPAAQ Archives of Pathology. (Chicago, IL) V.5(3)-50(3), 1928-50; V.70-99, 1960-75. For publisher information, see APLMAS. Volume(issue)/page/year: 94,270,1972 LDLo - Lowest published lethal dose Oral Human - man 93 mg/kg Behavioral - convulsions or effect on seizure threshold PAREAQ Pharmacological Reviews. (Williams & Wilkins, 428 E. Preston St., Baltimore, MD 21202) V.1- 1949- Volume(issue)/page/year: 14,225,1962
93	Hydroquinone * #(T3)	123-31-9	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 302 mg/kg Details of toxic effects not reported other than lethal dose value NTIS** National Technical Information Service. (Springfield, VA 22161) Formerly U.S. Clearinghouse for Scientific & Technical Information. Volume(issue)/page/year: OTS055537 LDLo - Lowest published lethal dose Oral Human 29 mg/kg Details of toxic effects not reported other than lethal dose value 34ZIAG "Toxicology of Drugs and Chemicals," Deichmann, W.B., New York, Academic Press, Inc., 1969 Volume(issue)/page/year: -321,1969
94	p-Dichlorobenzene #(T3)	106-46-7	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 500 mg/kg Details of toxic effects not reported other than lethal dose value WRPCA2 World Review of Pest Control. (London, UK) V.1-10, 1962-71. Discontinued. Volume(issue)/page/year: 9,119,1970 LDLo - Lowest published lethal dose Oral Human 857 mg/kg Details of toxic effects not reported other than lethal dose value 34ZIAG "Toxicology of Drugs and Chemicals," Deichmann, W.B., New York, Academic Press, Inc., 1969 Volume(issue)/page/year: -210,1969 TDLo - Lowest published toxic dose Oral Human 300 mg/kg Sense Organs and Special Senses (Eye) - effect, not otherwise specified Lungs, Thorax, or Respiration - other changes Gastrointestinal - hypermotility, diarrhea PCOC** Pesticide Chemicals Official Compendium, Association of the American Pesticide Control Officials, Inc., 1966. (Topeka, KS) Volume(issue)/page/year: -851,1966
95	2,6-di-tert-butyl-p-cresol *T3	128-37-0	TDLo - Lowest published toxic dose Oral Human - woman 80 mg/kg Behavioral - coma Gastrointestinal - gastritis Gastrointestinal - nausea or vomiting NEJMAG New England Journal of Medicine. (Massachusetts Medical Soc., 10 Shattuck St., Boston, MA 02115) V.198- 1928- Volume(issue)/page/year: 314,648,1986 LD50 - Lethal dose, 50 percent kil Oral Rodent - rat 890 mg/kg Details of toxic effects not reported other than lethal dose value ENTOX* Encyclopedia of Toxicology: Reference Book, Elsevier, 2005 Volume(issue)/page/year: -365,2005
96	Isobutyl alcohol #(T3)	78-83-1	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 2460 mg/kg Details of toxic effects not reported other than lethal dose value AMIHBC AMA Archives of Industrial Hygiene and Occupational Medicine. (Chicago, IL) V.2-10, 1950-54. For publisher information, see AEHLAU. Volume(issue)/page/year: 10,61,1954 LDLo - Lowest published lethal dose Oral Human 428 mg/kg Details of toxic effects not reported other than lethal dose value VCVGK* "Vrednie chemicheskic veshstva, galogen i kislorod sodergashie organicheskic soedinenia". (Hazardous substances. Galogen and oxygen containing substances). Bandman A.L. et al., Chimia, 1994. Volume(issue)/page/year: -103,1984
97	Isopropyl alcohol #(T3)	67-63-0	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 5000 mg/kg Behavioral - general anesthetic VCVGK* "Vrednie chemicheskic veshstva, galogen i kislorod sodergashie organicheskic soedinenia". (Hazardous substances. Galogen and oxygen containing substances). Bandman A.L. et al., Chimia, 1994. Volume(issue)/page/year: -97,1984 LDLo - Lowest published lethal dose Oral Human 3570 mg/kg Behavioral - coma Lungs, Thorax, or Respiration - respiratory depression Gastrointestinal - nausea or vomiting 34ZIAG "Toxicology of Drugs and Chemicals," Deichmann, W.B., New York, Academic Press, Inc., 1969 Volume(issue)/page/year: -339,1969

Chemical		CAS Number	Oral Toxicity (LD 50) Report Species/units
98	Ethyl acetate #(T3)	141-78-6	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 5620 mg/kg Details of toxic effects not reported other than lethal dose value YKYUA6 Yakkyoku. Pharmacy. (Nanzando, 4-1-11, Yushima, Bunkyo-ku, Tokyo, Japan) V.1-1950- Volume(issue)/page/year: 32,1241,1981 LD50 - Lethal dose, 50 percent kill Oral Rodent - mouse 4100 mg/kg Behavioral - somnolence (general depressed activity) Behavioral - changes in motor activity (specific assay) Behavioral - coma GISAAA Gigiena i Sanitariya. For English translation, see HYSAAV. (V/O Mezhdunarodnaya Kniga, 113095 Moscow, USSR) V.1-1936- Volume(issue)/page/year: 48(4),66,1983
99	Nitrobenzene #(T3)	98-95-3	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 349 mg/kg Behavioral - altered sleep time (including change in righting reflex) Lungs, Thorax, or Respiration - dyspnea NTIS** National Technical Information Service. (Springfield, VA 22161) Formerly U.S. Clearinghouse for Scientific & Technical Information. Volume(issue)/page/year: OTS0559505 TDLo - Lowest published toxic dose Oral Human - woman 200 mg/kg Behavioral - general anesthetic Vascular - other changes Lungs, Thorax, or Respiration - respiratory stimulation ATXKA8 Archiv fuer Toxikologie. (Berlin, Fed. Rep. Ger.) V.15-31, 1954-74. For publisher information, see ARTODN. Volume(issue)/page/year: 28,208,1971 LDLo - Lowest published lethal dose Unreported Human - man 35 mg/kg Details of toxic effects not reported other than lethal dose value 8SDCAI "Poisoning; Toxicology, Symptoms, Treatments," 2nd ed., Arena, J.M., Springfield, IL, C.C. Thomas, 1970 Volume(issue)/page/year: 2,73,1970
100	Methoxyflurane #(IDLH of halogenated ethers-general)	76-38-0	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 3.6 mg/kg Details of toxic effects not reported other than lethal dose value VCVGK* "Vrednie chemicheskije veshstva, galogen i kislorod sodergashije organicheskie soedineniya". (Hazardous substances. Galogen and oxygen containing substances), Bandman A.L. et al., Chimia, 1994. Volume(issue)/page/year: -,286,1994
101	Thallium #(T3)	7440-28-0	TDLo - Lowest published toxic dose Oral Human - man 5714 ug/kg Peripheral Nerve and Sensation - structural change in nerve or sheath Sense Organs and Special Senses (Eye) - changes in extra-ocular muscles Skin and Appendages - hair ATXKA8 Archiv fuer Toxikologie. (Berlin, Fed. Rep. Ger.) V.15-31, 1954-74. For publisher information, see ARTODN. Volume(issue)/page/year: 19,65,1961 TDLo - Lowest published toxic dose Oral Human 48 mg/kg Behavioral - hallucinations, distorted perceptions Gastrointestinal - nausea or vomiting Nutritional and Gross Metabolic - body temperature decrease NRTXDN Neurotoxicology. (Intox Press, Inc., POB 34075, Little Rock, AR 72203) V.1-1979- Volume(issue)/page/year: 27,291,2006 TDLo - Lowest published toxic dose Oral Human 21 mg/kg Peripheral Nerve and Sensation - paresthesia Behavioral - changes in psychophysiological tests Nutritional and Gross Metabolic - body temperature decrease NRTXDN Neurotoxicology. (Intox Press, Inc., POB 34075, Little Rock, AR 72203) V.1-1979- Volume(issue)/page/year: 27,291,2006 LDLo - Lowest published lethal dose Oral Rodent - rat 30 mg/kg Details of toxic effects not reported other than lethal dose value TOXD9 Toxicologist. (Soc. of Toxicology, Inc., 475 Wolf Ledge Parkway, Akron, OH 44311) V.1-1981- Volume(issue)/page/year: 72,22,2003
102	alpha-Chloroacetophenone * #(I)	532-27-4	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 50 mg/kg Details of toxic effects not reported other than lethal dose value TXAPA9 Toxicology and Applied Pharmacology. (Academic Press, Inc., 1 E. First St., Duluth, MN 55802) V.1-1959- Volume(issue)/page/year: 17,295,1970
103	guanidine hydrochloride	50-01-1	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 475 mg/kg Behavioral - altered sleep time (including change in righting reflex) Behavioral - excitement Gastrointestinal - hypermotility, diarrhea NTIS** National Technical Information Service. (Springfield, VA 22161) Formerly U.S. Clearinghouse for Scientific & Technical Information. Volume(issue)/page/year: AD-A165-747
104	Ethylene dichloride #(E3)	107-06-2	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 500 mg/kg Details of toxic effects not reported other than lethal dose value VCVGH* "Vrednie chemicheskije veshstva, galogenproisvodnie uglevodorodov". (Hazardous substances: Galogenated hydrocarbons) Bandman A.L. et al., Chimia, 1990. Volume(issue)/page/year: -,359,1990 LDLo - Lowest published lethal dose Oral Human 286 mg/kg Gastrointestinal - ulceration or bleeding from stomach Gastrointestinal - nausea or vomiting Liver - fatty liver degeneration CLCEAL Casopis Lekaru Ceskych. Journal of Czech Physicians. (ARTIA, Ve Sneckach 30, 111 27 Prague 1, Czechoslovakia) V.1-1862- Volume(issue)/page/year: 86,203,1947
105	Metalaxyl #(T3 of parent dixylyl methyl carbamate)	57837-19-1	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 566 mg/kg Details of toxic effects not reported other than lethal dose value JHEMA2 Journal of Hygiene, Epidemiology, Microbiology, and Immunology. (Avicenum, Malostranske namesti 28, 11802 Prague 1, Czechoslovakia) V.1-1957- Volume(issue)/page/year: 35,375,1991
106	Arsenic *T3	7440-38-2	TDLo - Lowest published toxic dose Oral Human - man 7857 mg/kg/55Y Gastrointestinal - changes in structure or function of esophagus Blood - hemorrhage Skin and Appendages - dermatitis, other (after systemic exposure) CMAJAX Canadian Medical Association Journal. (Canadian Medical Assoc., POB 8650, Ottawa, ON K1G 0G8, Canada) V.1-1911- Volume(issue)/page/year: 120,168,1979 LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 763 mg/kg Behavioral - ataxia Gastrointestinal - hypermotility, diarrhea GTPZAB Gigiena Truda i Professional'nye Zabolvaniya. Labor Hygiene and Occupational Diseases. (V/O Mezhdunarodnaya Kniga, 113095 Moscow, USSR) V.1-36, 1957-1992. For publisher information, see MTPPEI Volume(issue)/page/year: 31(12),53,1987
107	Metribuzin #(T3 as diazo compound)	21087-64-9	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 1100 mg/kg Details of toxic effects not reported other than lethal dose value FMCHA2 Farm Chemicals Handbook. (Meister Pub., 37841 Euclid Ave., Willoughby, OH 44094) Volume(issue)/page/year: -,C204,1991
108	Acetone	67-64-1	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 5800 mg/kg Behavioral - altered sleep time (including change in righting reflex) Behavioral - tremor JTEHD6 Journal of Toxicology and Environmental Health. (Hemisphere Pub., 1025 Vermont Ave., NW, Washington, DC 20005) V.1-1975/76- Volume(issue)/page/year: 15,609,1985

Chemical		CAS Number	Oral Toxicity (LD 50) Report Species/units
109	Carbendazim	10605-21-7	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 6400 mg/kg Details of toxic effects not reported other than lethal dose value 85ARAE "Agricultural Chemicals," Thomson, W.T., 4 vols., Fresno, CA, Thomson Publications, 1976/77 revision Volume(issue)/page/year: 4,131,1976/1977
110	n-Butyl acetate #(E3)	123-86-4	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 10768 mg/kg Behavioral - somnolence (general depressed activity) Lungs, Thorax, or Respiration - other changes Liver - other changes ATDAEI Acute Toxicity Data, Journal of the American College of Toxicology, Part B. (Mary Ann Liebert, Inc., 1651 Third Ave., New York, NY 10128) V.1- 1990- Volume(issue)/page/year: 1,196,1992
111	Mercuric nitrate	10045-94-0	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 26 mg/kg Details of toxic effects not reported other than lethal dose value GTPZAB Gigiena Truda i Profesional'nye Zabolevaniya, Labor Hygiene and Occupational Diseases. (VO Mezhunarodnaya Kniga, 113095 Moscow, USSR) V.1-36, 1957-1992. For publisher information, see MTPEEI Volume(issue)/page/year: 25(7),27,1981
112	Endrin * #(T3)	72-20-8	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 3 mg/kg Details of toxic effects not reported other than lethal dose value WRPCA2 World Review of Pest Control. (London, UK) V.1-10, 1962-71. Discontinued. Volume(issue)/page/year: 9,119,1970 LDLo - Lowest published lethal dose Oral Human - man 171 mg/kg Behavioral - convulsions or effect on seizure threshold Kidney/Ureter/Bladder - changes in tubules (including acute renal failure, acute tubular necrosis) Blood - thrombocytopenia HUTODJ Human Toxicology. (Macmillan Press Ltd., Houndmills, Basingstoke, Hants., RG 21 2XS, UK) V.1- 1981- Volume(issue)/page/year: 4,241,1985 LDLo - Lowest published lethal dose Oral Human - woman 234 mg/kg Behavioral - headache Lungs, Thorax, or Respiration - dyspnea Nutritional and Gross Metabolic - body temperature increase NEZAAQ Nippon Eiseigaku Zasshi. Japanese Journal of Hygiene. (Nippon Eisei Gakkai, c/o Kyoto Daigaku Igakubu, Konoe-cho, Yoshida, Sakyo-ku, Kyoto 606, Japan) V.1- 1946- Volume(issue)/page/year: 22,254,1967
113	ANTU * #(T3)	86-88-4	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 6 mg/kg Details of toxic effects not reported other than lethal dose value AFDOAQ Quarterly Bulletin--Association of Food and Drug Officials of the United States. (Denver, CO) V.3-38, 1939-74. Volume(issue)/page/year: 16,47,1952
114	Dinitroresol * #(T3)	534-52-1	TDLo - Lowest published toxic dose Oral Human - man 7500 ug/kg/7D Behavioral - somnolence (general depressed activity) Behavioral - headache CMEP** "Clinical Memoranda on Economic Poisons," U.S. Dept. HEW, Public Health Service, Communicable Disease Center, Atlanta, GA, 1956 Volume(issue)/page/year: -,1,1956 LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 7 mg/kg Details of toxic effects not reported other than lethal dose value DEVEAA Defense des Vegetaux. (Federation Nationale des Groupements de Protection des Cultures, 149, rue de Bercy, 75595 Paris Cedex, 12, France) V.1- 1947- Volume(issue)/page/year: 26,69,1972
115	EPN * #(T3)	2104-64-5	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 7 mg/kg Details of toxic effects not reported other than lethal dose value JPETAB Journal of Pharmacology and Experimental Therapeutics. (Williams & Wilkins Co., 428 E. Preston St., Baltimore, MD 21202) V.1- 1909/10- Volume(issue)/page/year: 112,29,1954
116	Thallium sulfate #(T3 of T1)	7446-18-6	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 16 mg/kg Details of toxic effects not reported other than lethal dose value YAKUDS Gekkan Yakuji. Pharmaceuticals Monthly. (Yakugyo Jihosha, Inaoka Bldg., 2-36 Jimbo-cho, Kanda, Chiyoda-ku, Tokyo 101, Japan) V.1- 1959- Volume(issue)/page/year: 22,291,1980 LDLo - Lowest published lethal dose Oral Human - man 23 mg/kg Peripheral Nerve and Sensation - paresthesia Autonomic Nervous System - other (direct) parasympathomimetic Cardiac - pulse rate increase, without fall in BP NRTXDN Neurotoxicology. (Intox Press, Inc., POB 34075, Little Rock, AR 72203) V.1- 1979- Volume(issue)/page/year: 19,421,1998 LDLo - Lowest published lethal dose Oral Human 7 mg/kg Details of toxic effects not reported other than lethal dose value PCOC** Pesticide Chemicals Official Compendium, Association of the American Pesticide Control Officials, Inc., 1966. (Topeka, KS) Volume(issue)/page/year: -,1126,1966 LDLo - Lowest published lethal dose Oral Human - man 33 mg/kg Spinal Cord - other degenerative changes Peripheral Nerve and Sensation - paresthesia Cardiac - change in rate HBTME* Handbook on the Toxicology of Metals (Third Edition) Edited by: Gunnar F. Nordberg, Bruce A. Fowler, Monica Nordberg and Lars T. Friberg, Elsevier Inc 2007 Volume(issue)/page/year: -,827,2007
117	Pentachlorophenol * #(T3)	87-86-5	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 27 mg/kg Vascular - BP elevation not characterized in autonomic section Endocrine - hyperglycemia Nutritional and Gross Metabolic - body temperature increase JPETAB Journal of Pharmacology and Experimental Therapeutics. (Williams & Wilkins Co., 428 E. Preston St., Baltimore, MD 21202) V.1- 1909/10- Volume(issue)/page/year: 76,104,1942 LDLo - Lowest published lethal dose Oral Human - man 401 mg/kg Behavioral - changes in motor activity (specific assay) Skin and Appendages - sweating Nutritional and Gross Metabolic - body temperature increase EESADV Ecotoxicology and Environmental Safety. (Academic Press, Inc., 1 E. First St., Duluth, MN 55802) V.1- 1977- Volume(issue)/page/year: 1,343,1977
118	Methyl iodide #(E3)	74-88-4	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 76 mg/kg Details of toxic effects not reported other than lethal dose value BIJOAK Biochemical Journal. (Biochemical Soc. Book Depot, POB 32, Commerce Way, Colchester, Essex CO2 8HP, UK) V.1- 1906- Volume(issue)/page/year: 98,38,1966
119	2-Aminopyridine #(I)	504-29-0	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 200 mg/kg Details of toxic effects not reported other than lethal dose value 85JCAE "Prehled Prumyslove Toxikologie; Organicke Latky," Marhold, J., Prague, Czechoslovakia, Avicenum, 1986 Volume(issue)/page/year: -,838,1986
120	1,3-Dichloro 5,5-dimethylhydantoin #(TEEL3 of hydantoin REV 22)	118-52-5	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 542 mg/kg Details of toxic effects not reported other than lethal dose value 85INAS "Documentation of the Threshold Limit Values and Biological Exposure Indices," 5th ed., Cincinnati, OH, American Conference of Governmental Industrial Hygienists, Inc., 1986 Volume(issue)/page/year: 5,183,1986
121	Methylene chloride	75-09-2	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 1600 mg/kg Behavioral - ataxia FAONAU FAO Nutrition Meetings Report Series. (Rome, Italy) No.?-57, 1948-77. Discontinued. Volume(issue)/page/year: 48A,94,1970 LDLo - Lowest published lethal dose Oral Human 357 mg/kg Peripheral Nerve and Sensation - paresthesia Behavioral - somnolence (general depressed activity) Behavioral - convulsions or effect on seizure threshold 34ZIAG "Toxicology of Drugs and Chemicals," Deichmann, W.B., New York, Academic Press, Inc., 1969 Volume(issue)/page/year: -,390,1969

Chemical		CAS Number	Oral Toxicity (LD 50) Report Species/units
122	Tetrahydrofuran #(T3)	109-99-9	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 1650 mg/kg Details of toxic effects not reported other than lethal dose value GAFCC* GAF Material Safety Data Sheet. (GAF Chemicals Corporation, 1361 Alps Road, Wayne, NJ 07470)
123	Tetrafluoroboric acid #(T3)	16872-11-0	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 100 mg/kg Behavioral - somnolence (general depressed activity) Behavioral - ataxia NTIS** National Technical Information Service. (Springfield, VA 22161) Formerly U.S. Clearinghouse for Scientific & Technical Information. Volume(issue)/page/year: OTS0570943
124	Azinphos-ethyl *T3	2642-71-9	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 7 mg/kg Details of toxic effects not reported other than lethal dose value ARSIM* Agricultural Research Service, USDA Information Memorandum. (Beltsville, MD 20705) Volume(issue)/page/year: 20,2,1966
125	Toxaphene #(T3 based on Keplinger 1963 study)	8001-35-2	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 40 mg/kg Behavioral - tetany Lungs, Thorax, or Respiration - respiratory obstruction Nutritional and Gross Metabolic - body temperature decrease VCVPS* "Vrednie chemicheskije veshstva. Prirodnie organicheskie soedinenia" (Hazardous substances. Nature products.) Volkova N.V. et al., Sankt-Peterburg, 1998. Volume(issue)/page/year: -302,1998 LDLo - Lowest published lethal dose Oral Human 28 mg/kg Behavioral - somnolence (general depressed activity) Behavioral - convulsions or effect on seizure threshold Behavioral - coma 3ZIAG "Toxicology of Drugs and Chemicals." Deichmann, W.B., New York, Academic Press, Inc., 1969 Volume(issue)/page/year: -598,1969 LDLo - Lowest published lethal dose Oral Human - man 29 mg/kg Behavioral - convulsions or effect on seizure threshold Lungs, Thorax, or Respiration - cyanosis Lungs, Thorax, or Respiration - other changes CMEP** "Clinical Memoranda on Economic Poisons," U.S. Dept. HEW, Public Health Service, Communicable Disease Center, Atlanta, GA, 1956 Volume(issue)/page/year: -.1956 LDLo - Lowest published lethal dose Oral Human 60 mg/kg Biochemical - Enzyme inhibition, induction, or change in blood or tissue levels - multiple enzyme effects VCVPS* "Vrednie chemicheskije veshstva. Prirodnie organicheskie soedinenia" (Hazardous substances. Nature products.) Volkova N.V. et al., Sankt-Peterburg, 1998.
126	DDT * #(T3)	50-29-3	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 87 mg/kg Details of toxic effects not reported other than lethal dose value DOEAAH Down to Earth. (Dow Chemical USA, Agricultural Products Dept., Midland, MI 48640) V.1- 1945- Volume(issue)/page/year: 35,25,1979 LDLo - Lowest published lethal dose Oral Human - infant 150 mg/kg Lungs, Thorax, or Respiration - acute pulmonary edema BMJOAE British Medical Journal. (British Medical Assoc., BMA House, Tavistock Sq., London WC1H 9JR, UK) V.1- 1857- Volume(issue)/page/year: 2,845,1945 LDLo - Lowest published lethal dose Oral Human 500 mg/kg Behavioral - convulsions or effect on seizure threshold Cardiac - arrhythmias (including changes in conduction) Lungs, Thorax, or Respiration - other changes 85KYAH "Merck Index; an Encyclopedia of Chemicals, Drugs, and Biologicals", 11th ed., Rahway, NJ 07065, Merck & Co., Inc. 1989 Volume(issue)/page/year: 11,446,1989 TDLo - Lowest published toxic dose Oral Human 3.57 mg/kg Sense Organs and Special Senses (Taste) - change in function HBPTO* Handbook of pesticide toxicology. Robert Krieger ed. Academic press, 2001 Volume(issue)/page/year: 2,1323,2001
127	Crag (r) herbicide #(T3)	136-78-7	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 480 mg/kg Lungs, Thorax, or Respiration - chronic pulmonary edema JAFCAU Journal of Agricultural and Food Chemistry. (American Chemical Soc., Distribution Office Dept. 223, POB 57136, West End Sm., Washington, DC 20037) V.1- 1953- Volume(issue)/page/year: 9,382,1961
128	Formic acid #(T3)	64-18-6	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 1100 mg/kg Behavioral - somnolence (general depressed activity) Lungs, Thorax, or Respiration - dyspnea GTPZAB Gigiena Truda i Professional'nye Zabolevaniya. Labor Hygiene and Occupational Diseases. (V/O Mezhdunarodnaya Kniga, 113095 Moscow, USSR) V.1-36, 1957-1992. For publisher information, see MITPEEI Volume(issue)/page/year: 23(12),49,1979 LDLo - Lowest published lethal dose Oral Human - woman 2440 ug/kg Vascular - shock Blood - other hemolysis with or without anemia Nutritional and Gross Metabolic - metabolic acidosis AJEMEN American Journal of Emergency Medicine. (WB Saunders, Philadelphia, PA) V.1- 1983- Volume(issue)/page/year: 7,286,1989 Kidney/Ureter/Bladder - hematuria Nutritional and Gross Metabolic - metabolic acidosis JTCTDW Journal of Toxicology, Clinical Toxicology. (Marcel Dekker, 270 Madison Ave., New York, NY 10016) V.19- 1982- Volume(issue)/page/year: 32,199,1994
129	Ethanolamine #(T3)	141-43-5	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 1720 mg/kg Details of toxic effects not reported other than lethal dose value TXAPA9 Toxicology and Applied Pharmacology. (Academic Press, Inc., 1 E. First St., Duluth, MN 55802) V.1- 1959- Volume(issue)/page/year: 42,417,1977 LD50 - Lethal dose, 50 percent kill Oral Rodent - guinea pig 620 mg/kg Details of toxic effects not reported other than lethal dose value EVSSAV Environmental Space Science. English Translation of Kosmicheskaya Biologiya Meditsina. 1967-70. Volume(issue)/page/year: 2,289,1968
130	Cyclohexanone #(T3)	108-94-1	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 1800 mg/kg Details of toxic effects not reported other than lethal dose value VCVGK* "Vrednie chemicheskije veshstva, galogen i kislород sodergashije organicheskie soedinenia". (Hazardous substances. Galogen and oxygen containing substances), Bandman A.L. et al., Chimia, 1994. Volume(issue)/page/year: -.455,1994 LDLo - Lowest published lethal dose Oral Human 714.3 mg/kg Details of toxic effects not reported other than lethal dose value VCVGK* "Vrednie chemicheskije veshstva, galogen i kislород sodergashije organicheskie soedinenia". (Hazardous substances. Galogen and oxygen containing substances), Bandman A.L. et al., Chimia, 1994. Volume(issue)/page/year: -.455,1994
131	Cadmium	7440-43-9	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 2330 mg/kg Details of toxic effects not reported other than lethal dose value 85PDAD "Evaluation of the Impact of Cadmium on the Health of Man", Oxford, UK. Pergamon Press Ltd., 1978 Volume(issue)/page/year: -.67,1978
132	Sodium borate	12179-04-3	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 2660 mg/kg Details of toxic effects not reported other than lethal dose value USXXAM United States Patent Document. (U.S. Patent Office, Box 9, Washington, DC 20231) Volume(issue)/page/year: #6365129

Chemical		CAS Number	Oral Toxicity (LD 50) Report Species/units
133	Xylenes #(T3)	95-47-6 or 1330-20-7 ?	<i>Xylenes (1330-20-7): LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 4300 mg/kg Liver - other changes Kidney/Ureter/Bladder - other changes AMIHAB AMA Archives of Industrial Health. (Chicago, IL) V.11-21, 1955-60. For publisher information, see AEHLAU. Volume(issue)/page/year: 14,387,1956 o-xylenes (95-47-6): LD50 Lethal dose, 50 percent kill Oral Rodent - rat 3567 mg/kg Details of toxic effects not reported other than lethal dose value VCVGH* "Vrednie chemicheskije veshstva, galogenproisvodnie uglevodorodov". (Hazardous substances: Galogenated hydrocarbons) Bandman A.L. et al., Chimia, 1990. Volume(issue)/page/year: ~160,1990</i>
134	Bismuth *T3 of BiOCl	7440-69-9	<i>LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 5 gm/kg Details of toxic effects not reported other than lethal dose value ENTOX* Encyclopedia of Toxicology: Reference Book, Elsevier, 2005 Volume(issue)/page/year: ~312,2005</i>
135	Mancozeb	8018-01-7	<i>LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 5 gm/kg Details of toxic effects not reported other than lethal dose value 85JFAN "Agrochemicals Handbook," with updates, Hartley, D., and H. Kidd, eds., Nottingham, Royal Soc. of Chemistry, 1983-86 Volume(issue)/page/year: A251,1986</i>
136	Boron *T3 of B2O3	7440-42-8	<i>B2O3: LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 3150 mg/kg Details of toxic effects not reported other than lethal dose value VCVNI* "Vrednie chemicheskije veshstva. Neorganicheskie soedinenia elementov I-IV groopp" (Hazardous substances. Inorganic substances containing I-IV group elements), Filov V.A., Chimia, 1988. Volume(issue)/page/year: ~193,1988 Boron: LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 650 mg/kg Details of toxic effects not reported other than lethal dose value GISAAA Gigiena i Sanitariya. For English translation, see HYSAAV. (V/O Mezhunarodnaya Kniga, 113095 Moscow, USSR) V.1- 1936- Volume(issue)/page/year: 35(11),11,1970</i>
137	Furfural #(E3)	98-01-1	<i>LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 65 mg/kg Details of toxic effects not reported other than lethal dose value BCTKAG Bromatologia i Chemia Toksikologiczna. (Ars Polona, POB 1001, 00-068 Warsaw 1, Poland) V.4- 1971- Volume(issue)/page/year: 13,371,1980</i>
138	Hydrogen peroxide #(E3)	7722-84-1	<i>LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 376 mg/kg Gastrointestinal - peritonitis Blood - pigmented or nucleated red blood cells Blood - changes in leukocyte (WBC) count STGNBT "Spravochnik po Toksikologii i Gigienicheskim Normativam (PDK) Potensial'no Opasnykh Khimicheskikh Veshchestv" Kushneva, V.S., and R.B. Gorshkova, eds. 46, Zhivopisnaya St., 123182, Moscow, Russia, Izdat 1999 Volume(issue)/page/year: ~39,1999</i>
139	Dicofol #(T3)	115-32-2	<i>TDLo - Lowest published toxic dose Oral Human - woman 800 uL/kg Sense Organs and Special Senses (Eye) - miosis (pupillary constriction) Behavioral - excitement Gastrointestinal - hypermotility, diarrhea YAKUD5 Gekkan Yakuji. Pharmaceuticals Monthly. (Yakugyo Jihosha, Inaoka Bldg., 2-36 Jinbo-cho, Kanda, Chiyoda-ku, Tokyo 101, Japan) V.1- 1959- Volume(issue)/page/year: 34,1232,1992 LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 575 mg/kg Details of toxic effects not reported other than lethal dose value VCVGK* "Vrednie chemicheskije veshstva, galogen i kislorod sodergashie organicheskie soedinenia". (Hazardous substances. Galogen and oxygen containing substances), Bandman A.L. et al., Chimia, 1994. Volume(issue)/page/year: ~191,1994</i>
140	Dichlorodifluoromethane #(T3)	75-71-8	<i>LD - Lethal dose Oral Rodent - rat >5600 ug/kg Details of toxic effects not reported other than lethal dose value GISAAA Gigiena i Sanitariya. For English translation, see HYSAAV. (V/O Mezhunarodnaya Kniga, 113095 Moscow, USSR) V.1- 1936- Volume(issue)/page/year: 52(3),73,1987</i>
141	Sodium azide (#T3)	26628-22-8	<i>LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 27 mg/kg Details of toxic effects not reported other than lethal dose value FMCHA2 Farm Chemicals Handbook. (Meister Pub., 37841 Euclid Ave., Willoughby, OH 44094) Volume(issue)/page/year: ~C32,1991 LDLo - Lowest published lethal dose Oral Human - woman 786 mg/kg Behavioral - convulsions or effect on seizure threshold Behavioral - coma Cardiac - arrhythmias (including changes in conduction) MTAEEB Medical Toxicology and Adverse Drug Experience. (Adis International Ltd., Private Bag 65901, Mairangi Bay, Auckland 10, N.Z.) V.4- 1989- Volume(issue)/page/year: 4,219,1989 LDLo - Lowest published lethal dose Oral Human - man 29 mg/kg Brain and Coverings - increased intracranial pressure Cardiac - pulse rate Lungs, Thorax, or Respiration - acute pulmonary edema MTAEEB Medical Toxicology and Adverse Drug Experience. (Adis International Ltd., Private Bag 65901, Mairangi Bay, Auckland 10, N.Z.) V.4- 1989- Volume(issue)/page/year: 4,219,1989 LDLo - Lowest published lethal dose Oral Human - man 129 mg/kg Behavioral - coma Cardiac - pulse rate Cardiac - other changes JATOD3 Journal of Analytical Toxicology. (Preston Pub. Inc., POB 48312, Niles, IL 60648) V.1- 1977- Volume(issue)/page/year: 20,134,1996 LDLo - Lowest published lethal dose Oral Human - woman 14 mg/kg Behavioral - convulsions or effect on seizure threshold Cardiac - arrhythmias (including changes in conduction) Cardiac - change in force of contraction JFCAS Journal of Forensic Sciences. (American Soc. for Testing and Materials, 1916 Race St., Philadelphia, PA 19103) V.1- 1956- Volume(issue)/page/year: 35,193,1990 LDLo - Lowest published lethal dose Oral Human - man 143 mg/kg Sense Organs and Special Senses (Eye) - mydriasis</i>
142	Heptachlor * #(T3)	76-44-8	<i>LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 40 mg/kg Details of toxic effects not reported other than lethal dose value PHJOAV Pharmaceutical Journal. (Pharmaceutical Soc. of Great Britain, 1 Lambeth High St., London, SE1 7JN, UK) V.131- 1933- Volume(issue)/page/year: 185,361,1960</i>

Chemical		CAS Number	Oral Toxicity (LD 50) Report Species/units
143	Chlorinated camphene * #(T3)	8001-35-2	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 40 mg/kg Behavioral - tetany Lungs, Thorax, or Respiration - respiratory obstruction Nutritional and Gross Metabolic - body temperature decrease VCVPS* "Vrednie chemicheskie veshstva. Prirodnie organicheskie soedinenia" (Hazardous substances. Nature products.) Volkova N.V. et al., Sankt-Peterburg, 1998. Volume(issue)/page/year: -,302,1998 LDLo - Lowest published lethal dose Oral Human 28 mg/kg Behavioral - somnolence (general depressed activity) Behavioral - convulsions or effect on seizure threshold Behavioral - coma 34ZIAG "Toxicology of Drugs and Chemicals," Deichmann, W.B., New York, Academic Press, Inc., 1969 Volume(issue)/page/year: -,598,1969 LDLo - Lowest published lethal dose Oral Human - man 29 mg/kg Behavioral - convulsions or effect on seizure threshold Lungs, Thorax, or Respiration - cyanosis Lungs, Thorax, or Respiration - other changes CMEP** "Clinical Memoranda on Economic Poisons," U.S. Dept. HEW, Public Health Service, Communicable Disease Center, Atlanta, GA, 1956 Volume(issue)/page/year: -,1956
144	Dimethyl 1,2-dibromo 2,2-dichlorethyl phosphate #(I)	300-76-5	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 92 mg/kg Behavioral - tremor Gastrointestinal - changes in structure or function of salivary glands Gastrointestinal - hypermotility, diarrhea ATDAEI Acute Toxicity Data, Journal of the American College of Toxicology, Part B. (Mary Ann Liebert, Inc., 1651 Third Ave., New York, NY 10128) V.1- 1990- Volume(issue)/page/year: 1.90,1990
145	p-Anisidine * #(T3)	104-94-9	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 1320 mg/kg Details of toxic effects not reported other than lethal dose value TL5MA6 Trudy Leningradskogo Sanitar'no-Gigienicheskogo Meditsinskogo Instituta. (Leningrad, Russia) V.1-145, 1949-82. Discontinued. Volume(issue)/page/year: 128,14,1979
146	Dimethylformamide	68-12-2	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 2000 mg/kg Details of toxic effects not reported other than lethal dose value CBINAS Chemo-Biological Interactions. (Elsevier Scientific Pub. Ireland Ltd., POB 85, Limerick, Ireland) V.1- 1969- Volume(issue)/page/year: 148,1,2004 LDLo - Lowest published lethal dose Oral Rodent - rat 2000 mg/kg Lungs, Thorax, or Respiration - other changes Liver - other changes Kidney/Ureter/Bladder - other changes TPKVAL Toksikologiya Novykh Promyshlennykh Khimicheskikh Veshchestv. Toxicology of New Industrial Chemical Substances. For English translation, see TNICS*. (Izdatel'stvo Meditsina, Moscow, USSR) No.1- 1961- Volume(issue)/page/year: 1.54,1961
147	Ammonium sulfamate * #(T3)	7773-06-0	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 2 gm/kg Details of toxic effects not reported other than lethal dose value AMHAB AMA Archives of Industrial Health. (Chicago, IL) V.11-21, 1955-60. For publisher information, see AEHLAU. Volume(issue)/page/year: 14,178,1956
148	Cyclohexane #(T3)	110-82-7	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 12705 mg/kg Details of toxic effects not reported other than lethal dose value ENTOX* Encyclopedia of Toxicology: Reference Book, Elsevier, 2005 Volume(issue)/page/year: -,705,2005
149	p-Nitrochlorobenzene * #(T3)	100-00-5	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 420 mg/kg Behavioral - somnolence (general depressed activity) Liver - fatty liver degeneration Blood - methemoglobinemia-carboxyhemoglobin AGGHAR Archiv fuer Gewerbepathologie und Gewerbelhygiene. (Berlin, Ger.) V.1-18, 1930-61. For publisher information, see IAHDW. Volume(issue)/page/year: 17,217,1959
150	Morpholine #(T3)	110-91-8	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 1738 mg/kg Kidney/Ureter/Bladder - changes in blood vessels or in circulation of kidney TPKVAL Toksikologiya Novykh Promyshlennykh Khimicheskikh Veshchestv. Toxicology of New Industrial Chemical Substances. For English translation, see TNICS*. (Izdatel'stvo Meditsina, Moscow, USSR) No.1- 1961- Volume(issue)/page/year: 8,60,1966
151	Aldrin * #(T3)	309-00-2	TDL0 - Lowest published toxic dose Oral Human 14 mg/kg Behavioral - tremor Behavioral - excitement Gastrointestinal - nausea or vomiting 34ZIAG "Toxicology of Drugs and Chemicals," Deichmann, W.B., New York, Academic Press, Inc., 1969 Volume(issue)/page/year: -,82,1969 LDLo - Lowest published lethal dose Oral Human - child 1250 ug/kg Details of toxic effects not reported other than lethal dose value 34ZIAG "Toxicology of Drugs and Chemicals," Deichmann, W.B., New York, Academic Press, Inc., 1969 Volume(issue)/page/year: -,82,1969 LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 38 mg/kg Details of toxic effects not reported other than lethal dose value HBPTO* Handbook of pesticide toxicology. Robert Krieger ed, Academic press, 2001 Volume(issue)/page/year: 2,1136,2001
152	Dieldrin * #(T3)	60-57-1	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 38300 ug/kg Details of toxic effects not reported other than lethal dose value JAFCAU Journal of Agricultural and Food Chemistry. (American Chemical Soc., Distribution Office Dept. 223, POB 57136, West End Sm., Washington, DC 20037) V.1- 1953- Volume(issue)/page/year: 3,402,1955 LDLo - Lowest published lethal dose Oral Human - man 65 mg/kg Details of toxic effects not reported other than lethal dose value 34ZIAG "Toxicology of Drugs and Chemicals," Deichmann, W.B., New York, Academic Press, Inc., 1969 Volume(issue)/page/year: -,215,1969
153	Ethylene chlorohydrin	107-07-3	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 71 mg/kg Behavioral - somnolence (general depressed activity) Lungs, Thorax, or Respiration - dyspnea HYSAAV Hygiene and Sanitation (USSR). English translation of GISAAA. (Springfield, VA) 1964-71. Discontinued. Volume(issue)/page/year: 36(4-6),376,1971 LDLo - Lowest published lethal dose Oral Human - man 330 mg/kg Details of toxic effects not reported other than lethal dose value JTCTDW Journal of Toxicology, Clinical Toxicology. (Marcel Dekker, 270 Madison Ave., New York, NY 10016) V.19- 1982- Volume(issue)/page/year: 39,587,2001 LDLo - Lowest published lethal dose Oral Human - child 396 mg/kg Details of toxic effects not reported other than lethal dose value JTCTDW Journal of Toxicology, Clinical Toxicology. (Marcel Dekker, 270 Madison Ave., New York, NY 10016) V.19- 1982- Volume(issue)/page/year: 39,587,2001 LDLo - Lowest published lethal dose Oral Human - woman 800 mg/kg Details of toxic effects not reported other than lethal dose value CTXAO Clinical Toxicology. (New York, NY) V.1-18, 1968-81. For publisher information, see JTCTDW. Volume(issue)/page/year: 39,587,2001
154	Dichloroethyl ether #(T3)	111-44-4	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 75 mg/kg Details of toxic effects not reported other than lethal dose value JIHAB Journal of Industrial Hygiene and Toxicology. (Cambridge, MA) V.18-31, 1936-49. For publisher information, see AEHLAU. Volume(issue)/page/year: 30,63,1948

	Chemical	CAS Number	Oral Toxicity (LD 50) Report Species/units
155	Isopropylamine #(T3)	75-31-0	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 111 mg/kg Behavioral - somnolence (general depressed activity) Lungs, Thorax, or Respiration - dyspnea Gastrointestinal - other changes NTIS** National Technical Information Service. (Springfield, VA 22161) Formerly U.S. Clearinghouse for Scientific & Technical Information. Volume(issue)/page/year: OTS0542011
156	Pirimicarb #(T3 as carbamate ester)	5947-49-9	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 155 mg/kg Behavioral - convulsions or effect on seizure threshold Biochemical - Enzyme inhibition, induction, or change in blood or tissue levels - cytochrome oxidases (including oxidative phosphorylation) EKFAE9 Eksperimental'naya i Klinicheskaya Farmakologiya. Experimental and Clinical Pharmacology. (Mezhdunarodnaya Kniga, ul. B. Yakimanka, 39, 117049 Moscow, Russia) V.55- 1992- Volume(issue)/page/year: 55,51,1992
157	Malathion * #(T3)	121-75-5	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 290 mg/kg Details of toxic effects not reported other than lethal dose value 85GMAT "Toxicometric Parameters of Industrial Toxic Chemicals Under Single Exposure," Izmerov, N.F., et al., Moscow, Centre of International Projects, GKNT, 1982 Volume(issue)/page/year: -56,1982 LDLo - Lowest published lethal dose Oral Human - woman 246 mg/kg Vascular - BP lowering not characterized in autonomic section Lungs, Thorax, or Respiration - chronic pulmonary edema Skin and Appendages - dermatitis, other (after systemic exposure) AEHLAU Archives of Environmental Health. (Heldref Pub., 4000 Albemarle St., NW, Washington, DC 20016) V.1- 1960- Volume(issue)/page/year: 33,240,1978
158	Phosphorus pentasulfide * #(T3)	1314-80-3	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 389 mg/kg Details of toxic effects not reported other than lethal dose value 28ZPAK "Sbornik Vysledku Toxikologickeho Vysetreni Latek A Pripravku," Marhold, J.V., Institut Pro Vychovu Vedoucic Pracovniku Chemického Prumyslu Praha, Czechoslovakia, 1972 Volume(issue)/page/year: -,16,1972
159	Triethylamine #(T3)	121-44-8	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 460 mg/kg Details of toxic effects not reported other than lethal dose value AMIHBC AMA Archives of Industrial Hygiene and Occupational Medicine. (Chicago, IL) V.2-10, 1950-54. For publisher information, see AEHLAU. Volume(issue)/page/year: 4,119,1951
160	Diethylamine #(T3)	109-89-7	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 540 mg/kg Details of toxic effects not reported other than lethal dose value ENTOX* Encyclopedia of Toxicology: Reference Book, Elsevier, 2005 Volume(issue)/page/year: -34,2005
161	o-Toluidine #(T3)	95-53-4	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 670 mg/kg Blood - normocytic anemia Blood - pigmented or nucleated red blood cells Blood - methemoglobinemia-carboxyhemoglobin IMEMDT IARC Monographs on the Evaluation of Carcinogenic Risk of Chemicals to Man. (WHO Publications Centre USA, 49 Sheridan Ave., Albany, NY 12210) V.1- 1972- Volume(issue)/page/year: 27,155,1982
162	Bromoform #(T3)	75-25-2	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 933 mg/kg Lungs, Thorax, or Respiration - dyspnea NTPTR* National Toxicology Program Technical Report Series. (Research Triangle Park, NC 27709) No.206- Volume(issue)/page/year: NTP-TR-350,1989 LDLo - Lowest published lethal dose Oral Human 143 mg/kg Details of toxic effects not reported other than lethal dose value 34ZIAG "Toxicology of Drugs and Chemicals," Deichmann, W.B., New York, Academic Press, Inc., 1969 Volume(issue)/page/year: -,141,1969
163	N,N-Dimethylaniline #(T3)	121-69-7	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 951 mg/kg Behavioral - somnolence (general depressed activity) Behavioral - tremor Lungs, Thorax, or Respiration - cyanosis NTIS** National Technical Information Service. (Springfield, VA 22161) Formerly U.S. Clearinghouse for Scientific & Technical Information. Volume(issue)/page/year: OTS0571982 LDLo - Lowest published lethal dose Oral Human 50 mg/kg Gastrointestinal - nausea or vomiting Gastrointestinal - other changes NCPBBY National Clearinghouse for Poison Control Centers, Bulletin. (U.S. Department of Health, Education, and Welfare, Washington, DC) Volume(issue)/page/year: Jan/Feb,1969
164	Chlorobenzene	108-90-7	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 1110 mg/kg Behavioral - somnolence (general depressed activity) Behavioral - tremor Behavioral - ataxia SRTCAC Science Reports of the Research Institutes, Tohoku University, Series C: Medicine. (Tohoku University, Research Institute for Tuberculosis and Cancer, 4-1 Seiryomachi, Sendai, Japan) V.1- 1949- Volume(issue)/page/year: 36(1-4),10,1989
165	Isoamyl alcohol (primary and secondary) #(T3)	123-51-3	Primary: LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 1300 mg/kg Liver - fatty liver degeneration Kidney/Ureter/Bladder - other changes Blood - other changes SAMJAF South African Medical Journal. (Medical Assoc. of South Africa, Secy., P.O. Box 643, Cape Town, S. Africa) V.6- 1932- Volume(issue)/page/year: 43,795,1969 Secondary: LD50 - Lethal dose, 50 percent kill Oral Rodent - rabbit 2821 mg/kg Sense Organs and Special Senses (Eye) - corneal damage Cardiac - pulse rate Lungs, Thorax, or Respiration - dyspnea IMSUAI Industrial Medicine and Surgery. (Northbrook, IL) V.18-42, 1949-73. For publisher information, see IOHSA5. Volume(issue)/page/year: 41,31,1972
166	n-Pentane #(T3)	109-66-0	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat >2000 mg/kg Details of toxic effects not reported other than lethal dose value JTEHFS Journal of Toxicology and Environmental Health, Part A. (Taylor & Francis, 47 Runway Rd., Suite G, Levittown, PA 19057) V.53- 1998- Volume(issue)/page/year: 58,35,1999
167	Biphenyl * #(T3)	92-52-4	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 2140 mg/kg Behavioral - somnolence (general depressed activity) Behavioral - muscle weakness Gastrointestinal - alteration in gastric secretion NTIS** National Technical Information Service. (Springfield, VA 22161) Formerly U.S. Clearinghouse for Scientific & Technical Information. Volume(issue)/page/year: OTS0546109
168	Buprofezin #(T3 based on limited acute toxicity pesticide)	69327-76-0	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 2198 mg/kg Details of toxic effects not reported other than lethal dose value PEMNDP Pesticide Manual. (The British Crop Protection Council, 20 Bridport Rd., Thornton Heath CR4 7QG, UK) V.1- 1968- Volume(issue)/page/year: 9,105,1991
169	Ethyl benzene	100-41-4	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 3500 mg/kg Liver - other changes Kidney/Ureter/Bladder - other changes AMIHAB AMA Archives of Industrial Health. (Chicago, IL) V.11-21, 1955-60. For publisher information, see AEHLAU. Volume(issue)/page/year: 14,387,1956

Chemical		CAS Number	Oral Toxicity (LD 50) Report Species/units
170	Thiophanate methyl #(T3 of carbamate fungicides)	23564-05-8	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 6640 mg/kg Sense Organs and Special Senses (Olfaction) - olfactory nerve change Sense Organs and Special Senses (Eye) - lacrimation Behavioral - convulsions or effect on seizure threshold TXAPA9 Toxicology and Applied Pharmacology. (Academic Press, Inc., 1 E. First St., Duluth, MN 55802) V.1- 1959- Volume(issue)/page/year: 23,606,1972
171	Dibutyl phthalate *(T3)	84-74-2	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 7499 mg/kg Details of toxic effects not reported other than lethal dose value WDZAEK Weisheng Dulixue Zachi. Journal of Health Toxicology. (Weisheng Dulixue Zachi Bianjibu, Dongdaqiao, Chaoyang Menwai, Beijing, Peop. Rep. China) V.1- 1987 Volume(issue)/page/year: 5,264,1991 TDLo - Lowest published toxic dose Oral Human 140 mg/kg Behavioral - hallucinations, distorted perceptions Gastrointestinal - nausea or vomiting Kidney/Ureter/Bladder - other changes SMWOAS Schweizerische Medizinische Wochenschrift. (Schwabe & Co., Steintorst 13, 4010 Basel, Switzerland) V.50- 1920- Volume(issue)/page/year: 84,1243,1954
172	Isobutyl acetate #(T3)	110-19-0	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 13400 mg/kg Details of toxic effects not reported other than lethal dose value NPIRI* Raw Material Data Handbook, Vol.1: Organic Solvents, 1974. (National Assoc. of Printing Ink Research Institute, Francis McDonald Sinclair Memorial Laboratory, Lehigh Univ., Bethlehem, PA 18015) Volume(issue)/page/year: 1,8,1974
173	n-Hexane	110-54-3	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 25 gm/kg Details of toxic effects not reported other than lethal dose value INHEAO Industrial Health. (National Institute of Industrial Health, 6-21-1 Nagao, Tama-ku, Kawasaki, 213 Japan) V.1- 1963- Volume(issue)/page/year: 32,145,1994
174	Ethyl ether #(T3)	60-29-7	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 1215 mg/kg Details of toxic effects not reported other than lethal dose value TXAPA9 Toxicology and Applied Pharmacology. (Academic Press, Inc., 1 E. First St., Duluth, MN 55802) V.1- 1959- Volume(issue)/page/year: 19,699,1971 LDLo - Lowest published lethal dose Oral Human 260 mg/kg Details of toxic effects not reported other than lethal dose value 85DCAI "Poisoning; Toxicology. Symptoms, Treatments," 2nd ed., Arena, J.M., Springfield, IL, C.C. Thomas, 1970 Volume(issue)/page/year: 2,73,1970
175	Benomyl	17804-35-2	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat >10 gm/kg Details of toxic effects not reported other than lethal dose value ENTOX* Encyclopedia of Toxicology: Reference Book, Elsevier, 2005 Volume(issue)/page/year: -248,2005
176	Di-syston #(T3)	298-04-4	TDLo - Lowest published toxic dose Oral Human - woman 800 ug/kg Behavioral - hallucinations, distorted perceptions Behavioral - convulsions or effect on seizure threshold Lungs, Thorax, or Respiration - other changes JJTOEX Japanese Journal of Toxicology. (Yakugyo Jihosha, Hokushin Bldg., 2-36 Jinbo-cho, Kanda, Chiyoda-ku, Tokyo, 101, Japan) V.1- 1988- Volume(issue)/page/year: 8,69,1995 LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 2600 ug/kg Details of toxic effects not reported other than lethal dose value YKYUA6 Yakyoku. Pharmacy. (Nanzando, 4-1-11, Yushima, Bunkyo-ku, Tokyo, Japan) V.1- 1950- Volume(issue)/page/year: 37,717,1986
177	Phosphamidon #(T3)	13171-21-6	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 8 mg/kg Details of toxic effects not reported other than lethal dose value 85JCAE "Prehled Prumyslove Toxikologie; Organické Latky," Marhold, J., Prague, Czechoslovakia, Avicenum, 1986 Volume(issue)/page/year: -1138,1986
178	Phosphorus trichloride	7719-12-2	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 18 mg/kg Behavioral - food intake (animal) Lungs, Thorax, or Respiration - chronic pulmonary edema Gastrointestinal - peritonitis ATDAEI Acute Toxicity Data. Journal of the American College of Toxicology, Part B. (Mary Ann Liebert, Inc., 1651 Third Ave., New York, NY 10128) V.1- 1990- Volume(issue)/page/year: 1,71,1990
179	Tetramethyl succinonitrile #(I)	3333-52-6	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 27 mg/kg Behavioral - somnolence (general depressed activity) Behavioral - tremor Lungs, Thorax, or Respiration - pulmonary emboli NTIS* National Technical Information Service. (Springfield, VA 22161) Formerly U.S. Clearinghouse for Scientific & Technical Information. Volume(issue)/page/year: OTS0555206
180	Acrylonitrile	107-13-1	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 78 mg/kg Behavioral - convulsions or effect on seizure threshold Lungs, Thorax, or Respiration - dyspnea Gastrointestinal - changes in structure or function of salivary glands JHEMA2 Journal of Hygiene, Epidemiology, Microbiology, and Immunology. (Avicenum, Malostranske namesit 28, 11802 Prague 1, Czechoslovakia) V.1- 1957- Volume(issue)/page/year: 3,106,1959
181	Methylamine	74-89-5	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 100 mg/kg Details of toxic effects not reported other than lethal dose value ENTOX* Encyclopedia of Toxicology: Reference Book, Elsevier, 2005 Volume(issue)/page/year: -86,2005
182	o-Chlorobenzylidene malononitrile *(T3)	2698-41-1	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 178 mg/kg Gastrointestinal - gastritis AEHLAU Archives of Environmental Health. (Heldref Pub., 4000 Albemarle St., NW, Washington, DC 20016) V.1- 1960- Volume(issue)/page/year: 24,449,1972
183	Bromoxynil #(T3-as naptha solution only)	1689-84-5	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 190 mg/kg Details of toxic effects not reported other than lethal dose value WRPCA2 World Review of Pest Control. (London, UK) V.1-10, 1962-71. Discontinued. Volume(issue)/page/year: 9,119,1970
184	Pindone *(I)	83-26-1	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 280 mg/kg Behavioral - tremor Behavioral - convulsions or effect on seizure threshold Behavioral - excitement TXAPA9 Toxicology and Applied Pharmacology. (Academic Press, Inc., 1 E. First St., Duluth, MN 55802) V.1- 1959- Volume(issue)/page/year: 2,88,1960
185	2,4,5-T *(T3)	93-76-5	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 300 mg/kg Details of toxic effects not reported other than lethal dose value RREVAH Residue Reviews. (Springer-Verlag New York, Inc., Service Center, 44 Hartz Way, Secaucus, NJ 07094) V.1- 1962- Volume(issue)/page/year: 10,97,1965
186	Rotenone *(T3)	83-79-4	LDLo - Lowest published lethal dose Oral Human 143 mg/kg Gastrointestinal - other changes 34ZIAG "Toxicology of Drugs and Chemicals," Deichmann, W.B., New York, Academic Press, Inc., 1969 Volume(issue)/page/year: -521,1969 LD50 - Lethal dose, 50 percent kill Oral Human 300 mg/kg Details of toxic effects not reported other than lethal dose value ENTOX* Encyclopedia of Toxicology: Reference Book, Elsevier, 2005 Volume(issue)/page/year: .744,2005

	Chemical	CAS Number	Oral Toxicity (LD 50) Report Species/units
187	Fenvalerate	51630-58-1	<i>Alpha</i> - LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 325 mg/kg Details of toxic effects not reported other than lethal dose value FMCHA2 Farm Chemicals Handbook. (Meister Pub., 37841 Euclid Ave., Willoughby, OH 44094) Volume(issue)/page/year: -,C287,1991
188	Profenofos #(I)	41198-08-7	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 358 mg/kg Details of toxic effects not reported other than lethal dose value PEMNDP Pesticide Manual. (The British Crop Protection Council, 20 Bridport Rd., Thornton Heath CR4 7QG, UK) V.1- 1968- Volume(issue)/page/year: 9,705,1991 LDLo - Lowest published lethal dose Oral Human - woman 2240 uL/kg Sense Organs and Special Senses (Eye) - miosis (pupillary constriction) Gastrointestinal - changes in structure or function of esophagus Gastrointestinal - other changes JTCTDW Journal of Toxicology, Clinical Toxicology. (Marcel Dekker, 270 Madison Ave., New York, NY 10016) V.19- 1982- Volume(issue)/page/year: 36,63,1998
189	Ferbam * #(I)	14484-64-1	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 1130 mg/kg Details of toxic effects not reported other than lethal dose value FATOAO Farmakologiya i Toksikologiya (Moscow). For English translation, see PHTXA6 and RPTOAN. (V/O Mezhdunarodnaya Kniga, 113095 Moscow, USSR) V.2- 1939- Volume(issue)/page/year: 32,356,1969
190	Ethyl bromide #(T3)	74-96-4	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 1350 mg/kg Details of toxic effects not reported other than lethal dose value 85GMAT "Toxicometric Parameters of Industrial Toxic Chemicals Under Single Exposure," Izmerov, N.F., et al., Moscow, Centre of International Projects, GKNT, 1982 Volume(issue)/page/year: -,65,1982
191	n-Amyl acetate #(T3)	628-63-7	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat >1600 mg/kg Details of toxic effects not reported other than lethal dose value NTIS** National Technical Information Service. (Springfield, VA 22161) Formerly U.S. Clearinghouse for Scientific & Technical Information. Volume(issue)/page/year: OTS0556694
192	n-Propyl alcohol #(T3)	71-23-8	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 1870 mg/kg Details of toxic effects not reported other than lethal dose value AMIHBC AMA Archives of Industrial Hygiene and Occupational Medicine. (Chicago, IL) V.2-10, 1950-54. For publisher information, see AEHLAU. Volume(issue)/page/year: 10,61,1954 LDLo - Lowest published lethal dose Oral Human - woman 5700 mg/kg Cardiac - other changes Lungs, Thorax, or Respiration - other changes ATXKA8 Archiv fuer Toxikologie. (Berlin, Fed. Rep. Ger.) V.15-31, 1954-74. For publisher information, see ARTODN. Volume(issue)/page/year: 16,84,1956
193	Methyl Cellosolve (r) acetate #(I)	110-49-6	LD16 - Lethal dose Oral Rodent - rat 2600 mg/kg Behavioral - convulsions or effect on seizure threshold Lungs, Thorax, or Respiration - respiratory depression TOVEFN Toksikologicheskii Vestnik. (18-20 Vadkovskii per. Moscow, 101479, Russia) History Unknown Volume(issue)/page/year: (1),28,1996 LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 2900 mg/kg Behavioral - convulsions or effect on seizure threshold Lungs, Thorax, or Respiration - dyspnea Lungs, Thorax, or Respiration - respiratory depression TOVEFN Toksikologicheskii Vestnik. (18-20 Vadkovskii per. Moscow, 101479, Russia) History Unknown Volume(issue)/page/year: (1),27,1996
194	Triphenyl phosphate*	115-86-6	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 3500 mg/kg Behavioral - tremor Behavioral - ataxia Gastrointestinal - hypermotility, diarrhea ARZNAD Arzneimittel-Forschung. Drug Research. (Editio Cantor Verlag, Postfach 1255, W-7960 Aulendorf, Fed. Rep. Ger.) V.1- 1951- Volume(issue)/page/year: 7,585,1957
195	Hexachloroethane #(T3)	67-72-1	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 4460 mg/kg Details of toxic effects not reported other than lethal dose value AIHAAP American Industrial Hygiene Association Journal. (AIHA, 475 Wolf Ledges Pkwy., Akron, OH 44311) V.19- 1958- Volume(issue)/page/year: 40,187,1979
196	Dipropylene glycol methyl ether #(T3)	34590-94-8	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 5400 uL/kg Details of toxic effects not reported other than lethal dose value AMIHBC AMA Archives of Industrial Hygiene and Occupational Medicine. (Chicago, IL) V.2-10, 1950-54. For publisher information, see AEHLAU. Volume(issue)/page/year: 9,509,1954
197	TEPP * #(T3)	107-49-3	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 500 ug/kg Details of toxic effects not reported other than lethal dose value PHJOAV Pharmaceutical Journal. (Pharmaceutical Soc. of Great Britain, 1 Lambeth High St., London, SE1 7JN, UK) V.131- 1933- Volume(issue)/page/year: 185,361,1960 LDLo - Lowest published lethal dose Oral Human 1429 ug/kg Peripheral Nerve and Sensation - paresthesia Behavioral - excitement Gastrointestinal - nausea or vomiting CMEP** "Clinical Memoranda on Economic Poisons," U.S. Dept. HEW, Public Health Service, Communicable Disease Center, Atlanta, GA, 1956 Volume(issue)/page/year: -,1,1956
198	Sodium borohydride #(T3)	16940-66-2	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 162 mg/kg Sense Organs and Special Senses (Eye) - effect, not otherwise specified Behavioral - convulsions or effect on seizure threshold Lungs, Thorax, or Respiration - structural or functional change in trachea or bronchi STGNBT "Spravochnik po Toksikologii i Gigienicheskim Normativam (PDK) Potentsial'no Opasnykh Khimicheskikh Veshchestv" Kushneva, V.S., and R.B. Gorshkova, eds. 46, Zhivopisnaya St., 123182, Moscow, Russia, Izdat 1999 Volume(issue)/page/year: -,177,1999
199	Methylene bisphenyl isocyanate * #(E3)	101-68-8	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 9200 mg/kg Behavioral - somnolence (general depressed activity) Behavioral - ataxia Nutritional and Gross Metabolic - body temperature decrease NTIS** National Technical Information Service. (Springfield, VA 22161) Formerly U.S. Clearinghouse for Scientific & Technical Information. Volume(issue)/page/year: OTS0516728
200	Phosdrin * #(T3) (Mevinphos)	7786-34-7	TDLo - Lowest published toxic dose Oral Human - man 700 ug/kg/28D (intermittent) Peripheral Nerve and Sensation - recording from peripheral motor nerve TXAP9 Toxicology and Applied Pharmacology. (Academic Press, Inc., 1 E. First St., Duluth, MN 55802) V.1- 1959- Volume(issue)/page/year: 42,351,1977 LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 3 mg/kg Details of toxic effects not reported other than lethal dose value DOEAAH Down to Earth. (Dow Chemical USA, Agricultural Products Dept., Midland, MI 48640) V.1- 1945- Volume(issue)/page/year: 35,25,1979

Chemical		CAS Number	Oral Toxicity (LD 50) Report Species/units
201	Parathion *	56-38-2	<i>Parathion S: LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 4410 ug/kg Details of toxic effects not reported other than lethal dose value 28ZPAK "Sbornik Vysledku Toxikologickeho Vysetreni Latek A Pripravku," Marhold, J.V., Institut Pro Vychovu Vedoucien Pracovniku Chemickeho Prumyslu Praha, Czechoslovakia, 1972 Volume(issue)/page/year: -,208,1972 Dimethyl parathion: LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 6010 ug/kg Details of toxic effects not reported other than lethal dose value 85JCAE "Prehled Prumyslove Toxikologie; Organické Látky," Marhold, J., Prague, Czechoslovakia, Avicenum, 1986 Volume(issue)/page/year: -,1155,1986 Diisopropyl parathion : LD50 - Lethal dose, 50 percent kill Oral Rodent - mouse 537 mg/kg Details of toxic effects not reported other than lethal dose value JAFCAU Journal of Agricultural and Food Chemistry, (American Chemical Soc., Distribution Office Dept. 223, POB 57136, West End Sm., Washington, DC 20037) V.1- 1953- Volume(issue)/page/year: 17,243,1969</i>
202	TEDP * #(T3)	3689-24-5	<i>LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 5 mg/kg Details of toxic effects not reported other than lethal dose value ARSIM* Agricultural Research Service, USDA Information Memorandum. (Beltsville, MD 20705) Volume(issue)/page/year: 20,24,1966</i>
203	Phosphoryl Trichloride	10025-87-3	<i>LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 36 mg/kg Gastrointestinal - other changes Liver - other changes Nutritional and Gross Metabolic - weight loss or decreased weight gain NTIS** National Technical Information Service, (Springfield, VA 22161) Formerly U.S. Clearinghouse for Scientific & Technical Information. Volume(issue)/page/year: OTS0534840</i>
204	Ethylene dibromide	106-93-4	<i>LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 108 mg/kg Details of toxic effects not reported other than lethal dose value SPEADM Special Publication of the Entomological Society of America, (4603 Calvert Rd., College Park, MD 20740) Volume(issue)/page/year: 78-1,17,1978 LDLo - Lowest published lethal dose Oral Human - woman 90 mg/kg Gastrointestinal - hypermotility, diarrhea Gastrointestinal - nausea or vomiting Kidney/Ureter/Bladder - urine volume decreased 34ZIAG "Toxicology of Drugs and Chemicals," Deichmann, W.B., New York, Academic Press, Inc., 1969 Volume(issue)/page/year: -,257,1969</i>
205	Phenylhydrazine #(T3)	100-63-0	<i>LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 188 mg/kg Behavioral - excitement Behavioral - muscle contraction or spasticity HYSAAV Hygiene and Sanitation (USSR), English translation of GISAAA. (Springfield, VA) 1964-71. Discontinued. Volume(issue)/page/year: 30(7-9),191,1965</i>
206	Methyl bromide	74-83-9	<i>LDLo - Lowest published lethal dose Oral Mammal - dog 500 mg/kg Cardiac - pulse rate increase, without fall in BP LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 214 mg/kg Details of toxic effects not reported other than lethal dose value TXAPA9 Toxicology and Applied Pharmacology. (Academic Press, Inc., 1 E. First St., Duluth, MN 55802) V.1- 1959- Volume(issue)/page/year: 72,262,1984 Gastrointestinal - nausea or vomiting Nutritional and Gross Metabolic - body temperature decrease NTIS** National Technical Information Service. (Springfield, VA 22161) Formerly U.S. Clearinghouse for Scientific & Technical Information. Volume(issue)/page/year: OTS0528834</i>
207	Monomethyl aniline #(T3)	100-61-8	<i>LDLo - Lowest published lethal dose Oral Rodent - guinea pig 1200 mg/kg Peripheral Nerve and Sensation - flaccid paralysis without anesthesia (usually neuromuscular blockage) Behavioral - convulsions or effect on seizure threshold Lungs, Thorax, or Respiration - respiratory depression XPHBAO U.S. Public Health Service, Public Health Bulletin. (Washington, DC) Volume(issue)/page/year: 271,16,1941 LDLo - Lowest published lethal dose Oral Rodent - rabbit 280 mg/kg Behavioral - somnolence (general depressed activity) Lungs, Thorax, or Respiration - dyspnea Lungs, Thorax, or Respiration - cyanosis JIHTAB Journal of Industrial Hygiene and Toxicology. (Cambridge, MA) V.18-31, 1936-49. For publisher information, see AEHLAU. Volume(issue)/page/year: 31,1,1949</i>
208	n-Butylamine #(T3)	109-73-9	<i>LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 366 mg/kg Behavioral - convulsions or effect on seizure threshold Behavioral - ataxia Lungs, Thorax, or Respiration - respiratory depression TXAPA9 Toxicology and Applied Pharmacology. (Academic Press, Inc., 1 E. First St., Duluth, MN 55802) V.1- 1959- Volume(issue)/page/year: 63,150,1982</i>
209	Methyl formate #(T3)	107-31-3	<i>LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 475 mg/kg Details of toxic effects not reported other than lethal dose value NTIS** National Technical Information Service. (Springfield, VA 22161) Formerly U.S. Clearinghouse for Scientific & Technical Information. Volume(issue)/page/year: OTS0556689</i>
210	o-Dichlorobenzene #(T3)	95-50-1	<i>LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 500 mg/kg Details of toxic effects not reported other than lethal dose value WRPCA2 World Review of Pest Control. (London, UK) V.1-10, 1962-71. Discontinued. Volume(issue)/page/year: 9,119,1970</i>
211	Phosphorus pentachloride * #(T3)	10026-13-8	<i>LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 600 mg/kg Sense Organs and Special Senses (Eye) - lacrimation Behavioral - somnolence (general depressed activity) Behavioral - muscle weakness TNICS* Toxicology of New Industrial Chemical Substances. English translation of TPKVAL. (USSR Academy of Medical Sciences, Meditsina, Moscow, USSR) Volume(issue)/page/year: 13,104,1973 LD16 - Lethal dose Oral Rodent - rat 550 mg/kg Details of toxic effects not reported other than lethal dose value TPKVAL Toksikologiya Novykh Promyshlennykh Khimicheskikh Veshchestv. Toxicology of New Industrial Chemical Substances. For English translation, see TNICS*. (Izdatel'svo Meditsina, Moscow, USSR) No.1- 1961- Volume(issue)/page/year: 13,107,1973 LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 600 mg/kg Details of toxic effects not reported other than lethal dose value TPKVAL Toksikologiya Novykh Promyshlennykh Khimicheskikh Veshchestv. Toxicology of New Industrial Chemical Substances. For English translation, see TNICS*. (Izdatel'svo Meditsina, Moscow, USSR) No.1- 1961- Volume(issue)/page/year: 13,107,1973 LD - Lethal dose Oral Rodent - rat 650 mg/kg Details of toxic effects not reported other than lethal dose value TPKVAL Toksikologiya Novykh Promyshlennykh Khimicheskikh Veshchestv. Toxicology of New Industrial Chemical Substances. For English translation, see TNICS*. (Izdatel'svo Meditsina, Moscow, USSR) No.1- 1961- Volume(issue)/page/year: 13,107,1973</i>
212	p-Nitroaniline * #(T3)	100-01-6	<i>LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 750 mg/kg Details of toxic effects not reported other than lethal dose value CEHYAN Ceskoslovenska Hygiene, Czechoslovak Hygiene. (PNS-Ustredni Expedice a Dovož Tisku, Kafkova 19, 160 00 Prague 6, Czechoslovakia) V.1- 1956- Volume(issue)/page/year: 23,168,1978</i>
213	Diisopropylamine #(T3)	108-18-9	<i>LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 770 mg/kg Details of toxic effects not reported other than lethal dose value UCDS** Union Carbide Data Sheet. (Union Carbide Corp., 39 Old Ridgebury Rd., Danbury, CT 06817) Volume(issue)/page/year: 12/15/1971</i>

Chemical		CAS Number	Oral Toxicity (LD 50) Report Species/units
214	2-Butoxyethanol #(T3)	111-76-2	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 917 mg/kg Liver - other changes Kidney/Ureter/Bladder - other changes Blood - other hemolysis with or without anemia VCVGK* "Vrednie chemicheskije vesthestva, galogen I kislород sodergashije organicheskie soedinienia". (Hazardous substances. Galogen and oxygen containing substances). Bandman A.L. et al., <i>Chimia</i> , 1994. Volume(issue)/page/year: -,166,1984 TDLo - Lowest published toxic dose Oral Human - woman 600 mg/kg Behavioral - coma Lungs, Thorax, or Respiration - dyspnea Nutritional and Gross Metabolic - metabolic acidosis HUTODJ Human Toxicology. (Macmillan Press Ltd., Houndmills, Basingstoke, Hants., RG 21 2XS, UK) V.1- 1981- Volume(issue)/page/year: 7,187,1988 TDLo - Lowest published toxic dose Oral Human - woman 7813 uL/kg Behavioral - coma Vascular - BP lowering not characterized in autonomic section Nutritional and Gross Metabolic - metabolic acidosis HUTODJ Human Toxicology. (Macmillan Press Ltd., Houndmills, Basingstoke, Hants., RG 21 2XS, UK) V.1- 1981- Volume(issue)/page/year: 8,243,1989 LDLo - Lowest published lethal dose Oral Human 143 mg/kg Details of toxic effects not reported other than lethal dose value VCVGK* "Vrednie chemicheskije vesthestva, galogen I kislород sodergashije organicheskie soedinienia". (Hazardous substances. Galogen and oxygen containing substances). Bandman A.L. et al., <i>Chimia</i> , 1994. Volume(issue)/page/year: -,166,1984 TDLo - Lowest published toxic dose Oral Human - man 132 mg/kg Behavioral - sleep Kidney/Ureter/Bladder - hematuria
215	Ethylenediamine	107-15-3	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 1200 mg/kg Behavioral - ataxia MTPEEI Meditsina Truda i Promyshlennaya Ekologiya. Industrial Medicine and Ecology. (Mezhdunarodnaya Kniga, ul.B. Yakimanka, 39 117049 Moscow, Russia) No.1- 1993- Volume(issue)/page/year: (1),38,1997
216	Carbon disulfide	75-15-0	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 1200 mg/kg Details of toxic effects not reported other than lethal dose value INHEAO Industrial Health. (National Institute of Industrial Health, 6-21-1 Nagao, Tama-ku, Kawasaki, 213 Japan) V.1- 1963- Volume(issue)/page/year: 32,145,1994
217	Cyclohexanol #(T3)	108-93-0	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 1400 mg/kg Behavioral - somnolence (general depressed activity) Lungs, Thorax, or Respiration - other changes Nutritional and Gross Metabolic - weight loss or decreased weight gain NTIS** National Technical Information Service. (Springfield, VA 22161) Formerly U.S. Clearinghouse for Scientific & Technical Information. Volume(issue)/page/year: OTS0538617
218	Pyridine #(T3)	110-86-1	LD50 - Lethal dose, 50 percent kill Oral Rodent - mouse 1500 mg/kg Behavioral - sleep Behavioral - somnolence (general depressed activity) Lungs, Thorax, or Respiration - dyspnea PLRCAT Pharmacological Research Communications. (Academic Press, Inc., 1 E. First St., Duluth, MN 55802) V.1- 1969- Volume(issue)/page/year: 5,341,1973 TDLo - Lowest published toxic dose Oral Rodent - mouse 500 mg/kg Behavioral - somnolence (general depressed activity) Behavioral - coma JJATDK JAT. Journal of Applied Toxicology. (John Wiley & Sons Ltd., Baffins Lane, Chichester, W. Sussex PO19 1UD, UK) V.1- 1981- Volume(issue)/page/year: 20,389,2000 LDLo - Lowest published lethal dose Oral Rodent - mouse 1000 mg/kg Liver - hepatitis (hepatocellular necrosis), diffuse Biochemical - Enzyme inhibition, induction, or change in blood or tissue levels - transaminases JJATDK JAT. Journal of Applied Toxicology. (John Wiley & Sons Ltd., Baffins Lane, Chichester, W. Sussex PO19 1UD, UK) V.1- 1981- Volume(issue)/page/year: 20,389,2000
219	Methyl (n-amyl) ketone #(T3)	110-43-0	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 1670 mg/kg Details of toxic effects not reported other than lethal dose value UCDS** Union Carbide Data Sheet. (Union Carbide Corp., 39 Old Ridgebury Rd., Danbury, CT 06817) Volume(issue)/page/year: 8/11/1958
220	Bromine	7726-95-6	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 1700 mg/kg Details of toxic effects not reported other than lethal dose value VCVN5* "Vrednie chemicheskije vesthestva. Neorganicheskie soedinienia elementov V-VII groopp" (Hazardous substances. Inorganic substances containing V-VII group elements). Bandman A.L. et al., <i>Chimia</i> , 1989. Volume(issue)/page/year: -,389,1989 LDLo - Lowest published lethal dose Oral Human 14 mg/kg Details of toxic effects not reported other than lethal dose value 34ZIAG "Toxicology of Drugs and Chemicals." Deichmann, W.B., New York, Academic Press, Inc., 1969 Volume(issue)/page/year: -,645,1969
221	Hexone #(T3)	108-10-1	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 2080 mg/kg Details of toxic effects not reported other than lethal dose value UCDS** Union Carbide Data Sheet. (Union Carbide Corp., 39 Old Ridgebury Rd., Danbury, CT 06817) Volume(issue)/page/year: 4/25/1958
222	2-Butanone	78-93-3	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 2737 mg/kg Details of toxic effects not reported other than lethal dose value ENTOX* Encyclopedia of Toxicology: Reference Book, Elsevier, 2005 Volume(issue)/page/year: -,77,2005 LDLo - Lowest published lethal dose Oral Human 714.3 mg/kg Details of toxic effects not reported other than lethal dose value VCVGK* "Vrednie chemicheskije vesthestva, galogen I kislород sodergashije organicheskie soedinienia". (Hazardous substances. Galogen and oxygen containing substances). Bandman A.L. et al., <i>Chimia</i> , 1994. Volume(issue)/page/year: -,417,1994
223	Collodion #(T3)	9004-70-0	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat >5 gm/kg Details of toxic effects not reported other than lethal dose value TXAPA9 Toxicology and Applied Pharmacology. (Academic Press, Inc., 1 E. First St., Duluth, MN 55802) V.1- 1959- Volume(issue)/page/year: 33,159,1975
224	Trypan blue #(T3)	72-57-1	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 6200 mg/kg Details of toxic effects not reported other than lethal dose value TSCAT* Office of Toxic Substances Report. (U.S. Environmental Protection Agency, Office of Toxic Substances, 401 M St., SW, Washington, DC 20460) Volume(issue)/page/year: OTS 215154
225	Diethylene glycol	111-46-6	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 12000 mg/kg Brain and Coverings - other degenerative changes Liver - other changes Kidney/Ureter/Bladder - other changes VCVGK* "Vrednie chemicheskije vesthestva, galogen I kislород sodergashije organicheskie soedinienia". (Hazardous substances. Galogen and oxygen containing substances). Bandman A.L. et al., <i>Chimia</i> , 1994. Volume(issue)/page/year: -,145,1984 LDLo - Lowest published lethal dose Oral Human 1 gm/kg Details of toxic effects not reported other than lethal dose value JHTAB Journal of Industrial Hygiene and Toxicology. (Cambridge, MA) V.18-31, 1936-49. For publisher information, see AEHLAU. Volume(issue)/page/year: 21,173,1939

Chemical		CAS Number	Oral Toxicity (LD 50) Report Species/units
226	Allyl alcohol	107-18-6	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 64 mg/kg Details of toxic effects not reported other than lethal dose value JHTAB Journal of Industrial Hygiene and Toxicology. (Cambridge, MA) V.18-31, 1936-49. For publisher information, see AEHLAU. Volume(issue)/page/year: 30.63,1948 LDLo - Lowest published lethal dose Oral Human 0.43 mL/kg Lungs, Thorax, or Respiration - emphysema Gastrointestinal - other changes Kidney/Ureter/Bladder - other changes VCVGK* "Vrednie chemicheskoe veshstva, galogen i kislorod sodergashie organicheskie soedinenia". (Hazardous substances. Galogen and oxygen containing substances), Bandman A.L. et al., <i>Chimia</i> , 1994. Volume(issue)/page/year: -,121,1984
227	Ethylene oxide	75-21-8	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 72 mg/kg Details of toxic effects not reported other than lethal dose value SPEADM Special Publication of the Entomological Society of America. (4603 Calvert Rd., College Park, MD 20740) Volume(issue)/page/year: 78-1,17,1978
228	Furfuryl alcohol #(T3)	98-00-0	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 177 mg/kg Behavioral - excitement Behavioral - ataxia Lungs, Thorax, or Respiration - cyanosis GTPZAB Gigiena Truda i Professional'nye Zabolevaniya. Labor Hygiene and Occupational Diseases. (V/O Mezhunarodnaya Kniga, 113095 Moscow, USSR) V.1-36, 1957-1992. For publisher information, see MTPPEI Volume(issue)/page/year: 25(9),52,1981
229	Dimethyl sulfate	77-78-1	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 205 mg/kg Details of toxic effects not reported other than lethal dose value GTPZAB Gigiena Truda i Professional'nye Zabolevaniya. Labor Hygiene and Occupational Diseases. (V/O Mezhunarodnaya Kniga, 113095 Moscow, USSR) V.1-36, 1957-1992. For publisher information, see MTPPEI Volume(issue)/page/year: 23(3),28,1979
230	Allyl chloride	107-05-1	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 460 mg/kg Behavioral - tremor Behavioral - convulsions or effect on seizure threshold Lungs, Thorax, or Respiration - dyspnea EESADV Ecotoxicology and Environmental Safety. (Academic Press, Inc., 1 E. First St., Duluth, MN 55802) V.1- 1977- Volume(issue)/page/year: 6,19,1982 LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 450 mg/kg Details of toxic effects not reported other than lethal dose value VCVGH* "Vrednie chemicheskoe veshstva, galogenproisvodnie uglevodorodov". (Hazardous substances: Galogenated hydrocarbons) Bandman A.L. et al., <i>Chimia</i> , 1990. Volume(issue)/page/year: -,468,1990
231	Cumene	98-82-8	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 1400 mg/kg Gastrointestinal - gastritis AMIHAB AMA Archives of Industrial Health. (Chicago, IL) V.11-21, 1955-60. For publisher information, see AEHLAU. Volume(issue)/page/year: 14,387,1956
232	Acetic anhydride #(T3)	108-24-7	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 1780 mg/kg Details of toxic effects not reported other than lethal dose value AMHBC AMA Archives of Industrial Hygiene and Occupational Medicine. (Chicago, IL) V.2-10, 1950-54. For publisher information, see AEHLAU. Volume(issue)/page/year: 4,119,1951
233	Demeton * #(T3) (Systox)	8065-48-3	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 1700 ug/kg Details of toxic effects not reported other than lethal dose value TXAPA9 Toxicology and Applied Pharmacology. (Academic Press, Inc., 1 E. First St., Duluth, MN 55802) V.1- 1959- Volume(issue)/page/year: 21,315,1972 LDLo - Lowest published lethal dose Oral Human 171 ug/kg Details of toxic effects not reported other than lethal dose value CMEP** "Clinical Memoranda on Economic Poisons," U.S. Dept. HEW, Public Health Service, Communicable Disease Center, Atlanta, GA, 1956 Volume(issue)/page/year: -,1,1956
234	Oxydemeton-methyl #(I)	301-12-2	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 30 mg/kg Details of toxic effects not reported other than lethal dose value AEPPEA Naunyn-Schmiedeberg's Archiv fuer Experimentelle Pathologie und Pharmakologie. (Berlin, Ger.) V.110-253, 1925-66. For publisher information, see NSAPCC. Volume(issue)/page/year: 234,352,1958
235	Epichlorohydrin #(I)	106-89-8	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 90 mg/kg Details of toxic effects not reported other than lethal dose value ENTOX* Encyclopedia of Toxicology: Reference Book, Elsevier, 2005 Volume(issue)/page/year: -228,2005
236	Fluorotrichloromethane #(T3)	75-69-4	LD - Lethal dose Oral Rodent - rat >352 mg/kg Details of toxic effects not reported other than lethal dose value NTIS** National Technical Information Service. (Springfield, VA 22161) Formerly U.S. Clearinghouse for Scientific & Technical Information. Volume(issue)/page/year: OTS0520424
237	Propylene oxide	75-56-9	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 380 mg/kg Behavioral - excitement Behavioral - ataxia Lungs, Thorax, or Respiration - respiratory stimulation GTPZAB Gigiena Truda i Professional'nye Zabolevaniya. Labor Hygiene and Occupational Diseases. (V/O Mezhunarodnaya Kniga, 113095 Moscow, USSR) V.1-36, 1957-1992. For publisher information, see MTPPEI Volume(issue)/page/year: 14(11),55,1970
238	Ethylamine	75-04-7	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 400 mg/kg Details of toxic effects not reported other than lethal dose value ENTOX* Encyclopedia of Toxicology: Reference Book, Elsevier, 2005 Volume(issue)/page/year: -285,2005
239	Ronnel #(I)	299-84-3	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 625 mg/kg Details of toxic effects not reported other than lethal dose value GISAAA Gigiena i Sanitariya. For English translation, see HYSAAV. (V/O Mezhunarodnaya Kniga, 113095 Moscow, USSR) V.1- 1936- Volume(issue)/page/year: 45(6),14,1980
240	Chloroform-D	suggested: 67-66-3 or 865-49-6	undeuteriated: LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 695 mg/kg Behavioral - changes in motor activity (specific assay) Behavioral - ataxia Lungs, Thorax, or Respiration - respiratory stimulation KHZDAN Khigiena i Zdraveopazvane. Hygiene and Sanitation. (Hemus, Blvd. Russki 6, Sofia, Bulgaria) V.9- 1966- Volume(issue)/page/year: 29(5),39,1986 LDLo - Lowest published lethal dose Oral Human - man 2514 mg/kg Behavioral - muscle contraction or spasticity Cardiac - other changes Kidney/Ureter/Bladder - changes in tubules (including acute renal failure, acute tubular necrosis) AJEMEN American Journal of Emergency Medicine. (WB Saunders, Philadelphia, PA) V.1- 1983- Volume(issue)/page/year: 6,507,1988
241	Dimethylamine	124-40-3	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 698 mg/kg Behavioral - excitement Behavioral - muscle weakness Gastrointestinal - ulceration or bleeding from stomach HYSAAV Hygiene and Sanitation (USSR). English translation of GISAAA. (Springfield, VA) 1964-71. Discontinued. Volume(issue)/page/year: 32(6),329,1967

Chemical		CAS Number	Oral Toxicity (LD 50) Report Species/units
242	2-Diethylaminoethanol #(I)	100-37-8	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 1300 mg/kg Details of toxic effects not reported other than lethal dose value JIHTAB Journal of Industrial Hygiene and Toxicology. (Cambridge, MA) V.18-31, 1936-49. For publisher information, see AEHLAU. Volume(issue)/page/year: 26,269,1944
243	1-methyl imidazole LD50	616-47-7	LD50 - Lethal dose, 50 percent kill Oral Rodent - mouse 1400 mg/kg Behavioral - convulsions or effect on seizure threshold TXAPA9 Toxicology and Applied Pharmacology. (Academic Press, Inc., 1 E. First St., Duluth, MN 55802) V.1- 1959- Volume(issue)/page/year: 14,301,1969
244	Methoxychlor * #(T3)	72-43-5	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 1855 mg/kg Behavioral - convulsions or effect on seizure threshold Behavioral - excitement Behavioral - ataxia GISAAA Gigena i Sanitariya. For English translation, see HYSAAV. (V/O Mezhunarodnaya Kniga, 113095 Moscow, USSR) V.1- 1936- Volume(issue)/page/year: 58(1),44,1993 LDLo - Lowest published lethal dose Oral Human 6430 mg/kg Details of toxic effects not reported other than lethal dose value PCOC** Pesticide Chemicals Official Compendium, Association of the American Pesticide Control Officials, Inc., 1966. (Topeka, KS) Volume(issue)/page/year: -,705,1966
245	Terphenyls * #(I)	92-06-8; 84-15-1; 92-94-4	m: LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 2400 mg/kg Gastrointestinal - hypermotility, diarrhea Skin and Appendages - hair AIHAAP American Industrial Hygiene Association Journal. (AIHA, 475 Wolf Ledges Pkwy., Akron, OH 44311) V.19- 1958- Volume(issue)/page/year: 23,372,1962 o: LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 1900 mg/kg Gastrointestinal - hypermotility, diarrhea Skin and Appendages - hair AIHAAP American Industrial Hygiene Association Journal. (AIHA, 475 Wolf Ledges Pkwy., Akron, OH 44311) V.19- 1958- Volume(issue)/page/year: 23,372,1962 p: LDLo - Lowest published lethal dose Oral Rodent - rat 500 mg/kg Details of toxic effects not reported other than lethal dose value NCNSA6 National Academy of Sciences, National Research Council, Chemical-Biological Coordination Center, Review. (Washington, DC) Volume(issue)/page/year: 5,26,1953
246	Carbon tetrachloride	56-23-5	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 2350 mg/kg Details of toxic effects not reported other than lethal dose value ARTODN Archives of Toxicology. (Springer-Verlag, Heidelberg) Pl. 3, D-1000 Berlin 33, Fed. Rep. Ger.) V.32- 1974- Volume(issue)/page/year: 54,275,1983 LDLo - Lowest published lethal dose Oral Human - man 429 mg/kg Cardiac - change in rate Lungs, Thorax, or Respiration - cyanosis Kidney/Ureter/Bladder - interstitial nephritis ZHYGAM Zeitschrift fuer die Gesamte Hygiene und Ihre Grenzgebiete. (VEB Verlag Volk und Gesundheit, Neue Grunstr. 18, Berlin DDR-1020, Ger. Dem. Rep.) V.1- 1955- Volume(issue)/page/year: 19,781,1973 LDLo - Lowest published lethal dose Oral Human 0.3 mL/kg Details of toxic effects not reported other than lethal dose value VCVGH* "Vrednie chemichescie veshstva, galogenproisvodnie uglevodorodov". (Hazardous substances: Galogenated hydrocarbons) Bandman A.L. et al., Chimia, 1990. Volume(issue)/page/year: -,342,1990
247	Acetonitrile	75-05-8	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 2460 mg/kg Details of toxic effects not reported other than lethal dose value UCDS** Union Carbide Data Sheet. (Union Carbide Corp., 39 Old Ridgebury Rd., Danbury, CT 06817) Volume(issue)/page/year: 3/18/1965 TDLo - Lowest published toxic dose Oral Human - woman 500 mg/kg Behavioral - coma Cardiac - pulse rate increase, without fall in BP Lungs, Thorax, or Respiration - respiratory depression PGMJAO Postgraduate Medical Journal. (Blackwell Scientific Pub. Ltd., POB 88, Oxford, UK) V.1- 1925- Volume(issue)/page/year: 73,299,1997 TDLo - Lowest published toxic dose Oral Human - child 800 mg/kg Behavioral - hallucinations, distorted perceptions Behavioral - convulsions or effect on seizure threshold Gastrointestinal - nausea or vomiting AJEMEN American Journal of Emergency Medicine. (WB Saunders, Philadelphia, PA) V.1- 1983- Volume(issue)/page/year: 9,268,1991 TDLo - Lowest published toxic dose Oral Human - man 571 mg/kg Behavioral - convulsions or effect on seizure threshold Gastrointestinal - nausea or vomiting Nutritional and Gross Metabolic - metabolic acidosis APTSAI Acta Pharmacologica et Toxicologica, Supplement. (Munksgaard International Pub., POB 2148, DK-1016 Copenhagen K, Denmark) No.1- 1947- Volume(issue)/page/year: 41,340,1977 TDLo - Lowest published toxic dose Oral Human - man 64 mg/kg Behavioral - excitement JTCTDW Journal of
248	Styrene	100-42-5	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 2650 mg/kg Behavioral - somnolence (general depressed activity) Liver - other changes SRTCAC Science Reports of the Research Institutes, Tohoku University, Series C: Medicine. (Tohoku University, Research Institute for Tuberculosis and Cancer, 4-1 Seiryomachi, Sendai, Japan) V.1- 1949- Volume(issue)/page/year: 36(1-4),10,1989 LD10 - Lethal dose Oral Rodent - rat 5 mL/kg Details of toxic effects not reported other than lethal dose value VCVGH* "Vrednie chemichescie veshstva, galogenproisvodnie uglevodorodov". (Hazardous substances: Galogenated hydrocarbons) Bandman A.L. et al., Chimia, 1990. Volume(issue)/page/year: -,192,1990 LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 5000 mg/kg Details of toxic effects not reported other than lethal dose value ENTOS* Encyclopedia of Toxicology: Reference Book, Elsevier, 2005 Volume(issue)/page/year: ,105,2005
249	Thioglycol TEEL-3	60-24-2	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 244 mg/kg Behavioral - excitement Behavioral - muscle contraction or spasticity Lungs, Thorax, or Respiration - respiratory depression GTPZAB Gigena Truda i Professional'nye Zabolovaniya. Labor Hygiene and Occupational Diseases. (V/O Mezhunarodnaya Kniga, 113095 Moscow, USSR) V.1-36, 1957- 1992. For publisher information, see MTPPEI Volume(issue)/page/year: 15(2),56,1971
250	Cyanogen Chloride	460-19-5	LD50 - Lethal dose, 50 percent kill Oral Mammal - cat 6 mg/kg Details of toxic effects not reported other than lethal dose value ENTOS* Encyclopedia of Toxicology: Reference Book, Elsevier, 2005 Volume(issue)/page/year: -,701,2005
251	Trithion	786-19-6	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 6800 ug/kg Details of toxic effects not reported other than lethal dose value FMCHA2 Farm Chemicals Handbook. (Meister Pub., 37841 Euclid Ave., Willoughby, OH 44094) Volume(issue)/page/year: -.C315,1991
252	Decaborane * #(T3)	17702-41-9	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 64 mg/kg Details of toxic effects not reported other than lethal dose value MLRS** U.S. Army, Chemical Corps Medical Laboratories Special Reports. (Army Chemical Center, MD) Volume(issue)/page/year: #8,1951

Chemical		CAS Number	Oral Toxicity (LD 50) Report Species/units
253	1,1,2,2-Tetrachloroethane #(T3)	79-34-5	<i>TDLo</i> - Lowest published toxic dose Oral Human 30 mg/kg Behavioral - general anesthetic PCOC** Pesticide Chemicals Official Compendium, Association of the American Pesticide Control Officials, Inc., 1966. (Topeka, KS) Volume(issue)/page/year: -,1110,1966 <i>LD50</i> - Lethal dose, 50 percent kill Oral Rodent - rat 200 mg/kg Details of toxic effects not reported other than lethal dose value INHEAO Industrial Health. (National Institute of Industrial Health, 6-21-1 Nagao, Tama-ku, Kawasaki, 213 Japan) V.1- 1963- Volume(issue)/page/year: 32,145,1994
254	1,1,2-Trichloroethane #(T3)	79-00-5	<i>LD50</i> - Lethal dose, 50 percent kill Oral Rodent - rat 580 mg/kg Details of toxic effects not reported other than lethal dose value ENTOX* Encyclopedia of Toxicology: Reference Book, Elsevier, 2005 Volume(issue)/page/year: -,380,2005
255	Trinitrotoluene	118-96-7	<i>LDLo</i> - Lowest published lethal dose Oral Human 28 gm/kg Behavioral - hallucinations, distorted perceptions Lungs, Thorax, or Respiration - cyanosis Gastrointestinal - other changes 34ZIAG "Toxicology of Drugs and Chemicals," Deichmann, W.B., New York, Academic Press, Inc., 1969 Volume(issue)/page/year: -,610,1969 <i>LD50</i> - Lethal dose, 50 percent kill Oral Rodent - rat 607 mg/kg Lungs, Thorax, or Respiration - respiratory stimulation Kidney/Ureter/Bladder - other changes in urine composition Kidney/Ureter/Bladder - inflammation, necrosis, or scarring of bladder IJTOFN International Journal of Toxicology. (Taylor & Francis, 47 Runway Rd., Suite g, Levittown, PA 19057) V.16- 1997- Volume(issue)/page/year: 19,169,2000
256	o-Anisidine * #(T3)	90-04-0	<i>LD50</i> - Lethal dose, 50 percent kill Oral Rodent - rat 1150 mg/kg Details of toxic effects not reported other than lethal dose value TLSMA6 Trudy Leningradskogo Sanitarno-Gigienicheskogo Meditsinskogo Instituta. (Leningrad, Russia) V.1-145, 1949-82. Discontinued. Volume(issue)/page/year: 128,14,1979
257	2-Pentanone #(T3)	107-87-9	<i>LD50</i> - Lethal dose, 50 percent kill Oral Rodent - rat 1600 mg/kg Details of toxic effects not reported other than lethal dose value 38MKAJ "Patty's Industrial Hygiene and Toxicology," 3rd rev. ed., Clayton, G.D., and F.E. Clayton, eds., New York, John Wiley & Sons, Inc., 1978-82. Vol. 3 originally pub. in 1979; pub. as 2nd rev. ed. in 1985. Volume(issue)/page/year: 2C.4735,1982
258	N-Ethylmorpholine #(I)	100-74-3	<i>LD50</i> - Lethal dose, 50 percent kill Oral Rodent - rat 1780 mg/kg Details of toxic effects not reported other than lethal dose value DTLWS* "Documentation of the Threshold Limit Values for Substances in Workroom Air," Supplements. For publisher information, see 85INA8. Volume(issue)/page/year: 4,190,1982
259	Ethyl formate #(I)	109-94-4	<i>LD50</i> - Lethal dose, 50 percent kill Oral Rodent - rat 1850 mg/kg Behavioral - somnolence (general depressed activity) Lungs, Thorax, or Respiration - dyspnea FCTXAV Food and Cosmetics Toxicology. (London, UK) V.1-19, 1963-81. For publisher information, see FCTOD7. Volume(issue)/page/year: 2,327,1964
260	Propylene dichloride #(T3)	78-87-5	<i>LD50</i> - Lethal dose, 50 percent kill Oral Rodent - rat 1900 mg/kg Details of toxic effects not reported other than lethal dose value VCVGH* "Vrednie chemicheskije veshstva, galogenproisvodnie uglevodorodov". (Hazardous substances: Galogenated hydrocarbons) Bandman A.L. et al., Chimia, 1990. Volume(issue)/page/year: -,395,1990
261	Cyclohexene #(T3)	110-83-8	<i>LD50</i> - Lethal dose, 50 percent kill Oral Rodent - rat 2400 uL/kg Behavioral - somnolence (general depressed activity) Behavioral - tremor Behavioral - ataxia NTIS** National Technical Information Service. (Springfield, VA 22161) Formerly U.S. Clearinghouse for Scientific & Technical Information. Volume(issue)/page/year: OTS0546026
262	sec-Butyl alcohol #(T3)	78-92-2	<i>LD50</i> - Lethal dose, 50 percent kill Oral Rodent - rat 2193 mg/kg Behavioral - somnolence (general depressed activity) Behavioral - ataxia Behavioral - coma NTIS** National Technical Information Service. (Springfield, VA 22161) Formerly U.S. Clearinghouse for Scientific & Technical Information. Volume(issue)/page/year: OTS0557575
263	Diacetone alcohol #(T3)	123-42-2	<i>LD50</i> - Lethal dose, 50 percent kill Oral Rodent - rat 2520 mg/kg Behavioral - tremor Behavioral - convulsions or effect on seizure threshold Liver - other changes NTIS** National Technical Information Service. (Springfield, VA 22161) Formerly U.S. Clearinghouse for Scientific & Technical Information. Volume(issue)/page/year: OTS0557732
264	Tetrachloroethylene	127-18-4	<i>TDLo</i> - Lowest published toxic dose Oral Human - child 545 mg/kg Behavioral - coma JTCTDW Journal of Toxicology, Clinical Toxicology. (Marcel Dekker, 270 Madison Ave., New York, NY 10016) V.19- 1982- Volume(issue)/page/year: 23,103,1985 <i>LD50</i> - Lethal dose, 50 percent kill Oral Rodent - rat 2629 mg/kg Details of toxic effects not reported other than lethal dose value AIHAAP American Industrial Hygiene Association Journal. (AIHA, 475 Wolf Ledges Pkwy., Akron, OH 44311) V.19- 1958- Volume(issue)/page/year: 20,364,1959
265	tert-Butyl alcohol #(T3)	75-65-0	<i>LD50</i> - Lethal dose, 50 percent kill Oral Rodent - rat 2743 mg/kg Sense Organs and Special Senses (Eye) - lacrimation Lungs, Thorax, or Respiration - respiratory depression Gastrointestinal - other changes NTIS** National Technical Information Service. (Springfield, VA 22161) Formerly U.S. Clearinghouse for Scientific & Technical Information. Volume(issue)/page/year: OTS0572351
266	Acrylamide * #(T3)	79-06-1	<i>LD50</i> - Lethal dose, 50 percent kill Oral Rodent - rat 2743 mg/kg Sense Organs and Special Senses (Eye) - lacrimation Lungs, Thorax, or Respiration - respiratory depression Gastrointestinal - other changes NTIS** National Technical Information Service. (Springfield, VA 22161) Formerly U.S. Clearinghouse for Scientific & Technical Information. Volume(issue)/page/year: OTS0572351
267	Tributyl phosphate #(T3)	126-73-8	<i>LD50</i> - Lethal dose, 50 percent kill Oral Rodent - rat 3 gm/kg Details of toxic effects not reported other than lethal dose value JKXXAF Japanese Kokai Tokyo Koho Patents. (U.S. Patent and Trademark Office, Foreign Patents, Washington, DC 20231) Volume(issue)/page/year: #72-18000
268	Castor oil #(T3)	8001-79-4	<i>TDLo</i> - Lowest published toxic dose Oral Rodent - rat 4 mL/kg Gastrointestinal - hypermotility, diarrhea INJPD2 Indian Journal of Pharmacology. (Dept. of Pharmacology, Baranas Hindu Univ., Varanasi 221 005, India) V.1- 1968(?). Volume(issue)/page/year: 38,346,2006
269	Dimethyl acetamide #(T3)	127-19-5	<i>LD50</i> - Lethal dose, 50 percent kill Oral Rodent - rat 4300 mg/kg Details of toxic effects not reported other than lethal dose value GISAAA Gigena i Sanitariya. For English translation, see HYSAAV. (VO Mezhunarodnaya Kniga, 113095 Moscow, USSR) V.1- 1936- Volume(issue)/page/year: 45(6),76,1980

Chemical		CAS Number	Oral Toxicity (LD 50) Report Species/units
270	Methyl acetate #(I)	79-20-9	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat >5 gm/kg Details of toxic effects not reported other than lethal dose value FCTXAV Food and Cosmetics Toxicology. (London, UK) V.1-19, 1963-81. For publisher information, see FCTOD7. Volume(issue)/page/year: 17,859,1979
271	1,3-Butadiene	106-99-0	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 5480 mg/kg Details of toxic effects not reported other than lethal dose value ENTOX* Encyclopedia of Toxicology: Reference Book, Elsevier, 2005 Volume(issue)/page/year: -353,2005
272	Isopropyl acetate #(T3)	108-21-4	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 6750 mg/kg Details of toxic effects not reported other than lethal dose value UCDS** Union Carbide Data Sheet. (Union Carbide Corp., 39 Old Ridgebury Rd., Danbury, CT 06817) Volume(issue)/page/year: 3/24/1970
273	Dimethylphthalate * #(T3)	131-11-3	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 6800 mg/kg Behavioral - somnolence (general depressed activity) Behavioral - withdrawal Nutritional and Gross Metabolic - weight loss or decreased weight gain GTPZAB Gigiena Truda i Professional'nye Zabolevaniya. Labor Hygiene and Occupational Diseases. (VO Mezhunarodnaya Kniga, 113095 Moscow, USSR) V.1-36, 1957-1992. For publisher information, see MTPPEI Volume(issue)/page/year: 24(3),25,1980
274	n-Propyl acetate #(I)	109-60-4	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 9370 mg/kg Behavioral - somnolence (general depressed activity) Skin and Appendages - hair FCTXAV Food and Cosmetics Toxicology. (London, UK) V.1-19, 1963-81. For publisher information, see FCTOD7. Volume(issue)/page/year: 2,327,1964
275	Methyl chloroform	71-55-6	TDLo - Lowest published toxic dose Oral Human 670 mg/kg Gastrointestinal - hypermotility, diarrhea Gastrointestinal - nausea or vomiting Gastrointestinal - other changes NTIS** National Technical Information Service. (Springfield, VA 22161) Formerly U.S. Clearinghouse for Scientific & Technical Information. Volume(issue)/page/year: PB257-185 LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 9600 mg/kg Cardiac - pulse rate Nutritional and Gross Metabolic - weight loss or decreased weight gain GNAMAP Gigiena Naselemykh Mest. Hygiene in Populated Places. (Izdatel'stvo Zdorov'ya, Kiev, USSR) V.7- 1967- Volume(issue)/page/year: 29,45,1990
276	Isoamyl acetate #(T3)	123-92-2	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 16600 mg/kg Details of toxic effects not reported other than lethal dose value YKYUA6 Yakkyoku. Pharmacy. (Nanzando, 4-1-11, Yushima, Bunkyo-ku, Tokyo, Japan) V.1-1950- Volume(issue)/page/year: 32,1241,1981
277	Antimony oxide *T3	1309-64-4	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat >34600 mg/kg Behavioral - somnolence (general depressed activity) Skin and Appendages - hair NTIS** National Technical Information Service. (Springfield, VA 22161) Formerly U.S. Clearinghouse for Scientific & Technical Information. Volume(issue)/page/year: OTS0555447
278	1,1,2-Trichloro 1,2,2-trifluoroethane #(T3)	76-13-1	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 43 gm/kg Behavioral - somnolence (general depressed activity) Gastrointestinal - other changes Skin and Appendages - hair JMCMAJ Journal of Medicinal Chemistry. (American Chemical Soc., Distribution Office Dept. 223, POB POB 57136, West End St., Washington, DC 20037) V.6- 1963- Volume(issue)/page/year: 7,378,1964 LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 43 gm/kg Behavioral - general anesthetic VCVGH* "Vrednie chemicheskie veshstva, galogenproisvodnie uglevodorodov". (Hazardous substances: Galogenated hydrocarbons) Bandman A.L. et al., Chimia, 1990. Volume(issue)/page/year: -636,1990
279	Acetylene tetrabromide #(T3)	79-27-6	LD50 - Lethal dose, 50 percent kill Oral Rodent - mouse 269 mg/kg Details of toxic effects not reported other than lethal dose value 85GMAT "Toxicometric Parameters of Industrial Toxic Chemicals Under Single Exposure," Izmerov, N.F., et al., Moscow, Centre of International Projects, GKNT, 1982 Volume(issue)/page/year: -107,1982
280	Nitrotoluene (o, m, p isomers) #(T3) - Note: o isomer T3 = 60ppm; m and p isomers T3 = 200ppm; Lowest T3 value used	88-72-2; 99-08-1; 99-99-0	m: LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 1072 mg/kg Details of toxic effects not reported other than lethal dose value NTIS** National Technical Information Service. (Springfield, VA 22161) Formerly U.S. Clearinghouse for Scientific & Technical Information. Volume(issue)/page/year: PB214-270 o: LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 891 mg/kg Details of toxic effects not reported other than lethal dose value NTIS** National Technical Information Service. (Springfield, VA 22161) Formerly U.S. Clearinghouse for Scientific & Technical Information. Volume(issue)/page/year: PB214-270 p: LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 1960 mg/kg Details of toxic effects not reported other than lethal dose value GTPZAB Gigiena Truda i Professional'nye Zabolevaniya. Labor Hygiene and Occupational Diseases. (VO Mezhunarodnaya Kniga, 113095 Moscow, USSR) V.1-36, 1957-1992. For publisher information, see MTPPEI Volume(issue)/page/year: 25(8),50,1981
281	Ethyl chloride #(T3)	75-00-3	TDLo - Lowest published toxic dose Oral Rodent - rat 250 mg/kg Liver - other changes Lungs, Thorax, or Respiration - other changes TOXID9 Toxicologist. (Soc. of Toxicology, Inc., 475 Wolf Ledge Parkway, Akron, OH 44311) V.1- 1981- Volume(issue)/page/year: 72(Suppl 1),323,2003
282	Methyl acrylate #(T3)	96-33-3	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 277 mg/kg Details of toxic effects not reported other than lethal dose value AMPMAR Archives des Maladies Professionnelles de Medecine du Travail et de Securite Sociale. (SPPIF, B.P.22, F-41353 Vineuil, France) V.7- 1946- Volume(issue)/page/year: 36,58,1975
283	Acetaldehyde	75-07-0	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 661 mg/kg Peripheral Nerve and Sensation - spastic paralysis with or without sensory change Behavioral - altered sleep time (including change in righting reflex) Lungs, Thorax, or Respiration - dyspnea AGACBH Agents and Actions. A Swiss Journal of Pharmacology. (Birkhauser Verlag, POB 133, CH-4010 Basel, Switzerland) V.1- 1969/70- Volume(issue)/page/year: 4,125,1974 LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 1930 mg/kg Details of toxic effects not reported other than lethal dose value ENTOX* Encyclopedia of Toxicology: Reference Book, Elsevier, 2005 Volume(issue)/page/year: -15,2005
284	Ethyl acrylate	140-88-5	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 800 mg/kg Details of toxic effects not reported other than lethal dose value BCTKAG Bromatologia i Chemia Toksykologiczna. (Ars Polona, POB 1001, 00-068 Warsaw 1, Poland) V.4- 1971- Volume(issue)/page/year: 12,405,1979
285	Methyl chloride	74-87-3	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 1800 mg/kg Details of toxic effects not reported other than lethal dose value 85JCAE "Prehled Prumyslove Toxikologie; Organické Latky," Marhold, J., Prague, Czechoslovakia, Avicenum, 1986 Volume(issue)/page/year: -86,1986

	Chemical	CAS Number	Oral Toxicity (LD 50) Report Species/units
286	Bromobenzene #(T3)	108-86-1	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 2383 mg/kg Sense Organs and Special Senses (Eye) - chromodacryorrhea Gastrointestinal - hypermotility, diarrhea Nutritional and Gross Metabolic - weight loss or decreased weight gain NTIS** National Technical Information Service. (Springfield, VA 22161) Formerly U.S. Clearinghouse for Scientific & Technical Information. Volume(issue)/page/year: OTS0571670
287	Diphenyl Ether #(T3)	101-84-8	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 2450 mg/kg Behavioral - food intake (animal) Behavioral - muscle weakness Gastrointestinal - other changes NTIS** National Technical Information Service. (Springfield, VA 22161) Formerly U.S. Clearinghouse for Scientific & Technical Information. Volume(issue)/page/year: OTS0518143
288	Tetryl * #(T3)	479-45-8	LDLo - Lowest published lethal dose Oral Rodent - rat 5 gm/kg Behavioral - somnolence (general depressed activity) Skin and Appendages - hair Nutritional and Gross Metabolic - weight loss or decreased weight gain ATDAEI Acute Toxicity Data. Journal of the American College of Toxicology, Part B. (Mary Ann Liebert, Inc., 1651 Third Ave., New York, NY 10128) V.1-1990. Volume(issue)/page/year: 1,167,1992
289	Benzoyl peroxide* #(T3)	94-36-0	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 6400 mg/kg Details of toxic effects not reported other than lethal dose value VCVGK* "Vrednie chemicheskije veshstva, galogen i kislorod sodergashie organicheskie soedinenia". (Hazardous substances. Galogen and oxygen containing substances), Bandman A.L. et al., <i>Chimia</i> , 1994. Volume(issue)/page/year: -,542,1994
290	1,1-Dimethylhydrazine	57-14-7	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 122 mg/kg Details of toxic effects not reported other than lethal dose value MEPAAX Medycyna Pracy, <i>Industrial Medicine</i> . (Ars-Polonia, POB 1001, 00-068 Warsaw 1, Poland) V.1-1950. Volume(issue)/page/year: 24,71,1973
291	Dioxane	123-91-1	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 4200 mg/kg Details of toxic effects not reported other than lethal dose value INHEAO Industrial Health. (National Institute of Industrial Health, 6-21-1 Nagao, Tama-ku, Kawasaki, 213 Japan) V.1-1963. Volume(issue)/page/year: 32,145,1994
292	Cyclopentadiene #(I)	542-92-7	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 113 mg/kg Details of toxic effects not reported other than lethal dose value NTIS** National Technical Information Service. (Springfield, VA 22161) Formerly U.S. Clearinghouse for Scientific & Technical Information. Volume(issue)/page/year: OTS0535718
293	Pyrethrum #(I) - IDLH value in ppm based on MW of 374, which is high end of range in NIOSH PG	8003-34-7	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 200 mg/kg Details of toxic effects not reported other than lethal dose value GUCHAZ Guide to the Chemicals Used in Crop Protection. (Information Canada, 171 Slater St., Ottawa, Ont., Canada) Volume(issue)/page/year: 6,442,1973 LDLo - Lowest published lethal dose Oral Human 1 gm/kg Details of toxic effects not reported other than lethal dose value 85GYAV "Pflanzenschutz- und Schaedlingsbekämpfungsmittel: Abriss einer Toxikologie und Therapie von Vergiftungen," 2nd ed., Klimmer, O.R., Hattingen, Fed. Rep. Ger., Hundt-Verlag, 1971 Volume(issue)/page/year: -,142,1971 LDLo - Lowest published lethal dose Oral Human - child 750 mg/kg Details of toxic effects not reported other than lethal dose value CMEP** "Clinical Memoranda on Economic Poisons," U.S. Dept. HEW, Public Health Service, Communicable Disease Center, Atlanta, GA, 1956 Volume(issue)/page/year: -,1,1956
294	Ethylene glycol dinitrate #(I)	628-96-6	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 460 mg/kg Behavioral - somnolence (general depressed activity) Behavioral - convulsions or effect on seizure threshold Cardiac - other changes STGNBT "Spravochnik po Toksikologii i Gigienicheskim Normativam (PDK) Potensial'no Opasnykh Khimicheskikh Veshchestv" Kushneva, V.S., and R.B. Gorskova, eds. 46, Zhivopisnaya St., 123182, Moscow, Russia, Izdat 1999 Volume(issue)/page/year: -,96,1999
295	Xylidine #(T3)	1300-73-8	LDLo - Lowest published lethal dose Oral Rodent - rat 610 mg/kg Behavioral - somnolence (general depressed activity) Lungs, Thorax, or Respiration - dyspnea Nutritional and Gross Metabolic - weight loss or decreased weight gain JHHTAB Journal of Industrial Hygiene and Toxicology. (Cambridge, MA) V.18-31, 1936-49. For publisher information, see AEHLAU. Volume(issue)/page/year: 31,1,1949
296	1,1-Dichloroethane #(T3)	75-34-3	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 725 mg/kg Details of toxic effects not reported other than lethal dose value HYSAAV Hygiene and Sanitation (USSR). English translation of GISAAA. (Springfield, VA) 1964-71. Discontinued. Volume(issue)/page/year: 32(3),349,1967
297	n-Butyl mercaptan #(T3)	109-79-5	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 1500 mg/kg Behavioral - somnolence (general depressed activity) Lungs, Thorax, or Respiration - respiratory depression Behavioral - coma AIHAAP American Industrial Hygiene Association Journal. (AIHA, 475 Wolf Ledges Pkwy., Akron, OH 44311) V.19-1958. Volume(issue)/page/year: 19,171,1958
298	p-tert-Butyltoluene #(I)	98-51-1	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 1555 mg/kg Behavioral - somnolence (general depressed activity) Behavioral - ataxia Lungs, Thorax, or Respiration - dyspnea AMIHBC AMA Archives of Industrial Hygiene and Occupational Medicine. (Chicago, IL) V.2-10, 1950-54. For publisher information, see AEHLAU. Volume(issue)/page/year: 9,227,1954
299	Allyl glycidyl ether #(I)	106-92-3	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 1600 mg/kg Brain and Coverings - recordings from specific areas of CNS Behavioral - changes in motor activity (specific assay) Behavioral - ataxia AMIHAB AMA Archives of Industrial Health. (Chicago, IL) V.11-21, 1955-60. For publisher information, see AEHLAU. Volume(issue)/page/year: 14,250,1956
300	Tetramethylenedisulfotetramine #(T3 as triethylenetetramine)	126-33-0	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 1540 uL/kg Details of toxic effects not reported other than lethal dose value AIHAAP American Industrial Hygiene Association Journal. (AIHA, 475 Wolf Ledges Pkwy., Akron, OH 44311) V.19-1958. Volume(issue)/page/year: 30,470,1969

Chemical		CAS Number	Oral Toxicity (LD 50) Report Species/units
301	2-Ethoxyethanol #(T3)	110-80-5	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 2125 mg/kg Behavioral - tetany Liver - other changes Kidney/Ureter/Bladder - other changes VCVGK* "Vrednie chemicheskije veshstva, galogen I kislorod sodergashije organicheskie soedinenia". (Hazardous substances. Galogen and oxygen containing substances), Bandman A.L. et al., <i>Chimia</i> , 1994. Volume(issue)/page/year: -,162,1984 TDLo - Lowest published toxic dose Oral Human - woman 0.8 mL/kg Brain and Coverings - other degenerative changes Liver - other changes Kidney/Ureter/Bladder - other changes VCVGK* "Vrednie chemicheskije veshstva, galogen I kislorod sodergashije organicheskie soedinenia". (Hazardous substances. Galogen and oxygen containing substances), Bandman A.L. et al., <i>Chimia</i> , 1994. Volume(issue)/page/year: -,163,1984 LDLo - Lowest published lethal dose Oral Human 143 mg/kg Details of toxic effects not reported other than lethal dose value VCVGK* "Vrednie chemicheskije veshstva, galogen I kislorod sodergashije organicheskie soedinenia". (Hazardous substances. Galogen and oxygen containing substances), Bandman A.L. et al., <i>Chimia</i> , 1994. Volume(issue)/page/year: -,163,1984
302	Methyl isobutyl carbinol #(I)	108-11-2	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 2590 mg/kg Details of toxic effects not reported other than lethal dose value AMIHC AMA Archives of Industrial Hygiene and Occupational Medicine. (Chicago, IL) V.2-10, 1950-54. For publisher information, see AEHLAU. Volume(issue)/page/year: 4,119,1951
303	2-Ethoxyethyl acetate #(T3)	111-15-9	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 2700 mg/kg Details of toxic effects not reported other than lethal dose value GISAAA Gigena i Sanitariya. For English translation, see HYSAAV. (VO Mezhunarodnaya Kniga, 113095 Moscow, USSR) V.1- 1936- Volume(issue)/page/year: 53(10),78,1988
304	Methylcyclohexane #(T3)	108-87-2	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat >3200 mg/kg Details of toxic effects not reported other than lethal dose value NTIS** National Technical Information Service. (Springfield, VA 22161) Formerly U.S. Clearinghouse for Scientific & Technical Information. Volume(issue)/page/year: OTS0556685
305	tert-Butyl acetate #(T3)	540-88-5	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 4100 mg/kg Behavioral - altered sleep time (including change in righting reflex) Behavioral - ataxia Lungs, Thorax, or Respiration - dyspnea NTIS** National Technical Information Service. (Springfield, VA 22161) Formerly U.S. Clearinghouse for Scientific & Technical Information. Volume(issue)/page/year: OTS0573684-1
306	Chlorobromomethane #(T3)	74-97-5	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 5 gm/kg Details of toxic effects not reported other than lethal dose value 34ZIAG "Toxicology of Drugs and Chemicals." Deichmann, W.B., New York, Academic Press, Inc., 1969 Volume(issue)/page/year: -,390,1969
307	Diisobutyl ketone #(T3)	108-83-8	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 5750 mg/kg Details of toxic effects not reported other than lethal dose value NPRI* Raw Material Data Handbook, Vol.1: Organic Solvents, 1974. (National Assoc. of Printing Ink Research Institute, Francis McDonald Sinclair Memorial Laboratory, Lehigh Univ., Bethlehem, PA 18015) Volume(issue)/page/year: 1,23,1974
308	Hydrazine	302-01-2	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 60 mg/kg Details of toxic effects not reported other than lethal dose value MEPAAX Medycyna Pracy, Industrial Medicine. (Ars-Polona, POB 1001, 00-068 Warsaw I., Poland) V.1- 1950- Volume(issue)/page/year: 24,71,1973
309	1,2,3-Trichloropropane #(T3)	96-18-4	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 108 uL/kg Gastrointestinal - hypermotility, diarrhea Liver - other changes Skin and Appendages - hair NTIS** National Technical Information Service. (Springfield, VA 22161) Formerly U.S. Clearinghouse for Scientific & Technical Information. Volume(issue)/page/year: OTS0534994
310	beta-Chloroprene #(T3)	126-99-8	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 450 mg/kg Details of toxic effects not reported other than lethal dose value 85GMAT "Toxicometric Parameters of Industrial Toxic Chemicals Under Single Exposure," Izmerov, N.F., et al., Moscow, Centre of International Projects, GKNT, 1982 Volume(issue)/page/year: -,38,1982
311	Dinitrotoluene * #(T3)	25321-14-6	LD50 - Lethal dose, 50 percent kill Oral Rodent - mouse 750 mg/kg Behavioral - convulsions or effect on seizure threshold Lungs, Thorax, or Respiration - dyspnea SRTCAC Science Reports of the Research Institutes, Tohoku University, Series C: Medicine. (Tohoku University, Research Institute for Tuberculosis and Cancer, 4-1 Seiryo-machi, Sendai, Japan) V.1- 1949- Volume(issue)/page/year: 36(1-4),10,1989
312	n-Butyl glycidyl ether #(T3)	2426-08-6	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 1660 mg/kg Behavioral - somnolence (general depressed activity) Lungs, Thorax, or Respiration - dyspnea Lungs, Thorax, or Respiration - respiratory depression GISAAA Gigena i Sanitariya. For English translation, see HYSAAV. (VO Mezhunarodnaya Kniga, 113095 Moscow, USSR) V.1- 1936- Volume(issue)/page/year: 51(8),91,1986
313	Isophorone #(T3)	78-59-1	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 1870 mg/kg Details of toxic effects not reported other than lethal dose value UCDS** Union Carbide Data Sheet. (Union Carbide Corp., 39 Old Ridgebury Rd., Danbury, CT 06817) Volume(issue)/page/year: 11/15/1971
314	Methyl Cellosolve (r) #(I)	109-86-4	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 2370 mg/kg Behavioral - altered sleep time (including change in righting reflex) Lungs, Thorax, or Respiration - other changes VHTODE Veterinary and Human Toxicology. (American College of Veterinary and Comparative Toxicology, Publication Office, Comparative Toxicology, Manhattan, KS 66506) V.19- 1977- Volume(issue)/page/year: 29,361,1987 LDLo - Lowest published lethal dose Oral Human 3380 mg/kg Gastrointestinal - gastritis Liver - other changes Kidney/Ureter/Bladder - other changes JIHTAB Journal of Industrial Hygiene and Toxicology. (Cambridge, MA) V.18-31, 1936-49. For publisher information, see AEHLAU. Volume(issue)/page/year: 28,267,1946 LDLo - Lowest published lethal dose Oral Human 143 mg/kg Details of toxic effects not reported other than lethal dose value VCVGK* "Vrednie chemicheskije veshstva, galogen I kislorod sodergashije organicheskie soedinenia". (Hazardous substances. Galogen and oxygen containing substances), Bandman A.L. et al., <i>Chimia</i> , 1994. Volume(issue)/page/year: -,159,1984

Chemical		CAS Number	Oral Toxicity (LD 50) Report Species/units
315	Hexachlorobenzene	118-74-1	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 10 gm/kg Details of toxic effects not reported other than lethal dose value FMCHA2 Farm Chemicals Handbook. (Meister Pub., 37841 Euclid Ave., Willoughby, OH 44094) Volume(issue)/page/year: -,C163,1991 LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 3500 mg/kg Lungs, Thorax, or Respiration - structural or functional change in trachea or bronchi Liver - other changes Kidney/Ureter/Bladder - changes in tubules (including acute renal failure, acute tubular necrosis) VCVGK* "Vrednie chemicheskije veshstva, galogen i kislorod sodergashije organicheskie soedinenia". (Hazardous substances. Galogen and oxygen containing substances). Bandman A.L. et al., <i>Chimia</i> , 1994. Volume(issue)/page/year: -,32,1984
316	Benzyl chloride #(E3)	100-44-7	LD50 - Lethal dose, 50 percent kill Oral Rodent - mouse 3400 uL/kg Details of toxic effects not reported other than lethal dose value 37ASAA "Kirk-Othmer Encyclopedia of Chemical Technology," 3rd ed., Grayson, M., and D. Eckroth, eds., New York, John Wiley & Sons, Inc., 1978 Volume(issue)/page/year: 5,819,1979
317	Isopropyl ether #(T3)	108-20-3	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 5880 mg/kg Details of toxic effects not reported other than lethal dose value VCVGK* "Vrednie chemicheskije veshstva, galogen i kislorod sodergashije organicheskie soedinenia". (Hazardous substances. Galogen and oxygen containing substances). Bandman A.L. et al., <i>Chimia</i> , 1994. Volume(issue)/page/year: -,266,1994
318	Ethyl silicate #(E3)	78-10-4	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 6270 mg/kg Details of toxic effects not reported other than lethal dose value JIHITAB Journal of Industrial Hygiene and Toxicology. (Cambridge, MA) V.18-31, 1936-49. For publisher information, see AEHLAU. Volume(issue)/page/year: 31,60,1949
319	Methylal #(T3)	109-87-5	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 6653 mg/kg Details of toxic effects not reported other than lethal dose value GISAAA Gigiena i Sanitariya. For English translation, see HYSAAV. (V/O Mezhdunarodnaya Kniga, 113095 Moscow, USSR) V.1- 1936- Volume(issue)/page/year: 11,16,1993
320	Methyl hydrazine	60-34-4	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 32 mg/kg Behavioral - convulsions or effect on seizure threshold XAWPA2 U.S. Army Chemical Warfare Laboratories. (Army Chemical Center, MD) Volume(issue)/page/year: CWL 2-10,1958
321	Crotonaldehyde	4170-30-3	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 80 mg/kg Cardiac - pulse rate increase, without fall in BP Lungs, Thorax, or Respiration - cyanosis Nutritional and Gross Metabolic - body temperature decrease GISAAA Gigiena i Sanitariya. For English translation, see HYSAAV. (V/O Mezhdunarodnaya Kniga, 113095 Moscow, USSR) V.1- 1936- Volume(issue)/page/year: 62(3),3,1997
322	Sulfuryl fluoride	2699-79-8	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 100 mg/kg Details of toxic effects not reported other than lethal dose value 85ARAE "Agricultural Chemicals," Thomson, W.T., 4 vols., Fresno, CA, Thomson Publications, 1976/77 revision Volume(issue)/page/year: 3,15,1976/1977
323	Sulfur monochloride	10025-67-9	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 132 mg/kg Behavioral - general anesthetic Cardiac - other changes Skin and Appendages - hair IJTOFN International Journal of Toxicology. (Taylor & Francis, 47 Runway Rd., Suite g, Levittown, PA 19057) V.16- 1997- Volume(issue)/page/year: 19,342,2000
324	Hexachloronaphthalene * #(T3)	1335-87-1	TDLo - Lowest published toxic dose Oral Rodent - rat 13500 mg/kg/90D (continuous) Liver - other changes Liver - changes in liver weight Kidney/Ureter/Bladder - changes in kidney weight VCVGK* "Vrednie chemicheskije veshstva, galogen i kislorod sodergashije organicheskie soedinenia". (Hazardous substances. Galogen and oxygen containing substances). Bandman A.L. et al., <i>Chimia</i> , 1994. Volume(issue)/page/year: -,78,1994
325	Acrolein	107-02-8	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 26 mg/kg Details of toxic effects not reported other than lethal dose value GISAAA Gigiena i Sanitariya. For English translation, see HYSAAV. (V/O Mezhdunarodnaya Kniga, 113095 Moscow, USSR) V.1- 1936- Volume(issue)/page/year: 58(10),4,1993 LDLo - Lowest published lethal dose Oral Human 140 mg/kg Details of toxic effects not reported other than lethal dose value VCVGK* "Vrednie chemicheskije veshstva, galogen i kislorod sodergashije organicheskie soedinenia". (Hazardous substances. Galogen and oxygen containing substances). Bandman A.L. et al., <i>Chimia</i> , 1994. Volume(issue)/page/year: -,384,1984
326	Polyphosphoric acid	68333-79-9	Sodium polyphosphate: LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 3053 mg/kg Gastrointestinal - ulceration or bleeding from stomach Gastrointestinal - ulceration or bleeding from duodenum Gastrointestinal - ulceration or bleeding from small intestine TOLEDS Toxicology Letters. (Elsevier Science Pub. B.V., POB 211, 1000 AE Amsterdam, Netherlands) V.1- 1977- Volume(issue)/page/year: 31(Suppl),44,1986
327	Phosphotungstic acid #(T3 of tungstic acid)	12067-99-1	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 3300 mg/kg Details of toxic effects not reported other than lethal dose value TXAPA9 Toxicology and Applied Pharmacology. (Academic Press, Inc., 1 E. First St., Duluth, MN 55802) V.1- 1959- Volume(issue)/page/year: 42,417,1977
328	Tetraethyl lead #(T3)	78-00-2	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 12300 ug/kg Behavioral - altered sleep time (including change in righting reflex) Behavioral - convulsions or effect on seizure threshold Behavioral - aggression EXPEAM Experientia. (Birkhaeuser Verlag, POB 133, CH-4010 Basel, Switzerland) V.1- 1945- Volume(issue)/page/year: 28,923,1972

Chemical		CAS Number	Oral Toxicity (LD 50) Report Species/units
329	Chlordane * #(T3)	57-74-9	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 200 mg/kg Details of toxic effects not reported other than lethal dose value ARZNAD Arzneimitel-Forschung, Drug Research, (Editio Cantor Verlag, Postfach 1255, W-7960 Aulendorf, Fed. Rep. Ger.) V.1- 1951- Volume(issue)/page/year: 17,614,1967 TDLo - Lowest published toxic dose Oral Human - man 3071 ug/kg Behavioral - coma Lungs, Thorax, or Respiration - dyspnea Gastrointestinal - nausea or vomiting JTCTDW Journal of Toxicology, Clinical Toxicology, (Marcel Dekker, 270 Madison Ave., New York, NY 10016) V.19- 1982- Volume(issue)/page/year: 20,291,1983 LDLo - Lowest published lethal dose Oral Human 29 mg/kg Liver - fatty liver degeneration CMEP** "Clinical Memoranda on Economic Poisons," U.S. Dept. HEW, Public Health Service, Communicable Disease Center, Atlanta, GA, 1956 Volume(issue)/page/year: -,1,1956 LDLo - Lowest published lethal dose Oral Human - woman 120 ug/kg Behavioral - convulsions or effect on seizure threshold Behavioral - excitement Gastrointestinal - gastritis CMEP** "Clinical Memoranda on Economic Poisons," U.S. Dept. HEW, Public Health Service, Communicable Disease Center, Atlanta, GA, 1956 Volume(issue)/page/year: -,1,1956
330	Methylcyclohexanol #(I)	25639-42-3	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 1660 mg/kg Details of toxic effects not reported other than lethal dose value JIHTAB Journal of Industrial Hygiene and Toxicology, (Cambridge, MA) V.18-31, 1936-49. For publisher information, see AEHLAU. Volume(issue)/page/year: 25,415,1943
331	Pentaerythrite tetranitrate #(T3)	78-11-5	TDLo - Lowest published toxic dose Oral Human - man 1669 mg/kg/8Y (continuous) Skin and Appendages - dermatitis, other (after systemic exposure) BJDEAZ British Journal of Dermatology, (Blackwell Scientific Pub. Ltd., POB 88, Oxford, UK) V.63- 1951- Volume(issue)/page/year: 87,498,1972 LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 1660 mg/kg Details of toxic effects not reported other than lethal dose value YAKUD5 Gekkan Yakuji, Pharmaceuticals Monthly, (Yakugyo Jihosha, Inaoka Bldg., 2-36 Jinbo-cho, Kanda, Chiyoda-ku, Tokyo 101, Japan) V.1- 1959- Volume(issue)/page/year: 9,759,1967
332	o-Methylcyclohexanone #(T3)	583-60-8	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 2140 uL/kg Details of toxic effects not reported other than lethal dose value AIHAAP American Industrial Hygiene Association Journal, (AIHA, 475 Wolf Ledges Pkwy., Akron, OH 44311) V.19- 1958- Volume(issue)/page/year: 30,470,1969
333	Dibutyl phosphate #(T3)	107-66-4	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 3200 mg/kg Details of toxic effects not reported other than lethal dose value NTIS** National Technical Information Service, (Springfield, VA 22161) Formerly U.S. Clearinghouse for Scientific & Technical Information. Volume(issue)/page/year: OTS0528344
334	Phenyl glycidyl ether #(I)	122-60-1	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 3850 mg/kg Behavioral - somnolence (general depressed activity) Behavioral - changes in motor activity (specific assay) Behavioral - ataxia AMIHAB AMA Archives of Industrial Health, (Chicago, IL) V.11-21, 1955-60. For publisher information, see AEHLAU. Volume(issue)/page/year: 14,250,1956
335	Turpentine #(T3)	8006-64-2	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 5760 mg/kg Details of toxic effects not reported other than lethal dose value INTOX** Encyclopedia of Toxicology: Reference Book, Elsevier, 2005 Volume(issue)/page/year: -,394,2005 LDLo - Lowest published lethal dose Oral Human - man 2857 uL/kg Brain and Coverings - other degenerative changes Lungs, Thorax, or Respiration - acute pulmonary edema Kidney/Ureter/Bladder - other changes FSINDR Forensic Science International, (Elsevier Scientific Pub. Ireland Ltd., POB 85, Limerick, Ireland) V.12- 1978- Volume(issue)/page/year: 65,47,1994 LDLo - Lowest published lethal dose Oral Human - man 3 mg/kg Behavioral - muscle weakness Gastrointestinal - other changes BMJOAE British Medical Journal, (British Medical Assoc., BMA House, Tavistock Sq., London WC1H 9JR, UK) V.1- 1857- Volume(issue)/page/year: 2,77,1931
336	Tetranitromethane	509-14-8	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 130 mg/kg Sense Organs and Special Senses (Olfaction) - effect, not otherwise specified Sense Organs and Special Senses (Eye) - effect, not otherwise specified Behavioral - somnolence (general depressed activity) NTIS** National Technical Information Service, (Springfield, VA 22161) Formerly U.S. Clearinghouse for Scientific & Technical Information. Volume(issue)/page/year: AD-A051-334
337	Ethyl mercaptan	75-08-1	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 682 mg/kg Behavioral - muscle weakness Behavioral - ataxia Lungs, Thorax, or Respiration - cyanosis AIHAAP American Industrial Hygiene Association Journal, (AIHA, 475 Wolf Ledges Pkwy., Akron, OH 44311) V.19- 1958- Volume(issue)/page/year: 19,171,1958
338	Mesityl oxide #(T3)	141-79-7	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 1120 mg/kg Details of toxic effects not reported other than lethal dose value 85INA8 "Documentation of the Threshold Limit Values and Biological Exposure Indices," 5th ed., Cincinnati, OH, American Conference of Governmental Industrial Hygienists, Inc., 1986 Volume(issue)/page/year: 6,896,1991
339	Propylene imine	75-55-8	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 19 mg/kg Details of toxic effects not reported other than lethal dose value JIHTAB Journal of Industrial Hygiene and Toxicology, (Cambridge, MA) V.18-31, 1936-49. For publisher information, see AEHLAU. Volume(issue)/page/year: 30,63,1948
340	Methyl isocyanate	624-83-9	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 51500 ug/kg Peripheral Nerve and Sensation - flaccid paralysis without anesthesia (usually neuromuscular blockage) Behavioral - somnolence (general depressed activity) Lungs, Thorax, or Respiration - respiratory depression IIEBA6 Indian Journal of Experimental Biology, (Publications & Information Directorate, CSIR, Hillside Rd., New Delhi 110 012, India) V.1- 1963- Volume(issue)/page/year: 25,531,1987
341	Perchloromethyl mercaptan	594-42-3	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 82600 ug/kg Details of toxic effects not reported other than lethal dose value 28ZPAK "Sbornik Vysledku Toxologickeho Vysetreni Latek A Pripravku," Marhold, J.V., Institut Pro Vychovu Vedoucnik Chemickeho Prumyslu Praha, Czechoslovakia, 1972 Volume(issue)/page/year: -,13,1972
342	Chloroacetaldehyde	107-20-0	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 89 mg/kg Details of toxic effects not reported other than lethal dose value JPMSAE Journal of Pharmaceutical Sciences, (American Pharmaceutical Assoc., 2215 Constitution Ave., NW, Washington, DC 20037) V.50- 1961- Volume(issue)/page/year: 61,19,1972

Chemical		CAS Number	Oral Toxicity (LD 50) Report Species/units
343	Nitroglycerin #(T3)	55-63-0	<p><i>TDLo - Lowest published toxic dose Oral Human - woman 8 ug/kg Behavioral - headache Cardiac - pulse rate</i></p> <p><i>Gastrointestinal - nausea or vomiting AJEMEN American Journal of Emergency Medicine. (WB Saunders, Philadelphia, PA) V.1- 1983- Volume(issue)/page/year: 11,253,1993</i></p> <p><i>TDLo - Lowest published toxic dose Oral Human - woman 8 ug/kg Cardiac - pulse rate Vascular - BP lowering not characterized in autonomic section</i></p> <p><i>Lungs, Thorax, or Respiration - other changes AEMED3 Annals of Emergency Medicine. (American College of Emergency Physicians, 1125 Executive Circle, Irving, TX 75038) Volume(issue)/page/year: 23,31,1994</i></p> <p><i>LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 105 mg/kg Behavioral - somnolence (general depressed activity) YACHDS Yakuri to Chiryō. Pharmacology and Therapeutics. (Rafju Saiensu Shuppan K.K., 2-5-13, Yaesu, Chuo-ku, Tokyo 104, Japan) V.1- 1972- Volume(issue)/page/year: 13,3649,1985</i></p> <p><i>TDLo - Lowest published toxic dose Oral Human - woman 5 mg/kg Behavioral - general anesthetic Cardiac - other changes</i></p> <p><i>Kidney/Ureter/Bladder - incontinence NAYXEW Nanjing Yixueyuan Xuebao. Journal of Nanjing Medical College. (Nanjing Yixueyuan, 140 Hanzhonglu, Nanjing, Peop. Rep. China) V.1- 1981(?) - Volume(issue)/page/year: 8,181,1988</i></p> <p><i>TDLo - Lowest published toxic dose Oral Human 0.0083 mg/kg Cardiac - change in rate Vascular - measurement of regional blood flow FATOAO Farmakologiya i Toksikologiya (Moscow). For English</i></p>
344	Glycidol #(I)	556-52-5	<p><i>LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 420 mg/kg Details of toxic effects not reported other than lethal dose value FCTXAV Food and Cosmetics Toxicology. (London, UK) V.1-19, 1963-81. For publisher information, see FCTOD7. Volume(issue)/page/year: 19,347,1981</i></p>
345	Diketene	674-82-8	<p><i>LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 560 uL/kg Details of toxic effects not reported other than lethal dose value TXAPA9 Toxicology and Applied Pharmacology. (Academic Press, Inc., 1 E. First St., Duluth, MN 55802) V.1- 1959- Volume(issue)/page/year: 28,313,1974</i></p>
346	1,1,2,2-Tetrachloro 1,2-difluoroethane #(I)	76-12-0	<p><i>LD50 - Lethal dose, 50 percent kill Oral Rodent - mouse 800 mg/kg Details of toxic effects not reported other than lethal dose value 8SGMAT "Toxicometric Parameters of Industrial Toxic Chemicals Under Single Exposure," Izmerov, N.F., et al., Moscow, Centre of International Projects, GKNT, 1982 Volume(issue)/page/year: -,54,1982</i></p>
347	Toluene-2,4-diisocyanate	584-84-9	<p><i>LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 5800 mg/kg Gastrointestinal - other changes AMIHAB AMA Archives of Industrial Health. (Chicago, IL) V.11-21, 1955-60. For publisher information, see AEHLAU. Volume(issue)/page/year: 15,324,1957</i></p>
348	Methyl methacrylate	80-62-6	<p><i>LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 7872 mg/kg Behavioral - muscle weakness Behavioral - coma</i></p> <p><i>Lungs, Thorax, or Respiration - respiratory depression JHHTAB Journal of Industrial Hygiene and Toxicology. (Cambridge, MA) V.18-31, 1936-49. For publisher information, see AEHLAU. Volume(issue)/page/year: 23,343,1941</i></p>
349	Toluene sulfonic acid #(T3 based on barium salt of the acid)	70788-37-3 (wrong?) suggested: 104-15-4	<p><i>p-Toluenesulfonic acid: LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 2480 mg/kg Details of toxic effects not reported other than lethal dose value 85JCAE "Přehled Průmyslové Toxikologie; Organické Latky," Marhold, J., Prague, Czechoslovakia, Avicenum, 1986 Volume(issue)/page/year: -,1055,1986</i></p>
350	Isoflurane #(IDLH of halogenated ethers-general)	26675-46-7	<p><i>LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 4770 uL/kg Behavioral - ataxia</i></p> <p><i>Lungs, Thorax, or Respiration - respiratory depression</i></p> <p><i>Nutritional and Gross Metabolic - body temperature decrease KSRNAM Kiso to Rinsho. Clinical Report. (Yubunsha Co., Ltd., 1-5, Kanda Suda-Cho, Chiyoda-ku, KS Bldg., Tokyo 101, Japan) V.1- 1960- Volume(issue)/page/year: 21,3031,1987</i></p> <p><i>LDLo - Lowest published lethal dose Oral Human - man 1143 uL/kg Brain and Coverings - changes in surface EEG Behavioral - muscle weakness</i></p> <p><i>Blood - changes in leukocyte (WBC) count NLJMAV Netherlands Journal of Medicine. (Elsevier Science, POB 211, 1000 AE Amsterdam, Netherlands) V.16- 1973- Volume(issue)/page/year: 33,74,1988</i></p> <p><i>LDLo - Lowest published lethal dose Oral Human - man 1071 uL/kg Details of toxic effects not reported other than lethal dose value JFCAS Journal of Forensic Sciences. (American Soc. for Testing and Materials, 1916 Race St., Philadelphia, PA 19103) V.1- 1956- Volume(issue)/page/year: 38,968,1993</i></p>
351	2-Hexanone #(T3)	591-78-6	<p><i>LDLo - Lowest published lethal dose Oral Human 714.3 mg/kg Details of toxic effects not reported other than lethal dose value VCVGK* "Vrednie chemicheskie veshstva, galogen i kislород sodergashie organicheskie soedinenia", (Hazardous substances. Galogen and oxygen containing substances), Bandman A.L. et al., Chimia, 1994. Volume(issue)/page/year: -,423,1994</i></p> <p><i>LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 2590 mg/kg Details of toxic effects not reported other than lethal dose value AMIHBC AMA Archives of Industrial Hygiene and Occupational Medicine. (Chicago, IL) V.2-10, 1950-54. For publisher information, see AEHLAU. Volume(issue)/page/year: 10,61,1954</i></p>
352	Ethyl butyl ketone #(T3)	106-35-4	<p><i>LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 2760 mg/kg Details of toxic effects not reported other than lethal dose value JHHTAB Journal of Industrial Hygiene and Toxicology. (Cambridge, MA) V.18-31, 1936-49. For publisher information, see AEHLAU. Volume(issue)/page/year: 31,60,1949</i></p>
353	sec-Butyl acetate #(T3)	105-46-4	<p><i>LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 3200 mg/kg Details of toxic effects not reported other than lethal dose value NTIS** National Technical Information Service. (Springfield, VA 22161) Formerly U.S. Clearinghouse for Scientific & Technical Information. Volume(issue)/page/year: OTS0556683</i></p>
354	5-Methyl 3-heptanone #(I)	541-85-5	<p><i>LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 3500 mg/kg Details of toxic effects not reported other than lethal dose value SCCUR* Shell Chemical Company. Unpublished Report. (2401 Crow Canyon Rd., San Romon, CA 94583) Volume(issue)/page/year: -,6,1961</i></p>
355	Chloropicrin	76-06-2	<p><i>LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 250 mg/kg Details of toxic effects not reported other than lethal dose value DOWCC* Dow Chemical Company Reports. (Dow Chemical USA, Health and Environment Research, Toxicology Research Lab., Midland, MI 48640) Volume(issue)/page/year: -,1972</i></p>
356	Fluorine	7782-41-4	<p><i>LD75 - Lethal dose Oral Rodent - rat 50 mg/kg Details of toxic effects not reported other than lethal dose value VCVNS* "Vrednie chemicheskie veshstva. Neorganicheskie soedinenia elementov V-VII groopp" (Hazardous substances. Inorganic substances containing V-VII group elements), Bandman A.L. et al., Chimia, 1989. Volume(issue)/page/year: -,342,1993</i></p>
357	1-Nitropropane #(I)	108-03-2	<p><i>LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 455 mg/kg Details of toxic effects not reported other than lethal dose value NPRI* Raw Material Data Handbook, Vol.1: Organic Solvents, 1974. (National Assoc. of Printing Ink Research Institute, Francis McDonald Sinclair Memorial Laboratory, Lehigh Univ., Bethlehem, PA 18015) Volume(issue)/page/year: 1,91,1974</i></p>

	Chemical	CAS Number	Oral Toxicity (LD 50) Report Species/units
358	2-Nitropropane #(T3)	79-46-9	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 720 mg/kg Details of toxic effects not reported other than lethal dose value 34ZIAG "Toxicology of Drugs and Chemicals." Deichmann, W.B., New York, Academic Press, Inc., 1969 Volume(issue)/page/year: -430,1969
359	1,2-Dichloroethylene #(T3)	540-59-0	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 770 mg/kg Details of toxic effects not reported other than lethal dose value VCVGH* "Vrednie chemicheskije veshstva, galogenproisvodnie uglevodorodov". (Hazardous substances: Galogenated hydrocarbons) Bandman A.L. et al., <i>Chimia</i> , 1990. Volume(issue)/page/year: -437,1990
360	Nitromethane #(T3)	75-52-5	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 940 mg/kg Details of toxic effects not reported other than lethal dose value GISAAA Gigiena i Sanitariya. For English translation, see HYSAAV. (V/O Mezhduнародnaya Kniga, 113095 Moscow, USSR) V.1- 1936- Volume(issue)/page/year: 32(9),9,1967
361	Dichlorotetrafluoroethane #(T3)	76-14-2	LD - Lethal dose Oral Rodent - rat >2250 mg/kg Details of toxic effects not reported other than lethal dose value NTIS** National Technical Information Service. (Springfield, VA 22161) Formerly U.S. Clearinghouse for Scientific & Technical Information. Volume(issue)/page/year: OTS0520424
362	Ethyleneimine	151-56-4	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 15 mg/kg Behavioral - general anesthetic Gastrointestinal - other changes Kidney/Ureter/Bladder - other changes JIHTAB Journal of Industrial Hygiene and Toxicology. (Cambridge, MA) V.18-31, 1936-49. For publisher information, see AEHLAU. Volume(issue)/page/year: 23,259,1941
363	Halothane (T:V)	151-67-7	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 5680 mg/kg Behavioral - excitement Behavioral - antipsychotic GTPZAB Gigiena Truda i Professional'nye Zabolevaniya. Labor Hygiene and Occupational Diseases. (V/O Mezhduнародnaya Kniga, 113095 Moscow, USSR) V.1-36, 1957-1992. For publisher information, see MTPEI Volume(issue)/page/year: 24(3),36,1980
364	sec Hexyl acetate #(I)	108-84-9	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 6160 mg/kg Details of toxic effects not reported other than lethal dose value UCDS** Union Carbide Data Sheet. (Union Carbide Corp., 39 Old Ridgebury Rd., Danbury, CT 06817) Volume(issue)/page/year: 7/28/1966
365	Chlorine dioxide	10049-04-4	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 292 mg/kg Behavioral - somnolence (general depressed activity) Lungs, Thorax, or Respiration - respiratory stimulation Skin and Appendages - hair JIATDK JAT, Journal of Applied Toxicology. (John Wiley & Sons Ltd., Baffins Lane, Chichester, W. Sussex PO19 1UD, UK) V.1- 1981- Volume(issue)/page/year: 2,160,1982
366	Phenyl etherbiphenyl mixture (vapor) #(I)	8004-13-5	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 2460 mg/kg Details of toxic effects not reported other than lethal dose value 28ZPAK "Sbornik Vysledku Toxikologickeho Vysetreni Latek A Pripravku." Marhold, J.V., Institut Pro Vychovu Vedoucnik Pracovníku Chemického Průmyslu Praha, Czechoslovakia, 1972 Volume(issue)/page/year: -271,1972 LD50 - Lethal dose, 50 percent kill Oral Rodent - guinea pig 3 gm/kg Details of toxic effects not reported other than lethal dose value 85GMAT "Toxicometric Parameters of Industrial Toxic Chemicals Under Single Exposure," Izmerov, N.F., et al., Moscow, Centre of International Projects, GKNT, 1982 Volume(issue)/page/year: -61,1982
367	1,1,1,2-Tetrachloro 2,2-difluoroethane #(I)	76-11-9	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat >8 gm/kg Details of toxic effects not reported other than lethal dose value NATUAS Nature. (Nature Subscription Dept., POB 1018, Manasquan, NJ 08736) V.1- 1869- Volume(issue)/page/year: 210,744,1966
368	1-Chloro-1-nitropropane #(I)	600-25-9	LDLo - Lowest published lethal dose Oral Rodent - rat 50 mg/kg Details of toxic effects not reported other than lethal dose value 85JCAE "Prehled Prumyslove Toxikologie; Organické Latky." Marhold, J., Prague, Czechoslovakia, Avicenum, 1986 Volume(issue)/page/year: -596,1986
369	Nitroethane #(T3)	79-24-3	TDL0 - Lowest published toxic dose Oral Human - child 1478 uL/kg Lungs, Thorax, or Respiration - respiratory obstruction Lungs, Thorax, or Respiration - cyanosis Blood - methemoglobinemia-carboxyhemoglobin JTCTDW Journal of Toxicology, Clinical Toxicology. (Marcel Dekker, 270 Madison Ave., New York, NY 10016) V.19- 1982- Volume(issue)/page/year: 32,321,1994 LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 1100 mg/kg Behavioral - general anesthetic Behavioral - tremor Behavioral - excitement GISAAA Gigiena i Sanitariya. For English translation, see HYSAAV. (V/O Mezhduнародnaya Kniga, 113095 Moscow, USSR) V.1- 1936- Volume(issue)/page/year: 32(9),9,1967
370	Vinyl toluene #(I)	25013-15-4	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 2255 mg/kg Sense Organs and Special Senses (Eye) - lacrimation Behavioral - somnolence (general depressed activity) Skin and Appendages - hair ATDAEI Acute Toxicity Data. Journal of the American College of Toxicology, Part B. (Mary Ann Liebert, Inc., 1651 Third Ave., New York, NY 10128) V.1- 1990- Volume(issue)/page/year: 1,77,1990
371	Isopropyl glycidyl ether #(I)	4016-14-2	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 4200 mg/kg Brain and Coverings - recordings from specific areas of CNS Behavioral - somnolence (general depressed activity) Behavioral - ataxia AMIHAB AMA Archives of Industrial Health. (Chicago, IL) V.11-21, 1955-60. For publisher information, see AEHLAU. Volume(issue)/page/year: 14,250,1956
372	Diglycidyl ether #(T3)	2238-07-5	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 450 mg/kg Brain and Coverings - recordings from specific areas of CNS Behavioral - somnolence (general depressed activity) Behavioral - ataxia AMIHAB AMA Archives of Industrial Health. (Chicago, IL) V.11-21, 1955-60. For publisher information, see AEHLAU. Volume(issue)/page/year: 14,250,1956
373	Chlorodiphenyl (42% chlorine)* #(T3)	53469-21-9	LD50 - Lethal dose, 50 percent kill Oral Rodent - rat 4250 mg/kg Sense Organs and Special Senses (Eye) - chromodacryorrhea Gastrointestinal - hypermotility, diarrhea Nutritional and Gross Metabolic - weight loss or decreased weight gain TXAPA9 Toxicology and Applied Pharmacology. (Academic Press, Inc., 1 E. First St., Duluth, MN 55802) V.1- 1959- Volume(issue)/page/year: 24,434,1973 LDLo - Lowest published lethal dose Oral Rodent - rat 2500 mg/kg Nutritional and Gross Metabolic - weight loss or decreased weight gain BECTA6 Bulletin of Environmental Contamination and Toxicology. (Springer-Verlag New York, Inc., Service Center, 44 Hartz Way, Secaucus, NJ 07094) V.1- 1966- Volume(issue)/page/year: 13,14,1975

Oral Toxicity Database									
Rank	Chemical	CAS Number	Oral Toxicity Value (In mg/kg unless otherwise noted)	Oral Toxicity Score	Reactivity Number	Stability Score	Physical State	Toxic (Operational) Hazard Score	# of Countries Producing
1	Chlorine	7782-50-5	2.90	4.00	0.00	5.00	1.00	10.00	63.00
2	Ammonia TDLo	7664-41-7	13.50	3.00	0.00	5.00	1.00	9.00	56.00
3	Calcium chloride	10043-52-4	1000.00	2.00	0.00	5.00	5.00	12.00	43.00
4	Sodium hydroxide #(E3)	1310-73-2	1.57	4.00	1.00	3.75	5.00	12.75	64.00
5	Arsenic Trioxide	1327-53-3	10.00	4.00	0.00	5.00	5.00	14.00	10.00
6	Sodium cyanide #(T3)	143-33-9	4.70	4.00	0.00	5.00	5.00	14.00	21.00
7	Ammonium Chloride	12125-02-9	1650.00	1.00	1.00	3.75	5.00	9.75	25.00
8	Copper sulfate #(T3)	7758-98-7	300.00	2.00	0.00	5.00	5.00	12.00	29.00
9	Methomyl	16752-77-5	76.00	3.00	0.00	5.00	5.00	13.00	9.00
10	Mercuric chloride #(T3 of Hg)	7487-94-7	1.00	5.00	0.00	5.00	5.00	15.00	9.00
11	Potassium cyanide #(T3)	151-50-8	5.00	4.00	0.00	5.00	5.00	14.00	14.00
12	Chlorpyrifos #(T3)	2921-88-2	82.00	3.00	0.00	5.00	5.00	13.00	17.00
13	Sodium bicarbonate #(T3)	144-55-8	4220.00	0.00	0.00	5.00	5.00	10.00	30.00
14	Silica #(T3)	7631-86-9	120000.00	0.00	0.00	5.00	5.00	10.00	30.00
15	Sodium Sulfate #(T3)	7757-82-6	5989.00	0.00	0.00	5.00	5.00	10.00	36.00
16	Ammonium nitrate, no organic coating T3	6484-52-2	10.00	4.00	3.00	1.25	5.00	10.25	52.00
17	Phosphoric acid *(T3)	7664-38-2	1250.00	1.00	0.00	5.00	5.00	11.00	49.00
18	Mercury	7439-97-6	43.00	3.00	0.00	5.00	2.50	10.50	14.00
19	Cobalt dichloride #(T3)	7646-79-9	80.00	3.00	0.00	5.00	5.00	13.00	22.00
20	Formaldehyde (Formalin solution-37% methanol) LDLo	50-00-0	100.00	3.00	0.00	5.00	1.00	9.00	53.00
21	Dibasic sodium phosphate	10039-32-4	17000.00	0.00	0.00	5.00	5.00	10.00	22.00
22	Hydrogen chloride LDLo	7647-01-0	2.86	4.00	1.00	3.75	1.00	8.75	63.00
23	Calcium Hydroxide #(T3)	1305-62-0	7340.00	0.00	1.00	3.75	5.00	8.75	38.00
24	Hydrogen cyanide	74-90-8	0.57	5.00	2.00	2.50	2.50	10.00	13.00
25	Nitric acid	7697-37-2	430.00	2.00	0.00	5.00	2.50	9.50	49.00
26	Naphthalene #(T3)	91-20-3	490.00	2.00	0.00	5.00	5.00	12.00	25.00
27	Toluene	108-88-3	636.00	2.00	0.00	5.00	2.50	9.50	40.00
28	Lindane * #(T3)	58-89-9	840.00	2.00	0.00	5.00	5.00	12.00	3.00
29	Benzene	71-43-2	930.00	2.00	0.00	5.00	2.50	9.50	42.00
30	Iodine #(E3)	7553-56-2	14.00	3.00	0.00	5.00	5.00	13.00	19.00
31	Sodium fluoride #(T3)	7681-49-4	31.00	3.00	0.00	5.00	5.00	13.00	16.00
32	Sodium dodecyl sulfate #(T3)	151-21-3	1288.00	1.00	0.00	5.00	5.00	11.00	27.00
33	Paracetamol #(E3-phenol)	103-90-2	1944.00	1.00	0.00	5.00	5.00	11.00	23.00
34	Sodium chloride #(T3)	7647-14-5	3000.00	0.00	0.00	5.00	5.00	10.00	38.00

Rank	Chemical	CAS Number	DWCP Data			Probability Section		Total Score
			Production Score	# of Global Distribution Sites	Distribution Score	Relative Probability	Threat Scores	
						Score		
1	Chlorine	7782-50-5	5.00	344.00	5.00	10.00	5.00	25.00
2	Ammonia TDLo	7664-41-7	5.00	348.00	5.00	10.00	5.00	24.00
3	Calcium chloride	10043-52-4	4.00	208.00	5.00	9.00	2.50	23.50
4	Sodium hydroxide #(E3)	1310-73-2	5.00	477.00	5.00	10.00	0.50	23.25
5	Arsenic Trioxide	1327-53-3	1.00	18.00	3.00	4.00	5.00	23.00
6	Sodium cyanide #(T3)	143-33-9	2.00	52.00	4.00	6.00	2.50	22.50
7	Ammonium Chloride	12125-02-9	2.00	141.00	5.00	7.00	5.00	21.75
8	Copper sulfate #(T3)	7758-98-7	2.00	188.00	5.00	7.00	2.50	21.50
9	Methomyl	16752-77-5	0.00	46.00	3.00	3.00	5.00	21.00
10	Mercuric chloride #(T3 of Hg)	7487-94-7	0.00	21.00	3.00	3.00	2.50	20.50
11	Potassium cyanide #(T3)	151-50-8	1.00	23.00	3.00	4.00	2.50	20.50
12	Chlorpyrifos #(T3)	2921-88-2	1.00	71.00	4.00	5.00	2.50	20.50
13	Sodium bicarbonate #(T3)	144-55-8	3.00	138.00	5.00	8.00	2.50	20.50
14	Silica #(T3)	7631-86-9	3.00	131.00	5.00	8.00	2.50	20.50
15	Sodium Sulfate #(T3)	7757-82-6	3.00	200.00	5.00	8.00	2.50	20.50
16	Ammonium nitrate, no organic coating T3	6484-52-2	5.00	182.00	5.00	10.00	0.00	20.25
17	Phosphoric acid *(T3)	7664-38-2	4.00	245.00	5.00	9.00	0.00	20.00
18	Mercury	7439-97-6	1.00	24.00	3.00	4.00	5.00	19.50
19	Cobalt dichloride #(T3)	7646-79-9	2.00	90.00	4.00	6.00	0.50	19.50
20	Formaldehyde (Formalin solution-37% methanol) LDLo	50-00-0	5.00	260.00	5.00	10.00	0.50	19.50
21	Dibasic sodium phosphate	10039-32-4	2.00	125.00	5.00	7.00	2.50	19.50
22	Hydrogen chloride LDLo	7647-01-0	5.00	528.00	5.00	10.00	0.50	19.25
23	Calcium Hydroxide #(T3)	1305-62-0	3.00	144.00	5.00	8.00	2.50	19.25
24	Hydrogen cyanide	74-90-8	1.00	25.00	3.00	4.00	5.00	19.00
25	Nitric acid	7697-37-2	4.00	226.00	5.00	9.00	0.50	19.00
26	Naphthalene #(T3)	91-20-3	2.00	103.00	5.00	7.00	0.00	19.00
27	Toluene	108-88-3	4.00	237.00	5.00	9.00	0.50	19.00
28	Lindane * #(T3)	58-89-9	0.00	9.00	2.00	2.00	5.00	19.00
29	Benzene	71-43-2	4.00	291.00	5.00	9.00	0.50	19.00
30	Iodine #(E3)	7553-56-2	1.00	80.00	4.00	5.00	0.50	18.50
31	Sodium fluoride #(T3)	7681-49-4	1.00	85.00	4.00	5.00	0.50	18.50
32	Sodium dodecyl sulfate #(T3)	151-21-3	2.00	104.00	5.00	7.00	0.50	18.50
33	Paracetamol #(E3-phenol)	103-90-2	2.00	106.00	5.00	7.00	0.50	18.50
34	Sodium chloride #(T3)	7647-14-5	3.00	175.00	5.00	8.00	0.50	18.50

Oral Toxicity Database									
Rank	Chemical	CAS Number	Oral Toxicity Value (In mg/kg unless otherwise noted)	Oral Toxicity Score	Reactivity Number	Stability Score	Physical State	Toxic (Operational) Hazard Score	# of Countries Producing
35	Magnesium (powder)-T3*	7439-95-4	230.00	2.00	2.00	2.50	5.00	9.50	42.00
36	Potassium Hydroxide #(T3)	1310-58-3	273.00	2.00	1.00	3.75	5.00	10.75	24.00
37	Oxalic acid * #(T3)	144-62-7	600.00	2.00	0.00	5.00	5.00	12.00	16.00
38	Sodium Nitrate #(T3)	7631-99-4	1267.00	1.00	2.00	2.50	5.00	8.50	23.00
39	Ethyl alcohol #(T3)	64-17-5	7060.00	0.00	0.00	5.00	2.50	7.50	51.00
40	Butane T3	106-97-8	2000.00	1.00	0.00	5.00	5.00	11.00	36.00
41	Aluminum (powder) *T3	7429-90-5	1260.00	1.00	1.00	3.75	5.00	9.75	39.00
42	Aldicarb *T#	116-06-3	0.46	5.00	0.00	5.00	5.00	15.00	4.00
43	Strychnine Sulfate #(T3)	60-41-3	2.60	4.00	0.00	5.00	5.00	14.00	1.00
44	Methyl parathion #(T3)	298-00-0	6.01	4.00	0.00	5.00	5.00	14.00	7.00
45	Methamidophos	10265-92-6	7.50	4.00	0.00	5.00	5.00	14.00	9.00
46	Endosulfan	115-29-7	18.00	3.00	0.00	5.00	5.00	13.00	11.00
47	Red mercuric oxide	21908-53-2	18.00	3.00	0.00	5.00	5.00	13.00	11.00
48	Methidathion #(T3)	950-37-8	20.00	3.00	0.00	5.00	5.00	13.00	4.00
49	Dimethoate #(T3)	60-51-5	30.00	3.00	0.00	5.00	5.00	13.00	11.00
50	Potassium fluoride #(T3)	7789-23-3	245.00	2.00	0.00	5.00	5.00	12.00	14.00
51	Imidacloprid #(E3)	138261-41-3 (changed)	410.00	2.00	0.00	5.00	5.00	12.00	10.00
52	Kerosene #(T3)	8008-20-6	500.00	2.00	0.00	5.00	2.50	9.50	35.00
53	Acephate	30560-19-1	700.00	2.00	0.00	5.00	5.00	12.00	9.00
54	Copper oxychloride #(E3)	1332-40-7	700.00	2.00	0.00	5.00	5.00	12.00	21.00
55	Lead Oxide #(T3)	1309-60-0	1400.00	1.00	0.00	5.00	5.00	11.00	10.00
56	Sulfuric acid LD50	7664-93-9	2140.00	0.00	2.00	2.50	2.50	5.00	66.00
57	Zinc	7440-66-6	5000.00	0.00	0.00	5.00	5.00	10.00	31.00
58	Phosphorus	7723-14-0	3.03	4.00	1.00	3.75	5.00	12.75	11.00
59	Paraquat* (dichloride)	1910-42-5	57.00	3.00	1.00	3.75	5.00	11.75	8.00
60	Lead nitrate	10099-74-8	500.00	2.00	1.00	3.75	5.00	10.75	16.00
61	Warfarin * #(T3)	81-81-2	1.60	4.00	0.00	5.00	5.00	14.00	9.00
62	Camphor (synthetic) * #(T3)	76-22-2	70.00	3.00	0.00	5.00	5.00	13.00	13.00
63	Aniline	62-53-3	250.00	2.00	0.00	5.00	2.50	9.50	16.00
64	Thiram * #(T3)	137-26-8	560.00	2.00	0.00	5.00	5.00	12.00	17.00
65	Sodium chlorate	7775-09-9	1200.00	1.00	2.00	2.50	5.00	8.50	20.00
66	Acetic acid #(T3)	64-19-7	3310.00	0.00	0.00	5.00	2.50	7.50	40.00
67	Methyl alcohol	67-56-1	5600.00	0.00	0.00	5.00	2.50	7.50	47.00
68	p-Phenylene diamine * #(T3)	106-50-3	80.00	3.00	1.00	3.75	5.00	11.75	12.00
69	Sodium sulfide #(T3)	1313-82-2	208.00	2.00	1.00	3.75	5.00	10.75	21.00

Rank	Chemical	CAS Number	DWCP Data			Probability Section		Total Score
			Production Score	# of Global Distribution Sites	Distribution Score	Relative Probability Score	Threat Scores	
36	Potassium Hydroxide #(T3)	1310-58-3	2.00	107.00	5.00	7.00	0.50	18.25
37	Oxalic acid * #(T3)	144-62-7	1.00	106.00	5.00	6.00	0.00	18.00
38	Sodium Nitrate #(T3)	7631-99-4	2.00	124.00	5.00	7.00	2.50	18.00
39	Ethyl alcohol #(T3)	64-17-5	5.00	321.00	5.00	10.00	0.50	18.00
40	Butane T3	106-97-8	3.00	97.00	4.00	7.00	0.00	18.00
41	Aluminum (powder) *T3	7429-90-5	3.00	520.00	5.00	8.00	0.00	17.75
42	Aldicarb *T#	116-06-3	0.00	6.00	2.00	2.00	0.50	17.50
43	Strychnine Sulfate #(T3)	60-41-3	0.00	3.00	1.00	1.00	2.50	17.50
44	Methyl parathion #(T3)	298-00-0	0.00	25.00	3.00	3.00	0.50	17.50
45	Methamidophos	10265-92-6	0.00	45.00	3.00	3.00	0.50	17.50
46	Endosulfan	115-29-7	1.00	32.00	3.00	4.00	0.50	17.50
47	Red mercuric oxide	21908-53-2	1.00	26.00	3.00	4.00	0.50	17.50
48	Methidathion #(T3)	950-37-8	0.00	9.00	2.00	2.00	2.50	17.50
49	Dimethoate #(T3)	60-51-5	1.00	39.00	3.00	4.00	0.50	17.50
50	Potassium fluoride #(T3)	7789-23-3	1.00	82.00	4.00	5.00	0.50	17.50
51	Imidacloprid #(E3)	138261-41-3 (changed)	1.00	75.00	4.00	5.00	0.50	17.50
52	Kerosene #(T3)	8008-20-6	3.00	102.00	5.00	8.00	0.00	17.50
53	Acephate	30560-19-1	0.00	49.00	3.00	3.00	2.50	17.50
54	Copper oxychloride #(E3)	1332-40-7	2.00	41.00	3.00	5.00	0.50	17.50
55	Lead Oxide #(T3)	1309-60-0	1.00	20.00	3.00	4.00	2.50	17.50
56	Sulfuric acid LD50	7664-93-9	5.00	544.00	5.00	10.00	2.50	17.50
57	Zinc	7440-66-6	3.00	90.00	4.00	7.00	0.50	17.50
58	Phosphorus	7723-14-0	1.00	49.00	3.00	4.00	0.50	17.25
59	Paraquat* (dichloride)	1910-42-5	0.00	29.00	3.00	3.00	2.50	17.25
60	Lead nitrate	10099-74-8	1.00	49.00	3.00	4.00	2.50	17.25
61	Warfarin * #(T3)	81-81-2	0.00	14.00	3.00	3.00	0.00	17.00
62	Camphor (synthetic) * #(T3)	76-22-2	1.00	37.00	3.00	4.00	0.00	17.00
63	Aniline	62-53-3	1.00	64.00	4.00	5.00	2.50	17.00
64	Thiram * #(T3)	137-26-8	1.00	72.00	4.00	5.00	0.00	17.00
65	Sodium chlorate	7775-09-9	2.00	59.00	4.00	6.00	2.50	17.00
66	Acetic acid #(T3)	64-19-7	4.00	186.00	5.00	9.00	0.50	17.00
67	Methyl alcohol	67-56-1	4.00	268.00	5.00	9.00	0.50	17.00
68	p-Phenylene diamine * #(T3)	106-50-3	1.00	52.00	4.00	5.00	0.00	16.75
69	Sodium sulfide #(T3)	1313-82-2	2.00	86.00	4.00	6.00	0.00	16.75

Oral Toxicity Database									
Rank	Chemical	CAS Number	Oral Toxicity Value (In mg/kg unless otherwise noted)	Oral Toxicity Score	Reactivity Number	Stability Score	Physical State	Toxic (Operational) Hazard Score	# of Countries Producing
70	Sodium fluoroacetate #(T3)	62-74-8	0.10	5.00	0.00	5.00	5.00	15.00	3.00
71	Azinphosmethyl * #(T3)	86-50-0	4.00	4.00	0.00	5.00	5.00	14.00	5.00
72	Phenamiphos #(T3)	22224-92-6	8.00	4.00	0.00	5.00	5.00	14.00	3.00
73	Fenpropathrin #(AEGL-3 of Cyano group of the carboxylate family)	39515-41-8	18.00	3.00	0.00	5.00	5.00	13.00	3.00
74	Bifenthrin Tox est. on Pyr.	82657-04-3	54.50	3.00	0.00	5.00	5.00	13.00	5.00
75	Atrazine *T3	1912-24-9	672.00	2.00	0.00	5.00	5.00	12.00	10.00
76	n-Butyl alcohol #(T3)	71-36-3	790.00	2.00	0.00	5.00	2.50	9.50	26.00
77	Potassium orthophosphate #(T3 based on strontium orthophosphate)	7778-53-2	4640.00	0.00	0.00	5.00	5.00	10.00	11.00
78	Potassium ferrocyanide #(T3)	13943-58-3	6400.00	0.00	0.00	5.00	5.00	10.00	12.00
79	Hydrogen fluoride TDL0	7664-39-3	143.00	2.00	1.00	3.75	1.00	6.75	25.00
80	Barium nitrate *T3	10022-31-8	355.00	2.00	1.00	3.75	5.00	10.75	15.00
81	Cobalt (II) nitrate	10141-05-6	434.00	2.00	1.00	3.75	5.00	10.75	18.00
82	Ammonium persulfate *T3	7727-54-0	689.00	2.00	1.00	3.75	5.00	10.75	12.00
83	Potassium permanganate #(T3)	7722-64-7	750.00	2.00	1.00	3.75	5.00	10.75	16.00
84	Silver nitrate #(T3)	7761-88-8	1173.00	1.00	1.00	3.75	5.00	9.75	22.00
85	Potassium nitrate #(T3)	7757-79-1	3750.00	0.00	1.00	3.75	5.00	8.75	24.00
86	Difethialone (T3 based on warfarin)	104653-34-1	0.55	5.00	0.00	5.00	5.00	15.00	1.00
87	OMPA	152-16-9	5.00	4.00	0.00	5.00	2.50	11.50	11.00
88	Deltamethrin #(I as in pyrethrum)	52918-63-5	9.36	4.00	0.00	5.00	2.50	11.50	15.00
89	Dichlorvos	62-73-7	17.00	3.00	0.00	5.00	2.50	10.50	12.00
90	2-chloroacetophenone *IDLH	532-27-4	50.00	3.00	0.00	5.00	5.00	13.00	6.00
91	Cypermethrin #(I as in pyrethrum)	52315-07-8	57.50	3.00	0.00	5.00	2.50	10.50	15.00
92	Dinitrobenzene* (o, m, p isomers) * #(T3)	528-29-0; 99-65-0; 100-25-4	59.50	3.00	0.00	5.00	5.00	13.00	6.00
93	Quinone #(T3)	106-51-4	130.00	2.00	0.00	5.00	5.00	12.00	12.00
94	Carbaryl * #(T3)	63-25-2	230.00	2.00	0.00	5.00	5.00	12.00	10.00
95	Chloroform	67-66-3	300.00	2.00	0.00	5.00	2.50	9.50	20.00
96	2,4-D * #(T3)	94-75-7	300.00	2.00	0.00	5.00	5.00	12.00	15.00
97	Hydroquinone * #(T3)	123-31-9	302.00	2.00	0.00	5.00	5.00	12.00	15.00
98	p-Dichlorobenzene #(T3)	106-46-7	500.00	2.00	0.00	5.00	5.00	12.00	10.00
99	2,6-di-tert-butyl-p-cresol *T3	128-37-0	890.00	2.00	0.00	5.00	5.00	12.00	13.00
100	Isobutyl alcohol #(T3)	78-83-1	2460.00	0.00	0.00	5.00	2.50	7.50	27.00
101	Isopropyl alcohol #(T3)	67-63-0	5000.00	0.00	0.00	5.00	2.50	7.50	24.00
102	Ethyl acetate #(T3)	141-78-6	5620.00	0.00	0.00	5.00	2.50	7.50	30.00

Rank	Chemical	CAS Number	DWCP Data			Probability Section		Total Score
			Production Score	# of Global Distribution Sites	Distribution Score	Relative Probability Score	Threat Scores	
70	Sodium fluoroacetate #(T3)	62-74-8	0.00	3.00	1.00	1.00	0.50	16.50
71	Azinphosmethyl * #(T3)	86-50-0	0.00	7.00	2.00	2.00	0.50	16.50
72	Phenamiphos #(T3)	22224-92-6	0.00	6.00	2.00	2.00	0.50	16.50
73	Fenpropathrin #(AEGL-3 of Cyano group of the carboxylate family)	39515-41-8	0.00	19.00	3.00	3.00	0.50	16.50
74	Bifenthrin Tox est. on Pyr.	82657-04-3	0.00	20.00	3.00	3.00	0.50	16.50
75	Atrazine *T3	1912-24-9	1.00	23.00	3.00	4.00	0.50	16.50
76	n-Butyl alcohol #(T3)	71-36-3	2.00	106.00	5.00	7.00	0.00	16.50
77	Potassium orthophosphate #(T3 based on strontium orthophosphate)	7778-53-2	1.00	33.00	3.00	4.00	2.50	16.50
78	Potassium ferrocyanide #(T3)	13943-58-3	1.00	38.00	3.00	4.00	2.50	16.50
79	Hydrogen fluoride TDLo	7664-39-3	2.00	138.00	5.00	7.00	2.50	16.25
80	Barium nitrate *T3	10022-31-8	1.00	72.00	4.00	5.00	0.50	16.25
81	Cobalt (II) nitrate	10141-05-6	1.00	70.00	4.00	5.00	0.50	16.25
82	Ammonium persulfate *T3	7727-54-0	1.00	57.00	4.00	5.00	0.50	16.25
83	Potassium permanganate #(T3)	7722-64-7	1.00	57.00	4.00	5.00	0.50	16.25
84	Silver nitrate #(T3)	7761-88-8	2.00	80.00	4.00	6.00	0.50	16.25
85	Potassium nitrate #(T3)	7757-79-1	2.00	117.00	5.00	7.00	0.50	16.25
86	Difethialone (T3 based on warfarin)	104653-34-1	0.00	1.00	1.00	1.00	0.00	16.00
87	OMPA	152-16-9	1.00	22.00	3.00	4.00	0.50	16.00
88	Deltamethrin #(I as in pyrethrum)	52918-63-5	1.00	41.00	3.00	4.00	0.50	16.00
89	Dichlorvos	62-73-7	1.00	52.00	4.00	5.00	0.50	16.00
90	2-chloroacetophenone *IDLH	532-27-4	0.00	11.00	3.00	3.00	0.00	16.00
91	Cypermethrin #(I as in pyrethrum)	52315-07-8	1.00	89.00	4.00	5.00	0.50	16.00
92	Dinitrobenzene* (o, m, p isomers) * #(T3)	528-29-0; 99-65-0; 100-25-4	0.00	15.00	3.00	3.00	0.00	16.00
93	Quinone #(T3)	106-51-4	1.00	25.00	3.00	4.00	0.00	16.00
94	Carbaryl * #(T3)	63-25-2	1.00	25.00	3.00	4.00	0.00	16.00
95	Chloroform	67-66-3	2.00	81.00	4.00	6.00	0.50	16.00
96	2,4-D * #(T3)	94-75-7	1.00	32.00	3.00	4.00	0.00	16.00
97	Hydroquinone * #(T3)	123-31-9	1.00	41.00	3.00	4.00	0.00	16.00
98	p-Dichlorobenzene #(T3)	106-46-7	1.00	38.00	3.00	4.00	0.00	16.00
99	2,6-di-tert-butyl-p-cresol *T3	128-37-0	1.00	48.00	3.00	4.00	0.00	16.00
100	Isobutyl alcohol #(T3)	78-83-1	2.00	80.00	4.00	6.00	2.50	16.00
101	Isopropyl alcohol #(T3)	67-63-0	2.00	90.00	4.00	6.00	2.50	16.00
102	Ethyl acetate #(T3)	141-78-6	3.00	139.00	5.00	8.00	0.50	16.00

Oral Toxicity Database									
Rank	Chemical	CAS Number	Oral Toxicity Value (In mg/kg unless otherwise noted)	Oral Toxicity Score	Reactivity Number	Stability Score	Physical State	Toxic (Operational) Hazard Score	# of Countries Producing
103	Nitrobenzene #(T3)	98-95-3	349.00	2.00	1.00	3.75	2.50	8.25	12.00
104	Methoxyflurane #(IDLH of halogenated ethers-general)	76-38-0	3.60	4.00	0.00	5.00	5.00	14.00	1.00
105	Thallium #(T3)	7440-28-0	5.71	4.00	0.00	5.00	5.00	14.00	5.00
106	alpha-Chloroacetophenone * #(I)	532-27-4	50.00	3.00	0.00	5.00	5.00	13.00	3.00
107	guanidine hydrochloride	50-01-1	475.00	2.00	0.00	5.00	5.00	12.00	7.00
108	Ethylene dichloride #(E3)	107-06-2	500.00	2.00	0.00	5.00	2.50	9.50	28.00
109	Metalaxyl #(T3 of parent dixylyl methyl carbamate)	57837-19-1	566.00	2.00	0.00	5.00	5.00	12.00	8.00
110	Arsenic *T3	7440-38-2	763.00	2.00	0.00	5.00	5.00	12.00	6.00
111	Metribuzin #(T3 as diazo compound)	21087-64-9	1100.00	1.00	0.00	5.00	5.00	11.00	11.00
112	Acetone	67-64-1	5800.00	0.00	0.00	5.00	2.50	7.50	30.00
113	Carbendazim	10605-21-7	6400.00	0.00	0.00	5.00	5.00	10.00	16.00
114	n-Butyl acetate #(E3)	123-86-4	10768.00	0.00	0.00	5.00	2.50	7.50	30.00
115	Mercuric nitrate	10045-94-0	26.00	3.00	1.00	3.75	5.00	11.75	8.00
116	Chloroacetyl chloride E3	79-04-9	207.00	2.00	1.00	3.75	2.50	8.25	25.00
117	Endrin * #(T3)	72-20-8	3.00	4.00	0.00	5.00	5.00	14.00	1.00
118	ANTU * #(T3)	86-88-4	6.00	4.00	0.00	5.00	5.00	14.00	3.00
119	Dinitroresol * #(T3)	534-52-1	7.00	4.00	0.00	5.00	5.00	14.00	2.00
120	EPN * #(T3)	2104-64-5	7.00	4.00	0.00	5.00	5.00	14.00	2.00
121	Thallium sulfate #(T3 of T1)	7446-18-6	16.00	3.00	0.00	5.00	5.00	13.00	4.00
122	Pentachlorophenol * #(T3)	87-86-5	27.00	3.00	0.00	5.00	5.00	13.00	4.00
123	Methyl iodide #(E3)	74-88-4	76.00	3.00	0.00	5.00	2.50	10.50	10.00
124	2-Aminopyridine #(I)	504-29-0	200.00	2.00	0.00	5.00	5.00	12.00	6.00
125	1,3-Dichloro 5,5-dimethylhydantoin #(TEEL3 of hydantoins REV 22)	118-52-5	542.00	2.00	0.00	5.00	5.00	12.00	3.00
126	Methylene chloride	75-09-2	1600.00	1.00	0.00	5.00	2.50	8.50	21.00
127	Tetrahydrofuran #(T3)	109-99-9	1650.00	1.00	0.00	5.00	2.50	8.50	21.00
128	Nitrogen mustard hydrochloride-T3*	55-86-7	10.00	4.00	0.00	5.00	5.00	14.00	3.00
129	Tetrafluoroboric acid #(T3)	16872-11-0	100.00	3.00	1.00	3.75	2.50	9.25	17.00
130	Azinphos-ethyl *T3	2642-71-9	7.00	4.00	0.00	5.00	5.00	14.00	0.00
131	Toxaphene #(T3 based on Keplinger 1963 study)	8001-35-2	40.00	3.00	0.00	5.00	5.00	13.00	1.00
132	DDT * #(T3)	50-29-3	87.00	3.00	0.00	5.00	5.00	13.00	2.00
133	Crag (r) herbicide #(T3)	136-78-7	480.00	2.00	0.00	5.00	5.00	12.00	0.00
134	Formic acid #(T3)	64-18-6	1100.00	1.00	0.00	5.00	2.50	8.50	26.00

Rank	Chemical	CAS Number	DWCP Data			Probability Section		Total Score
			Production Score	# of Global Distribution Sites	Distribution Score	Relative Probability Score	Threat Scores	
104	Methoxyflurane #(IDLH of halogenated ethers-general)	76-38-0	0.00	3.00	1.00	1.00	0.50	15.50
105	Thallium #(T3)	7440-28-0	0.00	5.00	1.00	1.00	0.50	15.50
106	alpha-Chloroacetophenone * #(I)	532-27-4	0.00	10.00	2.00	2.00	0.50	15.50
107	guanidine hydrochloride	50-01-1	0.00	12.00	3.00	3.00	0.50	15.50
108	Ethylene dichloride #(E3)	107-06-2	2.00	70.00	4.00	6.00	0.00	15.50
109	Metalaxyl #(T3 of parent dixylyl methyl carbamate)	57837-19-1	0.00	25.00	3.00	3.00	0.50	15.50
110	Arsenic *T3	7440-38-2	0.00	11.00	3.00	3.00	0.50	15.50
111	Metribuzin #(T3 as diazo compound)	21087-64-9	1.00	23.00	3.00	4.00	0.50	15.50
112	Acetone	67-64-1	3.00	146.00	5.00	8.00	0.00	15.50
113	Carbendazim	10605-21-7	1.00	62.00	4.00	5.00	0.50	15.50
114	n-Butyl acetate #(E3)	123-86-4	3.00	124.00	5.00	8.00	0.00	15.50
115	Mercuric nitrate	10045-94-0	0.00	14.00	3.00	3.00	0.50	15.25
116	Chloroacetyl chloride E3	79-04-9	2.00	179.00	5.00	7.00	0.00	15.25
117	Endrin * #(T3)	72-20-8	0.00	1.00	1.00	1.00	0.00	15.00
118	ANTU * #(T3)	86-88-4	0.00	3.00	1.00	1.00	0.00	15.00
119	Dinitroresol * #(T3)	534-52-1	0.00	3.00	1.00	1.00	0.00	15.00
120	EPN * #(T3)	2104-64-5	0.00	4.00	1.00	1.00	0.00	15.00
121	Thallium sulfate #(T3 of T1)	7446-18-6	0.00	8.00	2.00	2.00	0.00	15.00
122	Pentachlorophenol * #(T3)	87-86-5	0.00	7.00	2.00	2.00	0.00	15.00
123	Methyl iodide #(E3)	74-88-4	1.00	40.00	3.00	4.00	0.50	15.00
124	2-Aminopyridine #(I)	504-29-0	0.00	20.00	3.00	3.00	0.00	15.00
125	1,3-Dichloro 5,5-dimethylhydantoin #(TEEL3 of hydantoins REV 22)	118-52-5	0.00	16.00	3.00	3.00	0.00	15.00
126	Methylene chloride	75-09-2	2.00	83.00	4.00	6.00	0.50	15.00
127	Tetrahydrofuran #(T3)	109-99-9	2.00	65.00	4.00	6.00	0.50	15.00
128	Nitrogen mustard hydrochloride-T3*	55-86-7	0.00	3.00	1.00	1.00	0.00	15.00
129	Tetrafluoroboric acid #(T3)	16872-11-0	1.00	60.00	4.00	5.00	0.50	14.75
130	Azinphos-ethyl *T3	2642-71-9	0.00	0.00	0.00	0.00	0.50	14.50
131	Toxaphene #(T3 based on Keplinger 1963 study)	8001-35-2	0.00	1.00	1.00	1.00	0.50	14.50
132	DDT * #(T3)	50-29-3	0.00	3.00	1.00	1.00	0.50	14.50
133	Crag (r) herbicide #(T3)	136-78-7	0.00	0.00	0.00	0.00	2.50	14.50
134	Formic acid #(T3)	64-18-6	2.00	84.00	4.00	6.00	0.00	14.50

Oral Toxicity Database									
Rank	Chemical	CAS Number	Oral Toxicity Value (In mg/kg unless otherwise noted)	Oral Toxicity Score	Reactivity Number	Stability Score	Physical State	Toxic (Operational) Hazard Score	# of Countries Producing
135	Ethanolamine #(T3)	141-43-5	1720.00	1.00	0.00	5.00	2.50	8.50	20.00
136	Cyclohexanone #(T3)	108-94-1	1800.00	1.00	0.00	5.00	2.50	8.50	25.00
137	Cadmium	7440-43-9	2330.00	0.00	0.00	5.00	5.00	10.00	19.00
138	Sodium borate	12179-04-3	2660.00	0.00	0.00	5.00	5.00	10.00	6.00
139	Xylenes #(T3)	95-47-6 or 1330-20-7 ?	3567.00	0.00	0.00	5.00	2.50	7.50	32.00
140	Bismuth *T3 of BiOCl	7440-69-9	5000.00	0.00	0.00	5.00	5.00	10.00	15.00
141	Mancozeb	8018-01-7	5000.00	0.00	0.00	5.00	5.00	10.00	12.00
142	Boron *T3 of B2O3	7440-42-8	3150 / 650	0.00	0.00	5.00	5.00	10.00	10.00
143	Piperidine-T3*	110-89-4	30.00	3.00	0.00	5.00	2.50	10.50	11.00
144	Furfural #(E3)	98-01-1	65.00	3.00	1.00	3.75	2.50	9.25	19.00
145	Hydrogen peroxide #(E3)	7722-84-1	376.00	2.00	3.00	1.25	2.50	5.75	38.00
146	Dicofol #(T3)	115-32-2	575.00	2.00	1.00	3.75	5.00	10.75	8.00
147	Dichlorodifluoromethane #(T3)	75-71-8	5.60	4.00	0.00	5.00	1.00	10.00	14.00
148	Sodium azide (#T3)	26628-22-8	27.00	3.00	2.00	2.50	5.00	10.50	8.00
149	Heptachlor * #(T3)	76-44-8	40.00	3.00	0.00	5.00	5.00	13.00	1.00
150	Chlorinated camphene * #(T3)	8001-35-2	40.00	3.00	0.00	5.00	5.00	13.00	1.00
151	Dimethyl 1,2-dibromo 2,2-dichlorethyl phosphate #(I)	300-76-5	92.00	3.00	0.00	5.00	5.00	13.00	3.00
152	p-Anisidine * #(T3)	104-94-9	1320.00	1.00	0.00	5.00	5.00	11.00	5.00
153	Dimethylformamide	68-12-2	2000.00	1.00	0.00	5.00	2.50	8.50	19.00
154	Ammonium sulfamate * #(T3)	7773-06-0	2000.00	1.00	0.00	5.00	5.00	11.00	8.00
155	Cyclohexane #(T3)	110-82-7	12705.00	0.00	0.00	5.00	2.50	7.50	26.00
156	p-Nitrochlorobenzene * #(T3)	100-00-5	420.00	2.00	3.00	1.25	5.00	8.25	6.00
157	Morpholine #(T3)	110-91-8	1738.00	1.00	1.00	3.75	5.00	9.75	12.00
158	Aldrin * #(T3)	309-00-2	38.00	3.00	0.00	5.00	5.00	13.00	0.00
159	Dieldrin * #(T3)	60-57-1	38.30	3.00	0.00	5.00	5.00	13.00	0.00
160	Ethylene chlorohydrin	107-07-3	71.00	3.00	0.00	5.00	2.50	10.50	6.00
161	Dichloroethyl ether #(T3)	111-44-4	75.00	3.00	0.00	5.00	2.50	10.50	4.00
162	Isopropylamine #(T3)	75-31-0	111.00	2.00	0.00	5.00	2.50	9.50	13.00
163	Pirimicarb #(T3 as carbamate ester)	5947-49-9	155.00	2.00	0.00	5.00	5.00	12.00	1.00
164	Malathion * #(T3)	121-75-5	290.00	2.00	0.00	5.00	2.50	9.50	11.00
165	Phosphorus pentasulfide * #(T3)	1314-80-3	389.00	2.00	2.00	2.50	5.00	9.50	12.00
166	Triethylamine #(T3)	121-44-8	460.00	2.00	0.00	5.00	2.50	9.50	17.00
167	Diethylamine #(T3)	109-89-7	540.00	2.00	0.00	5.00	2.50	9.50	16.00
168	o-Toluidine #(T3)	95-53-4	670.00	2.00	0.00	5.00	2.50	9.50	11.00

Rank	Chemical	CAS Number	DWCP Data			Probability Section		Total Score
			Production Score	# of Global Distribution Sites	Distribution Score	Relative Probability Score	Threat Scores	
136	Cyclohexanone #(T3)	108-94-1	2.00	72.00	4.00	6.00	0.00	14.50
137	Cadmium	7440-43-9	1.00	37.00	3.00	4.00	0.50	14.50
138	Sodium borate	12179-04-3	0.00	10.00	2.00	2.00	2.50	14.50
139	Xylenes #(T3)	95-47-6 or 1330-20-7 ?	3.00	76.00	4.00	7.00	0.00	14.50
140	Bismuth *T3 of BiOCl	7440-69-9	1.00	26.00	3.00	4.00	0.50	14.50
141	Mancozeb	8018-01-7	1.00	41.00	3.00	4.00	0.50	14.50
142	Boron *T3 of B2O3	7440-42-8	1.00	23.00	3.00	4.00	0.50	14.50
143	Piperidine-T3*	110-89-4	1.00	21.00	3.00	4.00	0.00	14.50
144	Furfural #(E3)	98-01-1	1.00	66.00	4.00	5.00	0.00	14.25
145	Hydrogen peroxide #(E3)	7722-84-1	3.00	172.00	5.00	8.00	0.50	14.25
146	Dicofol #(T3)	115-32-2	0.00	18.00	3.00	3.00	0.50	14.25
147	Dichlorodifluoromethane #(T3)	75-71-8	1.00	25.00	3.00	4.00	0.00	14.00
148	Sodium azide #(T3)	26628-22-8	0.00	35.00	3.00	3.00	0.50	14.00
149	Heptachlor * #(T3)	76-44-8	0.00	1.00	1.00	1.00	0.00	14.00
150	Chlorinated camphene * #(T3)	8001-35-2	0.00	1.00	1.00	1.00	0.00	14.00
151	Dimethyl 1,2-dibromo 2,2-dichlorethyl phosphate #(L)	300-76-5	0.00	4.00	1.00	1.00	0.00	14.00
152	p-Anisidine * #(T3)	104-94-9	0.00	19.00	3.00	3.00	0.00	14.00
153	Dimethylformamide	68-12-2	1.00	64.00	4.00	5.00	0.50	14.00
154	Ammonium sulfamate * #(T3)	7773-06-0	0.00	14.00	3.00	3.00	0.00	14.00
155	Cyclohexane #(T3)	110-82-7	2.00	75.00	4.00	6.00	0.50	14.00
156	p-Nitrochlorobenzene * #(T3)	100-00-5	0.00	25.00	3.00	3.00	2.50	13.75
157	Morpholine #(T3)	110-91-8	1.00	32.00	3.00	4.00	0.00	13.75
158	Aldrin * #(T3)	309-00-2	0.00	0.00	0.00	0.00	0.50	13.50
159	Dieldrin * #(T3)	60-57-1	0.00	0.00	0.00	0.00	0.50	13.50
160	Ethylene chlorohydrin	107-07-3	0.00	17.00	3.00	3.00	0.00	13.50
161	Dichloroethyl ether #(T3)	111-44-4	0.00	12.00	3.00	3.00	0.00	13.50
162	Isopropylamine #(T3)	75-31-0	1.00	30.00	3.00	4.00	0.00	13.50
163	Pirimicarb #(T3 as carbamate ester)	5947-49-9	0.00	1.00	1.00	1.00	0.50	13.50
164	Malathion * #(T3)	121-75-5	1.00	33.00	3.00	4.00	0.00	13.50
165	Phosphorus pentasulfide * #(T3)	1314-80-3	1.00	28.00	3.00	4.00	0.00	13.50
166	Triethylamine #(T3)	121-44-8	1.00	46.00	3.00	4.00	0.00	13.50
167	Diethylamine #(T3)	109-89-7	1.00	39.00	3.00	4.00	0.00	13.50
168	o-Toluidine #(T3)	95-53-4	1.00	32.00	3.00	4.00	0.00	13.50

Oral Toxicity Database									
Rank	Chemical	CAS Number	Oral Toxicity Value (In mg/kg unless otherwise noted)	Oral Toxicity Score	Reactivity Number	Stability Score	Physical State	Toxic (Operational) Hazard Score	# of Countries Producing
169	Bromoform #(T3)	75-25-2	933.00	2.00	0.00	5.00	2.50	9.50	10.00
170	N,N-Dimethylaniline #(T3)	121-69-7	951.00	2.00	0.00	5.00	2.50	9.50	11.00
171	Chlorobenzene	108-90-7	1110.00	1.00	0.00	5.00	2.50	8.50	13.00
172	Isoamyl alcohol (primary and secondary) #(T3)	123-51-3	1300.00	1.00	0.00	5.00	2.50	8.50	18.00
173	n-Pentane #(T3)	109-66-0	2000.00	1.00	0.00	5.00	2.50	8.50	20.00
174	Biphenyl * #(T3)	92-52-4	2140.00	0.00	0.00	5.00	5.00	10.00	7.00
175	Buprofezin #(T3 based on limited acute toxicity pesticide)	69327-76-0	2198.00	0.00	0.00	5.00	5.00	10.00	5.00
176	Ethyl benzene	100-41-4	3500.00	0.00	0.00	5.00	2.50	7.50	21.00
177	Thiophanate methyl #(T3 of carbamate fungicides)	23564-05-8	6640.00	0.00	0.00	5.00	5.00	10.00	8.00
178	Dibutyl phthalate *(T3)	84-74-2	7499.00	0.00	0.00	5.00	2.50	7.50	27.00
179	Isobutyl acetate #(T3)	110-19-0	13400.00	0.00	0.00	5.00	2.50	7.50	21.00
180	n-Hexane	110-54-3	25000.00	0.00	0.00	5.00	2.50	7.50	23.00
181	Cyclohexylamine T3	108-91-8	11.00	3.00	0.00	5.00	2.50	10.50	8.00
182	Chlorosulfonic acid E3	7790-94-5	50.00	3.00	0.00	5.00	2.50	10.50	6.00
183	Methyl chloroformate-T3*	79-22-1	60.00	3.00	0.00	5.00	2.50	10.50	2.00
184	Oleum-E3*	8014-95-7	347.00	2.00	0.00	5.00	2.50	9.50	9.00
185	MDEA-R* (N-Methyldiethanolamine)	105-59-9	1945.00	1.00	0.00	5.00	2.50	8.50	24.00
186	Ethyl ether #(T3)	60-29-7	1215.00	1.00	1.00	3.75	2.50	7.25	20.00
187	Benomyl	17804-35-2	10000.00	0.00	1.00	3.75	5.00	8.75	10.00
188	Di-syston #(T3)	298-04-4	2.60	4.00	0.00	5.00	2.50	11.50	3.00
189	Phosphamidon #(T3)	13171-21-6	8.00	4.00	0.00	5.00	2.50	11.50	3.00
190	Phosphorus trichloride	7719-12-2	18.00	3.00	2.00	2.50	2.50	8.00	11.00
191	Tetramethyl succinonitrile #(I)	3333-52-6	27.00	3.00	0.00	5.00	5.00	13.00	0.00
192	Acrylonitrile	107-13-1	78.00	3.00	2.00	2.50	2.50	8.00	16.00
193	Methylamine	74-89-5	100.00	3.00	0.00	5.00	1.00	9.00	14.00
194	o-Chlorobenzylidene malononitrile * #(T3)	2698-41-1	178.00	2.00	0.00	5.00	5.00	12.00	1.00
195	Bromoxynil #(T3-as naphtha solution only)	1689-84-5	190.00	2.00	0.00	5.00	2.50	9.50	5.00
196	Pindone * #(I)	83-26-1	280.00	2.00	0.00	5.00	5.00	12.00	1.00
197	2,4,5-T * #(T3)	93-76-5	300.00	2.00	0.00	5.00	5.00	12.00	1.00
198	Rotenone * #(T3)	83-79-4	300.00	2.00	0.00	5.00	5.00	12.00	2.00
199	Fenvalerate	51630-58-1	325.00	2.00	0.00	5.00	2.50	9.50	6.00

Rank	Chemical	CAS Number	DWCP Data			Probability Section		Total Score
			Production Score	# of Global Distribution Sites	Distribution Score	Relative Probability Score	Threat Scores	
169	Bromoform #(T3)	75-25-2	1.00	24.00	3.00	4.00	0.00	13.50
170	N,N-Dimethylaniline #(T3)	121-69-7	1.00	41.00	3.00	4.00	0.00	13.50
171	Chlorobenzene	108-90-7	1.00	53.00	4.00	5.00	0.00	13.50
172	Isoamyl alcohol (primary and secondary) #(T3)	123-51-3	1.00	60.00	4.00	5.00	0.00	13.50
173	n-Pentane #(T3)	109-66-0	2.00	47.00	3.00	5.00	0.00	13.50
174	Biphenyl * #(T3)	92-52-4	0.00	18.00	3.00	3.00	0.50	13.50
175	Buprofezin #(T3 based on limited acute toxicity pesticide)	69327-76-0	0.00	27.00	3.00	3.00	0.50	13.50
176	Ethyl benzene	100-41-4	2.00	51.00	4.00	6.00	0.00	13.50
177	Thiophanate methyl #(T3 of carbamate fungicides)	23564-05-8	0.00	30.00	3.00	3.00	0.50	13.50
178	Dibutyl phthalate *(T3)	84-74-2	2.00	88.00	4.00	6.00	0.00	13.50
179	Isobutyl acetate #(T3)	110-19-0	2.00	56.00	4.00	6.00	0.00	13.50
180	n-Hexane	110-54-3	2.00	78.00	4.00	6.00	0.00	13.50
181	Cyclohexylamine T3	108-91-8	0.00	32.00	3.00	3.00	0.00	13.50
182	Chlorosulfonic acid E3	7790-94-5	0.00	38.00	3.00	3.00	0.00	13.50
183	Methyl chloroformate-T3*	79-22-1	0.00	23.00	3.00	3.00	0.00	13.50
184	Oleum-E3*	8014-95-7	0.00	81.00	4.00	4.00	0.00	13.50
185	MDEA-R* (N-Methyldiethanolamine)	105-59-9	2.00	44.00	3.00	5.00	0.00	13.50
186	Ethyl ether #(T3)	60-29-7	2.00	57.00	4.00	6.00	0.00	13.25
187	Benomyl	17804-35-2	1.00	23.00	3.00	4.00	0.50	13.25
188	Di-syston #(T3)	298-04-4	0.00	3.00	1.00	1.00	0.50	13.00
189	Phosphamidon #(T3)	13171-21-6	0.00	4.00	1.00	1.00	0.50	13.00
190	Phosphorus trichloride	7719-12-2	1.00	57.00	4.00	5.00	0.00	13.00
191	Tetramethyl succinonitrile #(I)	3333-52-6	0.00	0.00	0.00	0.00	0.00	13.00
192	Acrylonitrile	107-13-1	1.00	53.00	4.00	5.00	0.00	13.00
193	Methylamine	74-89-5	1.00	46.00	3.00	4.00	0.00	13.00
194	o-Chlorobenzylidene malononitrile * #(T3)	2698-41-1	0.00	1.00	1.00	1.00	0.00	13.00
195	Bromoxynil #(T3-as naptha solution only)	1689-84-5	0.00	14.00	3.00	3.00	0.50	13.00
196	Pindone * #(I)	83-26-1	0.00	1.00	1.00	1.00	0.00	13.00
197	2,4,5-T * #(T3)	93-76-5	0.00	1.00	1.00	1.00	0.00	13.00
198	Rotenone * #(T3)	83-79-4	0.00	2.00	1.00	1.00	0.00	13.00
199	Fenvalerate	51630-58-1	0.00	48.00	3.00	3.00	0.50	13.00

Oral Toxicity Database									
Rank	Chemical	CAS Number	Oral Toxicity Value (In mg/kg unless otherwise noted)	Oral Toxicity Score	Reactivity Number	Stability Score	Physical State	Toxic (Operational) Hazard Score	# of Countries Producing
200	Profenofos #(I)	41198-08-7	358.00	2.00	0.00	5.00	2.50	9.50	4.00
201	Ferbam * #(I)	14484-64-1	1130.00	1.00	0.00	5.00	5.00	11.00	6.00
202	Ethyl bromide #(T3)	74-96-4	1350.00	1.00	0.00	5.00	2.50	8.50	10.00
203	n-Amyl acetate #(T3)	628-63-7	1600.00	1.00	0.00	5.00	2.50	8.50	14.00
204	n-Propyl alcohol #(T3)	71-23-8	1870.00	1.00	0.00	5.00	2.50	8.50	18.00
205	Methyl Cellosolve (r) acetate #(I)	110-49-6	2900.00	0.00	0.00	5.00	5.00	10.00	6.00
206	Triphenyl phosphate*	115-86-6	3500.00	0.00	0.00	5.00	5.00	10.00	5.00
207	Hexachloroethane #(T3)	67-72-1	4460.00	0.00	0.00	5.00	5.00	10.00	3.00
208	Dipropylene glycol methyl ether #(T3)	34590-94-8	5130.00	0.00	0.00	5.00	5.00	10.00	7.00
209	Acetone cyanohydrin, stabilized *T-3	75-86-5	5.90	4.00	2.00	2.50	2.50	9.00	13.00
210	TEPP * #(T3)	107-49-3	0.50	5.00	1.00	3.75	2.50	11.25	1.00
211	Sodium borohydride #(T3)	16940-66-2	162.00	2.00	3.00	1.25	5.00	8.25	13.00
212	Methylene bisphenyl isocyanate * #(E3)	101-68-8	9200.00	0.00	1.00	3.75	5.00	8.75	12.00
213	Phosdrin * #(T3) (Mevinphos)	7786-34-7	3.00	4.00	0.00	5.00	2.50	11.50	4.00
214	Parathion *	56-38-2	4.41	4.00	2.00	2.50	2.50	9.00	3.00
215	TEDP * #(T3)	3689-24-5	5.00	4.00	0.00	5.00	2.50	11.50	1.00
216	Phosphoryl Trichloride	10025-87-3	36.00	3.00	2.00	2.50	2.50	8.00	14.00
217	Ethylene dibromide	106-93-4	108.00	2.00	0.00	5.00	2.50	9.50	7.00
218	Phenylhydrazine #(T3)	100-63-0	188.00	2.00	0.00	5.00	2.50	9.50	8.00
219	Methyl bromide	74-83-9	214.00	2.00	0.00	5.00	1.00	8.00	10.00
220	Monomethyl aniline #(T3)	100-61-8	280.00	2.00	0.00	5.00	2.50	9.50	6.00
221	n-Butylamine #(T3)	109-73-9	366.00	2.00	0.00	5.00	2.50	9.50	8.00
222	Methyl formate #(T3)	107-31-3	475.00	2.00	0.00	5.00	2.50	9.50	8.00
223	o-Dichlorobenzene #(T3)	95-50-1	500.00	2.00	0.00	5.00	2.50	9.50	9.00
224	Phosphorus pentachloride * #(T3)	10026-13-8	600.00	2.00	2.00	2.50	5.00	9.50	7.00
225	p-Nitroaniline * #(T3)	100-01-6	750.00	2.00	2.00	2.50	5.00	9.50	5.00
226	Diisopropylamine #(T3)	108-18-9	770.00	2.00	0.00	5.00	2.50	9.50	6.00
227	2-Butoxyethanol #(T3)	111-76-2	917.00	2.00	0.00	5.00	2.50	9.50	1.00
228	Ethylenediamine	107-15-3	1200.00	1.00	0.00	5.00	2.50	8.50	12.00
229	Carbon disulfide	75-15-0	1200.00	1.00	0.00	5.00	2.50	8.50	16.00
230	Cyclohexanol #(T3)	108-93-0	1400.00	1.00	0.00	5.00	2.50	8.50	15.00
231	Pyridine #(T3)	110-86-1	1500.00	1.00	0.00	5.00	2.50	8.50	15.00
232	Methyl (n-amyl) ketone #(T3)	110-43-0	1670.00	1.00	0.00	5.00	2.50	8.50	11.00
233	Bromine	7726-95-6	1700.00	1.00	0.00	5.00	2.50	8.50	12.00
234	Hexone #(T3)	108-10-1	2080.00	0.00	0.00	5.00	2.50	7.50	17.00
235	2-Butanone	78-93-3	2737.00	0.00	0.00	5.00	2.50	7.50	18.00

Rank	Chemical	CAS Number	DWCP Data			Probability Section		Total Score
			Production Score	# of Global Distribution Sites	Distribution Score	Relative Probability	Threat	
						Score	Scores	
200	Profenofos #(I)	41198-08-7	0.00	21.00	3.00	3.00	0.50	13.00
201	Ferbam * #(I)	14484-64-1	0.00	8.00	2.00	2.00	0.00	13.00
202	Ethyl bromide #(T3)	74-96-4	1.00	37.00	3.00	4.00	0.50	13.00
203	n-Amyl acetate #(T3)	628-63-7	1.00	37.00	3.00	4.00	0.50	13.00
204	n-Propyl alcohol #(T3)	71-23-8	1.00	50.00	3.00	4.00	0.50	13.00
205	Methyl Cellosolve (r) acetate #(I)	110-49-6	0.00	12.00	3.00	3.00	0.00	13.00
206	Triphenyl phosphate*	115-86-6	0.00	21.00	3.00	3.00	0.00	13.00
207	Hexachloroethane #(T3)	67-72-1	0.00	15.00	3.00	3.00	0.00	13.00
208	Dipropylene glycol methyl ether #(T3)	34590-94-8	0.00	35.00	3.00	3.00	0.00	13.00
209	Acetone cyanohydrin, stabilized *T-3	75-86-5	1.00	22.00	3.00	4.00	0.00	13.00
210	TEPP * #(T3)	107-49-3	0.00	1.00	1.00	1.00	0.50	12.75
211	Sodium borohydride #(T3)	16940-66-2	1.00	34.00	3.00	4.00	0.50	12.75
212	Methylene bisphenyl isocyanate * #(E3)	101-68-8	1.00	25.00	3.00	4.00	0.00	12.75
213	Phosdrin * #(T3) (Mevinphos)	7786-34-7	0.00	5.00	1.00	1.00	0.00	12.50
214	Parathion *	56-38-2	0.00	11.00	3.00	3.00	0.50	12.50
215	TEDP * #(T3)	3689-24-5	0.00	1.00	1.00	1.00	0.00	12.50
216	Phosphoryl Trichloride	10025-87-3	1.00	50.00	3.00	4.00	0.50	12.50
217	Ethylene dibromide	106-93-4	0.00	27.00	3.00	3.00	0.00	12.50
218	Phenylhydrazine #(T3)	100-63-0	0.00	23.00	3.00	3.00	0.00	12.50
219	Methyl bromide	74-83-9	1.00	17.00	3.00	4.00	0.50	12.50
220	Monomethyl aniline #(T3)	100-61-8	0.00	17.00	3.00	3.00	0.00	12.50
221	n-Butylamine #(T3)	109-73-9	0.00	19.00	3.00	3.00	0.00	12.50
222	Methyl formate #(T3)	107-31-3	0.00	16.00	3.00	3.00	0.00	12.50
223	o-Dichlorobenzene #(T3)	95-50-1	0.00	37.00	3.00	3.00	0.00	12.50
224	Phosphorus pentachloride * #(T3)	10026-13-8	0.00	17.00	3.00	3.00	0.00	12.50
225	p-Nitroaniline * #(T3)	100-01-6	0.00	47.00	3.00	3.00	0.00	12.50
226	Diisopropylamine #(T3)	108-18-9	0.00	18.00	3.00	3.00	0.00	12.50
227	2-Butoxyethanol #(T3)	111-76-2	0.00	43.00	3.00	3.00	0.00	12.50
228	Ethylenediamine	107-15-3	1.00	32.00	3.00	4.00	0.00	12.50
229	Carbon disulfide	75-15-0	1.00	45.00	3.00	4.00	0.00	12.50
230	Cyclohexanol #(T3)	108-93-0	1.00	27.00	3.00	4.00	0.00	12.50
231	Pyridine #(T3)	110-86-1	1.00	49.00	3.00	4.00	0.00	12.50
232	Methyl (n-amyl) ketone #(T3)	110-43-0	1.00	20.00	3.00	4.00	0.00	12.50
233	Bromine	7726-95-6	1.00	50.00	3.00	4.00	0.00	12.50
234	Hexone #(T3)	108-10-1	1.00	52.00	4.00	5.00	0.00	12.50
235	2-Butanone	78-93-3	1.00	63.00	4.00	5.00	0.00	12.50

Oral Toxicity Database									
Rank	Chemical	CAS Number	Oral Toxicity Value (In mg/kg unless otherwise noted)	Oral Toxicity Score	Reactivity Number	Stability Score	Physical State	Toxic (Operational) Hazard Score	# of Countries Producing
236	Collodion #(T3)	9004-70-0	5000.00	0.00	0.00	5.00	2.50	7.50	22.00
237	Trypan blue #(T3)	72-57-1	6200.00	0.00	0.00	5.00	5.00	10.00	6.00
238	Diethylene glycol	111-46-6	12000.00	0.00	0.00	5.00	FALSE	5.00	30.00
239	Isobutyronitrile-E3*	78-82-0	50.00	3.00	0.00	5.00	2.50	10.50	3.00
240	Peracetic acid-T3*	79-21-0	154.00	2.00		5.00	2.50	9.50	9.00
241	Aluminum phosphide *T3	20859-73-8	180.00	2.00	2.00	2.50	5.00	9.50	2.00
242	Hexafluoroacetone E3	684-16-2	191.00	2.00	2.00	2.50	5.00	9.50	6.00
243	Propyl chloroformate-T3*	109-61-5	650.00	2.00	0.00	5.00	2.50	9.50	2.00
244	Potassium chlorate	3811-04-9	1870.00	1.00	2.00	2.50	5.00	8.50	11.00
245	Aluminum chloride, anhydrous *T3	7446-70-0	3450.00	0.00	2.00	2.50	5.00	7.50	10.00
246	Allyl alcohol	107-18-6	64.00	3.00	1.00	3.75	2.50	9.25	6.00
247	Ethylene oxide	75-21-8	72.00	3.00	3.00	1.25	1.00	5.25	32.00
248	Furfuryl alcohol #(T3)	98-00-0	177.00	2.00	1.00	3.75	2.50	8.25	12.00
249	Dimethyl sulfate	77-78-1	205.00	2.00	1.00	3.75	2.50	8.25	12.00
250	Allyl chloride	107-05-1	450.00	2.00	1.00	3.75	2.50	8.25	11.00
251	Cumene	98-82-8	1400.00	1.00	1.00	3.75	2.50	7.25	20.00
252	Acetic anhydride #(T3)	108-24-7	1780.00	1.00	1.00	3.75	2.50	7.25	19.00
253	Propionitrile-T3*	107-12-0	39.00	3.00	1.00	3.75	2.50	9.25	3.00
254	Demeton * #(T3) (Systox)	8065-48-3	1.70	4.00	0.00	5.00	2.50	11.50	0.00
255	Oxydemeton-methyl #(I)	301-12-2	30.00	3.00	0.00	5.00	2.50	10.50	3.00
256	Epichlorohydrin #(I)	106-89-8	90.00	3.00	2.00	2.50	2.50	8.00	15.00
257	Fluorotrichloromethane #(T3)	75-69-4	352.00	2.00	0.00	5.00	1.00	8.00	12.00
258	Propylene oxide	75-56-9	380.00	2.00	2.00	2.50	2.50	7.00	16.00
259	Ethylamine	75-04-7	400.00	2.00	0.00	5.00	1.00	8.00	14.00
260	Ronnel #(I)	299-84-3	625.00	2.00	0.00	5.00	5.00	12.00	0.00
261	Chloroform-D	suggested: 67-66-3 or 865-49-6	695.00	2.00	0.00	5.00	2.50	9.50	6.00
262	Dimethylamine	124-40-3	698.00	2.00	0.00	5.00	1.00	8.00	14.00
263	2-Diethylaminoethanol #(I)	100-37-8	1300.00	1.00	0.00	5.00	2.50	8.50	0.00
264	1-methyl imidazole LD50	616-47-7	1400.00	1.00	0.00	5.00	2.50	8.50	8.00
265	Methoxychlor * #(T3)	72-43-5	1855.00	1.00	0.00	5.00	5.00	11.00	1.00
266	Terphenyls * #(I)	92-06-8; 84-15-1; 92-94-4	1900.00	1.00	0.00	5.00	5.00	11.00	4.00
267	Carbon tetrachloride	56-23-5	2350.00	0.00	0.00	5.00	2.50	7.50	16.00
268	Acetonitrile	75-05-8	2460.00	0.00	0.00	5.00	2.50	7.50	19.00

Rank	Chemical	CAS Number	DWCP Data			Probability Section		Total Score
			Production Score	# of Global Distribution Sites	Distribution Score	Relative Probability Score	Threat Scores	
237	Trypan blue #(T3)	72-57-1	0.00	10.00	2.00	2.00	0.50	12.50
238	Diethylene glycol	111-46-6	3.00	94.00	4.00	7.00	0.50	12.50
239	Isobutyronitrile-E3*	78-82-0	0.00	6.00	2.00	2.00	0.00	12.50
240	Peracetic acid-T3*	79-21-0	0.00	41.00	3.00	3.00	0.00	12.50
241	Aluminum phosphide *T3	20859-73-8	0.00	17.00	3.00	3.00	0.00	12.50
242	Hexafluoroacetone E3	684-16-2	0.00	18.00	3.00	3.00	0.00	12.50
243	Propyl chloroformate-T3*	109-61-5	0.00	12.00	3.00	3.00	0.00	12.50
244	Potassium chlorate	3811-04-9	1.00	38.00	3.00	4.00	0.00	12.50
245	Aluminum chloride, anhydrous *T3	7446-70-0	1.00	99.00	4.00	5.00	0.00	12.50
246	Allyl alcohol	107-18-6	0.00	13.00	3.00	3.00	0.00	12.25
247	Ethylene oxide	75-21-8	3.00	84.00	4.00	7.00	0.00	12.25
248	Furfuryl alcohol #(T3)	98-00-0	1.00	38.00	3.00	4.00	0.00	12.25
249	Dimethyl sulfate	77-78-1	1.00	39.00	3.00	4.00	0.00	12.25
250	Allyl chloride	107-05-1	1.00	19.00	3.00	4.00	0.00	12.25
251	Cumene	98-82-8	2.00	39.00	3.00	5.00	0.00	12.25
252	Acetic anhydride #(T3)	108-24-7	1.00	55.00	4.00	5.00	0.00	12.25
253	Propionitrile-T3*	107-12-0	0.00	14.00	3.00	3.00	0.00	12.25
254	Demeton * #(T3) (Systox)	8065-48-3	0.00	0.00	0.00	0.00	0.50	12.00
255	Oxydemeton-methyl #(I)	301-12-2	0.00	3.00	1.00	1.00	0.50	12.00
256	Epichlorohydrin #(I)	106-89-8	1.00	34.00	3.00	4.00	0.00	12.00
257	Fluorotrichloromethane #(T3)	75-69-4	1.00	18.00	3.00	4.00	0.00	12.00
258	Propylene oxide	75-56-9	1.00	54.00	4.00	5.00	0.00	12.00
259	Ethylamine	75-04-7	1.00	33.00	3.00	4.00	0.00	12.00
260	Ronnel #(I)	299-84-3	0.00	0.00	0.00	0.00	0.00	12.00
261	Chloroform-D	suggested: 67-66-3 or 865-49-6	0.00	10.00	2.00	2.00	0.50	12.00
262	Dimethylamine	124-40-3	1.00	41.00	3.00	4.00	0.00	12.00
263	2-Diethylaminoethanol #(I)	100-37-8	0.00	23.00	3.00	3.00	0.50	12.00
264	1-methyl imidazole LD50	616-47-7	0.00	22.00	3.00	3.00	0.50	12.00
265	Methoxychlor * #(T3)	72-43-5	0.00	1.00	1.00	1.00	0.00	12.00
266	Terphenyls * #(I)	92-06-8; 84-15-1; 92-94-4	0.00	5.00	1.00	1.00	0.00	12.00
267	Carbon tetrachloride	56-23-5	1.00	49.00	3.00	4.00	0.50	12.00
268	Acetonitrile	75-05-8	1.00	50.00	3.00	4.00	0.50	12.00

Oral Toxicity Database									
Rank	Chemical	CAS Number	Oral Toxicity Value (In mg/kg unless otherwise noted)	Oral Toxicity Score	Reactivity Number	Stability Score	Physical State	Toxic (Operational) Hazard Score	# of Countries Producing
269	Styrene	100-42-5	2650.00	0.00	2.00	2.50	2.50	5.00	28.00
270	Isoprene-T3*	78-79-5	4.50	4.00	2.00	2.50	2.50	9.00	6.00
271	Acetyl Bromide *T3	506-96-7	50.00	3.00	2.00	2.50	2.50	8.00	10.00
272	Dipicrylamine (or hexanitrodiphenylamine)	131-73-7	500.00	2.00	0.00	5.00	5.00	12.00	0.00
273	Trinitroanisole	606-35-9	500.00	2.00		5.00	5.00	12.00	0.00
274	Triethanolamine hydrochloride	637-39-8	12285.00	0.00	0.00	5.00	5.00	10.00	6.00
275	Thioglycol TEEL-3	60-24-2	244.00	2.00	1.00	3.75	2.50	8.25	6.00
276	Cyanogen Chloride	460-19-5	6.00	4.00	0.00	5.00	1.00	10.00	2.00
277	Trithion	786-19-6	6.80	4.00	0.00	5.00	2.50	11.50	0.00
278	Decaborane * #(T3)	17702-41-9	64.00	3.00	2.00	2.50	5.00	10.50	2.00
279	1,1,2,2-Tetrachloroethane #(T3)	79-34-5	200.00	2.00	0.00	5.00	2.50	9.50	6.00
280	1,1,2-Trichloroethane #(T3)	79-00-5	580.00	2.00	0.00	5.00	2.50	9.50	2.00
281	Trinitrotoluene	118-96-7	607.00	2.00	4.00	0.00	5.00	7.00	11.00
282	o-Anisidine * #(T3)	90-04-0	1150.00	1.00	0.00	5.00	2.50	8.50	5.00
283	2-Pentanone #(T3)	107-87-9	1600.00	1.00	0.00	5.00	2.50	8.50	8.00
284	N-Ethylmorpholine #(I)	100-74-3	1780.00	1.00	0.00	5.00	2.50	8.50	7.00
285	Ethyl formate #(I)	109-94-4	1850.00	1.00	0.00	5.00	2.50	8.50	6.00
286	Propylene dichloride #(T3)	78-87-5	1900.00	1.00	0.00	5.00	2.50	8.50	9.00
287	Cyclohexene #(T3)	110-83-8	1944.00	1.00	0.00	5.00	2.50	8.50	9.00
288	sec-Butyl alcohol #(T3)	78-92-2	2193.00	0.00	0.00	5.00	2.50	7.50	12.00
289	Diacetone alcohol #(T3)	123-42-2	2520.00	0.00	0.00	5.00	2.50	7.50	11.00
290	Tetrachloroethylene	127-18-4	2629.00	0.00	0.00	5.00	2.50	7.50	17.00
291	tert-Butyl alcohol #(T3)	75-65-0	2743.00	0.00	0.00	5.00	2.50	7.50	13.00
292	Acrylamide * #(T3)	79-06-1	2743.00	0.00	2.00	2.50	5.00	7.50	14.00
293	Tributyl phosphate #(T3)	126-73-8	3000.00	0.00	0.00	5.00	2.50	7.50	10.00
294	Castor oil #(T3)	8001-79-4	3836.00	0.00	0.00	5.00	2.50	7.50	18.00
295	Dimethyl acetamide #(T3)	127-19-5	4300.00	0.00	0.00	5.00	2.50	7.50	11.00
296	Methyl acetate #(I)	79-20-9	5000.00	0.00	0.00	5.00	2.50	7.50	15.00
297	1,3-Butadiene	106-99-0	5480.00	0.00	2.00	2.50	1.00	3.50	31.00
298	Isopropyl acetate #(T3)	108-21-4	6750.00	0.00	0.00	5.00	2.50	7.50	14.00
299	Dimethylphthalate * #(T3)	131-11-3	6800.00	0.00	0.00	5.00	2.50	7.50	16.00
300	n-Propyl acetate #(I)	109-60-4	9370.00	0.00	0.00	5.00	2.50	7.50	12.00
301	Methyl chloroform	71-55-6	9600.00	0.00	0.00	5.00	2.50	7.50	14.00
302	Isoamyl acetate #(T3)	123-92-2	16600.00	0.00	0.00	5.00	2.50	7.50	13.00
303	Antimony oxide *T3	1309-64-4	34600.00	0.00	0.00	5.00	5.00	10.00	2.00

Rank	Chemical	CAS Number	DWCP Data			Probability Section		Total Score
			Production Score	# of Global Distribution Sites	Distribution Score	Relative Probability Score	Threat Scores	
270	Isoprene-T3*	78-79-5	0.00	17.00	3.00	3.00	0.00	12.00
271	Acetyl Bromide *T3	506-96-7	1.00	23.00	3.00	4.00	0.00	12.00
272	Dipicrylamine (or hexanitrodiphenylamine)	131-73-7	0.00	0.00	0.00	0.00	0.00	12.00
273	Trinitroanisole	606-35-9	0.00	0.00	0.00	0.00	0.00	12.00
274	Triethanolamine hydrochloride	637-39-8	0.00	6.00	2.00	2.00	0.00	12.00
275	Thioglycol TEEL-3	60-24-2	0.00	17.00	3.00	3.00	0.50	11.75
276	Cyanogen Chloride	460-19-5	0.00	3.00	1.00	1.00	0.50	11.50
277	Trithion	786-19-6	0.00	0.00	0.00	0.00	0.00	11.50
278	Decaborane * #(T3)	17702-41-9	0.00	1.00	1.00	1.00	0.00	11.50
279	1,1,2,2-Tetrachloroethane #(T3)	79-34-5	0.00	10.00	2.00	2.00	0.00	11.50
280	1,1,2-Trichloroethane #(T3)	79-00-5	0.00	7.00	2.00	2.00	0.00	11.50
281	Trinitrotoluene	118-96-7	1.00	17.00	3.00	4.00	0.50	11.50
282	o-Anisidine * #(T3)	90-04-0	0.00	24.00	3.00	3.00	0.00	11.50
283	2-Pentanone #(T3)	107-87-9	0.00	13.00	3.00	3.00	0.00	11.50
284	N-Ethylmorpholine #(I)	100-74-3	0.00	12.00	3.00	3.00	0.00	11.50
285	Ethyl formate #(I)	109-94-4	0.00	16.00	3.00	3.00	0.00	11.50
286	Propylene dichloride #(T3)	78-87-5	0.00	16.00	3.00	3.00	0.00	11.50
287	Cyclohexene #(T3)	110-83-8	0.00	14.00	3.00	3.00	0.00	11.50
288	sec-Butyl alcohol #(T3)	78-92-2	1.00	24.00	3.00	4.00	0.00	11.50
289	Diacetone alcohol #(T3)	123-42-2	1.00	30.00	3.00	4.00	0.00	11.50
290	Tetrachloroethylene	127-18-4	1.00	43.00	3.00	4.00	0.00	11.50
291	tert-Butyl alcohol #(T3)	75-65-0	1.00	37.00	3.00	4.00	0.00	11.50
292	Acrylamide * #(T3)	79-06-1	1.00	48.00	3.00	4.00	0.00	11.50
293	Tributyl phosphate #(T3)	126-73-8	1.00	37.00	3.00	4.00	0.00	11.50
294	Castor oil #(T3)	8001-79-4	1.00	50.00	3.00	4.00	0.00	11.50
295	Dimethyl acetamide #(T3)	127-19-5	1.00	38.00	3.00	4.00	0.00	11.50
296	Methyl acetate #(I)	79-20-9	1.00	33.00	3.00	4.00	0.00	11.50
297	1,3-Butadiene	106-99-0	3.00	111.00	5.00	8.00	0.00	11.50
298	Isopropyl acetate #(T3)	108-21-4	1.00	41.00	3.00	4.00	0.00	11.50
299	Dimethylphthalate * #(T3)	131-11-3	1.00	36.00	3.00	4.00	0.00	11.50
300	n-Propyl acetate #(I)	109-60-4	1.00	31.00	3.00	4.00	0.00	11.50
301	Methyl chloroform	71-55-6	1.00	20.00	3.00	4.00	0.00	11.50
302	Isoamyl acetate #(T3)	123-92-2	1.00	46.00	3.00	4.00	0.00	11.50
303	Antimony oxide *T3	1309-64-4	0.00	4.00	1.00	1.00	0.50	11.50

Oral Toxicity Database									
Rank	Chemical	CAS Number	Oral Toxicity Value (In mg/kg unless otherwise noted)	Oral Toxicity Score	Reactivity Number	Stability Score	Physical State	Toxic (Operational) Hazard Score	# of Countries Producing
304	1,1,2-Trichloro 1,2,2-trifluoroethane #(T3)	76-13-1	43000.00	0.00	0.00	5.00	2.50	7.50	12.00
305	Magnesium phosphide- Rentokil MSDS*	12057-74-8	11.20	3.00	2.00	2.50	5.00	10.50	2.00
306	Triethanolamine-T3*	102-71-6	492.00	2.00	0.00	5.00	2.50	9.50	6.00
307	Triethyl phosphite-T3*	122-52-1	1840.00	1.00	0.00	5.00	2.50	8.50	6.00
308	Boron trichloride T3	10294-34-5	25000.00	0.00	2.00	2.50	5.00	7.50	16.00
309	Acetylene tetrabromide #(T3)	79-27-6	269.00	2.00	1.00	3.75	2.50	8.25	6.00
310	Nitrotoluene (o, m, p isomers) #(T3) - Note: o isomer T3 = 60ppm; m and p isomers T3 = 200ppm; Lowest T3 value used	88-72-2; 99-08-1; 99-99-0	891.00	2.00	1.00	3.75	2.50	8.25	7.00
311	Iron, pentacarbonyl- T3	13463-40-6	25.00	3.00	1.00	3.75	2.50	9.25	1.00
312	Ethyl chloride #(T3)	75-00-3	250.00	2.00	0.00	5.00	1.00	8.00	8.00
313	Methyl acrylate #(T3)	96-33-3	277.00	2.00	2.00	2.50	2.50	7.00	16.00
314	Acetaldehyde	75-07-0	661.00	2.00	2.00	2.50	2.50	7.00	15.00
315	Ethyl acrylate	140-88-5	800.00	2.00	2.00	2.50	2.50	7.00	16.00
316	Methyl chloride	74-87-3	1800.00	1.00	0.00	5.00	1.00	7.00	17.00
317	Bromobenzene #(T3)	108-86-1	2383.00	0.00	0.00	5.00	2.50	7.50	8.00
318	Diphenyl Ether #(T3)	101-84-8	2450.00	0.00	0.00	5.00	2.50	7.50	5.00
319	Tetryl * #(T3)	479-45-8	5000.00	0.00	0.00	5.00	5.00	10.00	1.00
320	Benzoyl peroxide* #(T3)	94-36-0	6400.00	0.00	4.00	0.00	5.00	5.00	22.00
321	Methyltrichlorosilane-E3*	75-79-6	62.00	3.00	2.00	2.50	2.50	8.00	3.00
322	Trimethylamine-E3*	75-50-3	500.00	2.00	0.00	5.00	1.00	8.00	8.00
323	Acetyl Chloride *T3	75-36-5	910.00	2.00	2.00	2.50	2.50	7.00	10.00
324	Lead azide-TLV TWA*	13424-46-9	3920.00	0.00		5.00	5.00	10.00	1.00
325	Trinitrofluorenone-R*B40	129-79-3	9910.00	0.00		5.00	5.00	10.00	1.00
326	1,1-Dimethylhydrazine	57-14-7	122.00	2.00	1.00	3.75	2.50	8.25	7.00
327	Dioxane	123-91-1	4200.00	0.00	1.00	3.75	2.50	6.25	12.00
328	Vinyl chloride-T3*	75-01-4	500.00	2.00	1.00	3.75	1.00	6.75	6.00
329	Cyclopentadiene #(I)	542-92-7	113.00	2.00	0.00	5.00	2.50	9.50	2.00
330	Pyrethrum #(I) - IDLH value in ppm based on MW of 374, which is high end of range in NIOSH PG	8003-34-7	200.00	2.00	0.00	5.00	2.50	9.50	4.00
331	Ethylene glycol dinitrate #(I)	628-96-6	460.00	2.00	0.00	5.00	2.50	9.50	3.00
332	Xylidine #(T3)	1300-73-8	610.00	2.00	0.00	5.00	2.50	9.50	4.00

Rank	Chemical	CAS Number	DWCP Data			Probability Section		Total Score
			Production Score	# of Global Distribution Sites	Distribution Score	Relative Probability Score	Threat Scores	
304	1,1,2-Trichloro 1,2,2-trifluoroethane #(T3)	76-13-1	1.00	15.00	3.00	4.00	0.00	11.50
305	Magnesium phosphide- Rentokil MSDS*	12057-74-8	0.00	5.00	1.00	1.00	0.00	11.50
306	Triethanolamine-T3*	102-71-6	0.00	6.00	2.00	2.00	0.00	11.50
307	Triethyl phosphite-T3*	122-52-1	0.00	13.00	3.00	3.00	0.00	11.50
308	Boron trichloride T3	10294-34-5	1.00	13.00	3.00	4.00	0.00	11.50
309	Acetylene tetrabromide #(T3)	79-27-6	0.00	11.00	3.00	3.00	0.00	11.25
310	Nitrotoluene (o, m, p isomers) #(T3) - Note: o isomer T3 = 60ppm; m and p isomers T3 = 200ppm; Lowest T3 value used	88-72-2; 99-08-1; 99-99-0	0.00	19.00	3.00	3.00	0.00	11.25
311	Iron, pentacarbonyl- T3	13463-40-6	0.00	8.00	2.00	2.00	0.00	11.25
312	Ethyl chloride #(T3)	75-00-3	0.00	21.00	3.00	3.00	0.00	11.00
313	Methyl acrylate #(T3)	96-33-3	1.00	46.00	3.00	4.00	0.00	11.00
314	Acetaldehyde	75-07-0	1.00	49.00	3.00	4.00	0.00	11.00
315	Ethyl acrylate	140-88-5	1.00	40.00	3.00	4.00	0.00	11.00
316	Methyl chloride	74-87-3	1.00	46.00	3.00	4.00	0.00	11.00
317	Bromobenzene #(T3)	108-86-1	0.00	34.00	3.00	3.00	0.50	11.00
318	Diphenyl Ether #(T3)	101-84-8	0.00	23.00	3.00	3.00	0.50	11.00
319	Tetryl * #(T3)	479-45-8	0.00	1.00	1.00	1.00	0.00	11.00
320	Benzoyl peroxide* #(T3)	94-36-0	2.00	70.00	4.00	6.00	0.00	11.00
321	Methyltrichlorosilane-E3*	75-79-6	0.00	15.00	3.00	3.00	0.00	11.00
322	Trimethylamine-E3*	75-50-3	0.00	41.00	3.00	3.00	0.00	11.00
323	Acetyl Chloride *T3	75-36-5	1.00	37.00	3.00	4.00	0.00	11.00
324	Lead azide-TLV TWA*	13424-46-9	0.00	3.00	1.00	1.00	0.00	11.00
325	Trinitrofluorenone-R*B40	129-79-3	0.00	1.00	1.00	1.00	0.00	11.00
326	1,1-Dimethylhydrazine	57-14-7	0.00	9.00	2.00	2.00	0.50	10.75
327	Dioxane	123-91-1	1.00	34.00	3.00	4.00	0.50	10.75
328	Vinyl chloride-T3*	75-01-4	0.00	63.00	4.00	4.00	0.00	10.75
329	Cyclopentadiene #(I)	542-92-7	0.00	2.00	1.00	1.00	0.00	10.50
330	Pyrethrum #(I) - IDLH value in ppm based on MW of 374, which is high end of range in NIOSH PG	8003-34-7	0.00	4.00	1.00	1.00	0.00	10.50
331	Ethylene glycol dinitrate #(I)	628-96-6	0.00	3.00	1.00	1.00	0.00	10.50
332	Xylidine #(T3)	1300-73-8	0.00	4.00	1.00	1.00	0.00	10.50

Oral Toxicity Database									
Rank	Chemical	CAS Number	Oral Toxicity Value (In mg/kg unless otherwise noted)	Oral Toxicity Score	Reactivity Number	Stability Score	Physical State	Toxic (Operational) Hazard Score	# of Countries Producing
333	1,1-Dichloroethane #(T3)	75-34-3	725.00	2.00	0.00	5.00	2.50	9.50	3.00
334	n-Butyl mercaptan #(T3)	109-79-5	1500.00	1.00	0.00	5.00	2.50	8.50	4.00
335	p-tert-Butyltoluene #(I)	98-51-1	1555.00	1.00	0.00	5.00	2.50	8.50	4.00
336	Allyl glycidyl ether #(I)	106-92-3	1600.00	1.00	0.00	5.00	2.50	8.50	6.00
337	Tetramethylenedisulfotetramine #(T3 as triethylenetetramine)	126-33-0	1940.40	1.00	0.00	5.00	2.50	8.50	5.00
338	2-Ethoxyethanol #(T3)	110-80-5	2125.00	0.00	0.00	5.00	2.50	7.50	1.00
339	Methyl isobutyl carbinol #(I)	108-11-2	2590.00	0.00	0.00	5.00	2.50	7.50	9.00
340	2-Ethoxyethyl acetate #(T3)	111-15-9	2700.00	0.00	0.00	5.00	2.50	7.50	8.00
341	Methylcyclohexane #(T3)	108-87-2	3200.00	0.00	0.00	5.00	2.50	7.50	9.00
342	tert-Butyl acetate #(T3)	540-88-5	4100.00	0.00	0.00	5.00	2.50	7.50	6.00
343	Chlorobromomethane #(T3)	74-97-5	5000.00	0.00	0.00	5.00	2.50	7.50	7.00
344	Diisobutyl ketone #(T3)	108-83-8	5750.00	0.00	0.00	5.00	2.50	7.50	8.00
345	Trinitrobenzene	99-35-4	275.00	2.00	2.00	2.50	5.00	9.50	1.00
346	Aluminum bromide, anhydrous as AlCl3	7727-15-3	1598.00	1.00	2.00	2.50	5.00	8.50	2.00
347	Sulfur trioxide-E3*	7446-11-9	2140.00	0.00	2.00	2.50	5.00	7.50	6.00
348	Isopropyl chloride-T3*	75-29-6	5000.00	0.00	0.00	5.00	2.50	7.50	1.00
349	Thiodiglycol-Alfa MSDS*B71	111-48-8	6610.00	0.00	0.00	5.00	2.50	7.50	9.00
350	Potassium perchlorate-T3*	7778-74-7	7980.00	0.00	2.00	2.50	5.00	7.50	7.00
351	Hydrazine	302-01-2	60.00	3.00	3.00	1.25	2.50	6.75	9.00
352	1,2,3-Trichloropropane #(T3)	96-18-4	149.69	2.00	1.00	3.75	2.50	8.25	6.00
353	beta-Chloroprene #(T3)	126-99-8	450.00	2.00	1.00	3.75	2.50	8.25	4.00
354	Dinitrotoluene * #(T3)	25321-14-6	750.00	2.00	3.00	1.25	5.00	8.25	6.00
355	n-Butyl glycidyl ether #(T3)	2426-08-6	1660.00	1.00	1.00	3.75	2.50	7.25	7.00
356	Isophorone #(T3)	78-59-1	1870.00	1.00	1.00	3.75	2.50	7.25	7.00
357	Methyl Cellosolve (r) #(I)	109-86-4	2370.00	0.00	1.00	3.75	2.50	6.25	13.00
358	Hexachlorobenzene	118-74-1	3500.00	0.00	1.00	3.75	5.00	8.75	1.00
359	Benzyl chloride #(E3)	100-44-7	3740.00	0.00	1.00	3.75	2.50	6.25	12.00
360	Isopropyl ether #(T3)	108-20-3	5880.00	0.00	1.00	3.75	2.50	6.25	15.00
361	Ethyl silicate #(E3)	78-10-4	6270.00	0.00	1.00	3.75	2.50	6.25	10.00
362	Methylal #(T3)	109-87-5	6653.00	0.00	1.00	3.75	2.50	6.25	10.00
363	Arsenic trichloride T3	7784-34-1	17.85	3.00	1.00	3.75	2.50	9.25	1.00
364	Furan T3	110-00-9	40.00	3.00	1.00	3.75	2.50	9.25	3.00
365	Methyl thiocyanate-T3*	1556-64-9	60.00	3.00	1.00	3.75	2.50	9.25	1.00
366	Trinitrochlorobenzene-T3*	88-88-0	80.00	3.00	3.00	1.25	5.00	9.25	1.00
367	RDX and HMX mixtures- As RDX-T3*	121-82-4	85.00	3.00	3.00	1.25	5.00	9.25	1.00

Rank	Chemical	CAS Number	DWCP Data			Probability Section		Total Score
			Production Score	# of Global Distribution Sites	Distribution Score	Relative Probability Score	Threat Scores	
334	n-Butyl mercaptan #(T3)	109-79-5	0.00	6.00	2.00	2.00	0.00	10.50
335	p-tert-Butyltoluene #(I)	98-51-1	0.00	6.00	2.00	2.00	0.00	10.50
336	Allyl glycidyl ether #(I)	106-92-3	0.00	8.00	2.00	2.00	0.00	10.50
337	Tetramethylenedisulfotetramine #(T3 as triethylenetetramine)	126-33-0	0.00	10.00	2.00	2.00	0.00	10.50
338	2-Ethoxyethanol #(T3)	110-80-5	0.00	31.00	3.00	3.00	0.00	10.50
339	Methyl isobutyl carbinol #(I)	108-11-2	0.00	14.00	3.00	3.00	0.00	10.50
340	2-Ethoxyethyl acetate #(T3)	111-15-9	0.00	17.00	3.00	3.00	0.00	10.50
341	Methylcyclohexane #(T3)	108-87-2	0.00	17.00	3.00	3.00	0.00	10.50
342	tert-Butyl acetate #(T3)	540-88-5	0.00	17.00	3.00	3.00	0.00	10.50
343	Chlorobromomethane #(T3)	74-97-5	0.00	11.00	3.00	3.00	0.00	10.50
344	Diisobutyl ketone #(T3)	108-83-8	0.00	13.00	3.00	3.00	0.00	10.50
345	Trinitrobenzene	99-35-4	0.00	1.00	1.00	1.00	0.00	10.50
346	Aluminum bromide, anhydrous as AlCl3	7727-15-3	0.00	6.00	2.00	2.00	0.00	10.50
347	Sulfur trioxide-E3*	7446-11-9	0.00	12.00	3.00	3.00	0.00	10.50
348	Isopropyl chloride-T3*	75-29-6	0.00	13.00	3.00	3.00	0.00	10.50
349	Thiodiglycol-Alfa MSDS*B71	111-48-8	0.00	12.00	3.00	3.00	0.00	10.50
350	Potassium perchlorate-T3*	7778-74-7	0.00	27.00	3.00	3.00	0.00	10.50
351	Hydrazine	302-01-2	0.00	12.00	3.00	3.00	0.50	10.25
352	1,2,3-Trichloropropane #(T3)	96-18-4	0.00	10.00	2.00	2.00	0.00	10.25
353	beta-Chloroprene #(T3)	126-99-8	0.00	6.00	2.00	2.00	0.00	10.25
354	Dinitrotoluene * #(T3)	25321-14-6	0.00	9.00	2.00	2.00	0.00	10.25
355	n-Butyl glycidyl ether #(T3)	2426-08-6	0.00	13.00	3.00	3.00	0.00	10.25
356	Isophorone #(T3)	78-59-1	0.00	13.00	3.00	3.00	0.00	10.25
357	Methyl Cellosolve (r) #(I)	109-86-4	1.00	30.00	3.00	4.00	0.00	10.25
358	Hexachlorobenzene	118-74-1	0.00	2.00	1.00	1.00	0.50	10.25
359	Benzyl chloride #(E3)	100-44-7	1.00	41.00	3.00	4.00	0.00	10.25
360	Isopropyl ether #(T3)	108-20-3	1.00	24.00	3.00	4.00	0.00	10.25
361	Ethyl silicate #(E3)	78-10-4	1.00	39.00	3.00	4.00	0.00	10.25
362	Methylal #(T3)	109-87-5	1.00	13.00	3.00	4.00	0.00	10.25
363	Arsenic trichloride T3	7784-34-1	0.00	5.00	1.00	1.00	0.00	10.25
364	Furan T3	110-00-9	0.00	5.00	1.00	1.00	0.00	10.25
365	Methyl thiocyanate-T3*	1556-64-9	0.00	2.00	1.00	1.00	0.00	10.25
366	Trinitrochlorobenzene-T3*	88-88-0	0.00	1.00	1.00	1.00	0.00	10.25
367	RDX and HMX mixtures- As RDX-T3*	121-82-4	0.00	4.00	1.00	1.00	0.00	10.25

Oral Toxicity Database									
Rank	Chemical	CAS Number	Oral Toxicity Value (In mg/kg unless otherwise noted)	Oral Toxicity Score	Reactivity Number	Stability Score	Physical State	Toxic (Operational) Hazard Score	# of Countries Producing
368	RDX-T3*	121-82-4	85.00	3.00	3.00	1.25	5.00	9.25	1.00
369	Hexolite T3	121-82-4	100.00	3.00	3.00	1.25	5.00	9.25	2.00
370	Allylamine *T3	107-11-9	102.00	2.00	1.00	3.75	2.50	8.25	5.00
371	Isopropyl chloroformate-T3*	1108-23-6	1070.00	1.00	1.00	3.75	2.50	7.25	1.00
372	Trimethyl phosphite-T3*	121-45-9	1600.00	1.00	1.00	3.75	2.50	7.25	4.00
373	Methyl hydrazine	60-34-4	32.00	3.00	2.00	2.50	2.50	8.00	4.00
374	Crotonaldehyde	4170-30-3	80.00	3.00	2.00	2.50	2.50	8.00	6.00
375	Sulfuryl fluoride	2699-79-8	100.00	3.00	0.00	5.00	1.00	9.00	4.00
376	Sulfur monochloride	10025-67-9	132.00	2.00	2.00	2.50	2.50	7.00	8.00
377	Hexachloronaphthalene * #(T3)	1335-87-1	13500.00	0.00	0.00	5.00	5.00	10.00	0.00
378	Trinitrophenol-T3*	88-89-1	200.00	2.00	4.00	0.00	5.00	7.00	8.00
379	Vinylidene chloride, inhibited-T3*	75-35-4	200.00	2.00	2.00	2.50	2.50	7.00	2.00
380	Chloromethyl methyl ether E3	107-30-2	223.00	2.00	2.00	2.50	2.50	7.00	8.00
381	Acrylyl Chloride *T3	814-68-6	500.00	2.00	2.00	2.50	2.50	7.00	5.00
382	Dimethyldichlorosilane T3	75-78-5	560.00	2.00	2.00	2.50	2.50	7.00	4.00
383	Trimethylchlorosilane-E3*	75-77-44	566.00	2.00	2.00	2.50	2.50	7.00	
384	Acrolein	107-02-8	26.00	3.00	3.00	1.25	2.50	6.75	7.00
385	Polyphosphoric acid	68333-79-9	3053.00	0.00	1.00	3.75	2.50	6.25	9.00
386	Phosphotungstic acid #(T3 of tungstic acid)	12067-99-1	3300.00	0.00	1.00	3.75	2.50	6.25	9.00
387	Difluoroethane T3	75-37-6	1500.00	1.00	1.00	3.75	1.00	5.75	14.00
388	Tetraethyl lead #(T3)	78-00-2	12.30	3.00	2.00	2.50	2.50	8.00	1.00
389	Chlordane * #(T3)	57-74-9	200.00	2.00	0.00	5.00	2.50	9.50	0.00
390	Methylcyclohexanol #(I)	25639-42-3	1660.00	1.00	0.00	5.00	2.50	8.50	1.00
391	Pentaerythrite tetranitrate #(T3)	78-11-5	1660.00	1.00	4.00	0.00	5.00	6.00	9.00
392	o-Methylcyclohexanone #(T3)	583-60-8	1977.36	1.00	0.00	5.00	2.50	8.50	4.00
393	Dibutyl phosphate #(T3)	107-66-4	3200.00	0.00	0.00	5.00	2.50	7.50	6.00
394	Phenyl glycidyl ether #(I)	122-60-1	3850.00	0.00	0.00	5.00	2.50	7.50	7.00
395	Turpentine #(T3)	8006-64-2	5760.00	0.00	0.00	5.00	2.50	7.50	6.00
396	Tetranitromethane	509-14-8	130.00	2.00	1.00	3.75	2.50	8.25	1.00
397	Ethyl mercaptan	75-08-1	682.00	2.00	1.00	3.75	2.50	8.25	4.00
398	Mesityl oxide #(T3)	141-79-7	1120.00	1.00	1.00	3.75	2.50	7.25	5.00
399	Chloromethyl ether E3	542-88-1	210.00	2.00	1.00	3.75	2.50	8.25	1.00
400	Diethylamino)ethanethiol, N,N-(2- R	100-38-9	231.00	2.00	1.00	3.75	2.50	8.25	2.00
401	TNT	118-96-7	28000.00	0.00	3.00	1.25	5.00	6.25	3.00
402	Propylene imine	75-55-8	19.00	3.00	2.00	2.50	2.50	8.00	3.00

Rank	Chemical	CAS Number	DWCP Data			Probability Section		Total Score
			Production Score	# of Global Distribution Sites	Distribution Score	Relative Probability Score	Threat Scores	
369	Hexolite T3	121-82-4	0.00	4.00	1.00	1.00	0.00	10.25
370	Allylamine *T3	107-11-9	0.00	9.00	2.00	2.00	0.00	10.25
371	Isopropyl chloroformate-T3*	1108-23-6	0.00	17.00	3.00	3.00	0.00	10.25
372	Trimethyl phosphite-T3*	121-45-9	0.00	18.00	3.00	3.00	0.00	10.25
373	Methyl hydrazine	60-34-4	0.00	6.00	2.00	2.00	0.00	10.00
374	Crotonaldehyde	4170-30-3	0.00	9.00	2.00	2.00	0.00	10.00
375	Sulfuryl fluoride	2699-79-8	0.00	5.00	1.00	1.00	0.00	10.00
376	Sulfur monochloride	10025-67-9	0.00	15.00	3.00	3.00	0.00	10.00
377	Hexachloronaphthalene * #(T3)	1335-87-1	0.00	0.00	0.00	0.00	0.00	10.00
378	Trinitrophenol-T3*	88-89-1	0.00	18.00	3.00	3.00	0.00	10.00
379	Vinylidene chloride, inhibited-T3*	75-35-4	0.00	12.00	3.00	3.00	0.00	10.00
380	Chloromethyl methyl ether E3	107-30-2	0.00	11.00	3.00	3.00	0.00	10.00
381	Acrylyl Chloride *T3	814-68-6	0.00	15.00	3.00	3.00	0.00	10.00
382	Dimethyldichlorosilane T3	75-78-5	0.00	20.00	3.00	3.00	0.00	10.00
383	Trimethylchlorosilane-E3*	75-77-44	0.00	30.00	3.00	3.00	0.00	10.00
384	Acrolein	107-02-8	0.00	12.00	3.00	3.00	0.00	9.75
385	Polyphosphoric acid	68333-79-9	0.00	26.00	3.00	3.00	0.50	9.75
386	Phosphotungstic acid #(T3 of tungstic acid)	12067-99-1	0.00	21.00	3.00	3.00	0.50	9.75
387	Difluoroethane T3	75-37-6	1.00	15.00	3.00	4.00	0.00	9.75
388	Tetraethyl lead #(T3)	78-00-2	0.00	2.00	1.00	1.00	0.50	9.50
389	Chlordane * #(T3)	57-74-9	0.00	0.00	0.00	0.00	0.00	9.50
390	Methylcyclohexanol #(I)	25639-42-3	0.00	1.00	1.00	1.00	0.00	9.50
391	Pentaerythrite tetranitrate #(T3)	78-11-5	0.00	12.00	3.00	3.00	0.50	9.50
392	o-Methylcyclohexanone #(T3)	583-60-8	0.00	5.00	1.00	1.00	0.00	9.50
393	Dibutyl phosphate #(T3)	107-66-4	0.00	8.00	2.00	2.00	0.00	9.50
394	Phenyl glycidyl ether #(I)	122-60-1	0.00	10.00	2.00	2.00	0.00	9.50
395	Turpentine #(T3)	8006-64-2	0.00	9.00	2.00	2.00	0.00	9.50
396	Tetranitromethane	509-14-8	0.00	1.00	1.00	1.00	0.00	9.25
397	Ethyl mercaptan	75-08-1	0.00	5.00	1.00	1.00	0.00	9.25
398	Mesityl oxide #(T3)	141-79-7	0.00	6.00	2.00	2.00	0.00	9.25
399	Chloromethyl ether E3	542-88-1	0.00	1.00	1.00	1.00	0.00	9.25
400	Diethylamino)ethanethiol, N,N-(2- R	100-38-9	0.00	4.00	1.00	1.00	0.00	9.25
401	TNT	118-96-7	0.00	15.00	3.00	3.00	0.00	9.25
402	Propylene imine	75-55-8	0.00	4.00	1.00	1.00	0.00	9.00

Oral Toxicity Database									
Rank	Chemical	CAS Number	Oral Toxicity Value (In mg/kg unless otherwise noted)	Oral Toxicity Score	Reactivity Number	Stability Score	Physical State	Toxic (Operational) Hazard Score	# of Countries Producing
403	Methyl isocyanate	624-83-9	51.50	3.00	2.00	2.50	2.50	8.00	2.00
404	Perchloromethyl mercaptan	594-42-3	82.60	3.00	2.00	2.50	2.50	8.00	3.00
405	Chloroacetaldehyde	107-20-0	89.00	3.00	2.00	2.50	2.50	8.00	4.00
406	Nitroglycerin #(T3)	55-63-0	105.00	2.00	4.00	0.00	2.50	4.50	13.00
407	Glycidol #(I)	556-52-5	420.00	2.00	2.00	2.50	2.50	7.00	4.00
408	Diketene	674-82-8	616.00	2.00	2.00	2.50	2.50	7.00	3.00
409	1,1,2,2-Tetrachloro 1,2-difluoroethane #(I)	76-12-0	800.00	2.00	0.00	5.00	1.00	8.00	1.00
410	Toluene-2,4-diisocyanate	584-84-9	5800.00	0.00	2.00	2.50	2.50	5.00	12.00
411	Methyl methacrylate	80-62-6	7872.00	0.00	2.00	2.50	2.50	5.00	17.00
412	Iodine pentafluoride R	7783-66-6	146.00	2.00	2.00	2.50	2.50	7.00	2.00
413	Vinyltrichlorosilane-R*	75-94-5	280.00	2.00	2.00	2.50	2.50	7.00	3.00
414	Methyldichlorosilane-R*	75-54-7	283.00	2.00	2.00	2.50	2.50	7.00	2.00
415	Vinyl ethyl ether-T3*	109-92-2	816.00	2.00	2.00	2.50	2.50	7.00	3.00
416	Trichlorosilane-E3*	10025-78-2	1030.00	1.00	2.00	2.50	2.50	6.00	4.00
417	Vinyl acetate monomer-E3*	108-05-4	2900.00	0.00	2.00	2.50	2.50	5.00	4.00
418	Toluene sulfonic acid #(T3 based on barium salt of the acid)	70788-37-3 (wrong?) suggested: 104-15-4	2480.00	0.00	1.00	3.75	2.50	6.25	5.00
419	Isoflurane #(IDLH of halogenated ethers-general)	26675-46-7	6201.95	0.00	1.00	3.75	2.50	6.25	2.00
420	Carbonyl sulfide T3	463-58-1	840.00	2.00	1.00	3.75	1.00	6.75	2.00
421	2-Hexanone #(T3)	591-78-6	2590.00	0.00	0.00	5.00	2.50	7.50	2.00
422	Ethyl butyl ketone #(T3)	106-35-4	2760.00	0.00	0.00	5.00	2.50	7.50	2.00
423	sec-Butyl acetate #(T3)	105-46-4	3200.00	0.00	0.00	5.00	2.50	7.50	2.00
424	5-Methyl 3-heptanone #(I)	541-85-5	3500.00	0.00	0.00	5.00	2.50	7.50	2.00
425	Dipicryl sulfide	2217-06-3	1200.00	1.00	2.00	2.50	5.00	8.50	0.00
426	Ethyldiethanolamine	139-87-7	4570.00	0.00	0.00	5.00	2.50	7.50	1.00
427	Chloropicrin	76-06-2	250.00	2.00	3.00	1.25	2.50	5.75	3.00
428	Diethyl S-[2-(diethylamino)ethyl]phosphorothiolate, o,o-T3	78-53-5	330.00	2.00	1.00	3.75	2.50	8.25	0.00
429	1-Chloropropylene R	590-21-6	1950.00	1.00	1.00	3.75	2.50	7.25	2.00
430	Fluorine	7782-41-4	50.00	3.00	4.00	0.00	1.00	4.00	10.00
431	1-Nitropropane #(I)	108-03-2	455.00	2.00	2.00	2.50	2.50	7.00	3.00

Rank	Chemical	CAS Number	DWCP Data			Probability Section		Total Score
			Production Score	# of Global Distribution Sites	Distribution Score	Relative Probability Score	Threat Scores	
404	Perchloromethyl mercaptan	594-42-3	0.00	5.00	1.00	1.00	0.00	9.00
405	Chloroacetaldehyde	107-20-0	0.00	5.00	1.00	1.00	0.00	9.00
406	Nitroglycerin #(T3)	55-63-0	1.00	22.00	3.00	4.00	0.50	9.00
407	Glycidol #(I)	556-52-5	0.00	6.00	2.00	2.00	0.00	9.00
408	Diketene	674-82-8	0.00	8.00	2.00	2.00	0.00	9.00
409	1,1,2,2-Tetrachloro 1,2-difluoroethane #(I)	76-12-0	0.00	1.00	1.00	1.00	0.00	9.00
410	Toluene-2,4-diisocyanate	584-84-9	1.00	20.00	3.00	4.00	0.00	9.00
411	Methyl methacrylate	80-62-6	1.00	48.00	3.00	4.00	0.00	9.00
412	Iodine pentafluoride R	7783-66-6	0.00	8.00	2.00	2.00	0.00	9.00
413	Vinyltrichlorosilane-R*	75-94-5	0.00	8.00	2.00	2.00	0.00	9.00
414	Methyldichlorosilane-R*	75-54-7	0.00	9.00	2.00	2.00	0.00	9.00
415	Vinyl ethyl ether-T3*	109-92-2	0.00	8.00	2.00	2.00	0.00	9.00
416	Trichlorosilane-E3*	10025-78-2	0.00	15.00	3.00	3.00	0.00	9.00
417	Vinyl acetate monomer-E3*	108-05-4	0.00	53.00	4.00	4.00	0.00	9.00
418	Toluene sulfonic acid #(T3 based on barium salt of the acid)	70788-37-3 (wrong?) suggested: 104-15-4	0.00	6.00	2.00	2.00	0.50	8.75
419	Isoflurane #(IDLH of halogenated ethers-general)	26675-46-7	0.00	8.00	2.00	2.00	0.50	8.75
420	Carbonyl sulfide T3	463-58-1	0.00	10.00	2.00	2.00	0.00	8.75
421	2-Hexanone #(T3)	591-78-6	0.00	3.00	1.00	1.00	0.00	8.50
422	Ethyl butyl ketone #(T3)	106-35-4	0.00	4.00	1.00	1.00	0.00	8.50
423	sec-Butyl acetate #(T3)	105-46-4	0.00	2.00	1.00	1.00	0.00	8.50
424	5-Methyl 3-heptanone #(I)	541-85-5	0.00	3.00	1.00	1.00	0.00	8.50
425	Dipicryl sulfide	2217-06-3	0.00	0.00	0.00	0.00	0.00	8.50
426	Ethyldiethanolamine	139-87-7	0.00	1.00	1.00	1.00	0.00	8.50
427	Chloropicrin	76-06-2	0.00	7.00	2.00	2.00	0.50	8.25
428	Diethyl S-[2-(diethylamino)ethyl]phosphorothiolate, o,o-T3	78-53-5	0.00	0.00	0.00	0.00	0.00	8.25
429	1-Chloropropylene R	590-21-6	0.00	2.00	1.00	1.00	0.00	8.25
430	Fluorine	7782-41-4	1.00	17.00	3.00	4.00	0.00	8.00
431	1-Nitropropane #(I)	108-03-2	0.00	4.00	1.00	1.00	0.00	8.00

Oral Toxicity Database									
Rank	Chemical	CAS Number	Oral Toxicity Value (In mg/kg unless otherwise noted)	Oral Toxicity Score	Reactivity Number	Stability Score	Physical State	Toxic (Operational) Hazard Score	# of Countries Producing
432	2-Nitropropane #(T3)	79-46-9	720.00	2.00	2.00	2.50	2.50	7.00	2.00
433	1,2-Dichloroethylene #(T3)	540-59-0	770.00	2.00	2.00	2.50	2.50	7.00	2.00
434	Nitromethane #(T3)	75-52-5	940.00	2.00	4.00	0.00	2.50	4.50	7.00
435	Dichlorotetrafluoroethane #(T3)	76-14-2	2250.00	0.00	0.00	5.00	1.00	6.00	6.00
436	Dinitrophenol, Dry or wet T3	25550-58-7 (51-28-5)	36.00	3.00	4.00	0.00	5.00	8.00	0.00
437	Methacrylonitrile-T3*	126-98-7	120.00	2.00	2.00	2.50	2.50	7.00	1.00
438	Crotonaldehyde, (E)- T3	123-73-9	240.00	2.00	2.00	2.50	2.50	7.00	1.00
439	Dodecyltrichlorosilane Sc	4484-72-41	500.00	2.00	2.00	2.50	2.50	7.00	1.00
440	Diethyldichlorosilane R	1719-53-5	1000.00	2.00	2.00	2.50	2.50	7.00	1.00
441	Ammonium perchlorate T3	7790-98-9	4200.00	0.00	4.00	0.00	5.00	5.00	2.00
442	Ethyleneimine	151-56-4	15.00	3.00	3.00	1.25	2.50	6.75	3.00
443	Halothane (T:V)	151-67-7	5680.00	0.00	1.00	3.75	2.50	6.25	3.00
444	sec Hexyl acetate #(I)	108-84-9	6160.00	0.00	0.00	5.00	2.50	7.50	0.00
445	Hexaethyl tetraphosphate and compressed gas mixtures	757-58-4	7.00	4.00	2.00	2.50	1.00	7.50	0.00
446	Vinylidene fluoride-T3*	75-38-7	857.00	2.00	2.00	2.50	1.00	5.50	2.00
447	Nitrotriazolone	932-64-9	5000.00	0.00		5.00	2.50	7.50	0.00
448	HMX T3	2691-41-0	6490.00	0.00	3.00	1.25	5.00	6.25	1.00
449	2-pentene (E)	646-04-8	10000.00	0.00	1.00	3.75	2.50	6.25	1.00
450	Chlorine dioxide	10049-04-4	292.00	2.00	4.00	0.00	1.00	3.00	14.00
451	Phenyl etherbiphenyl mixture (vapor) #(I)	8004-13-5	2460.00	0.00	0.00	5.00	1.00	6.00	3.00
452	1,1,1,2-Tetrachloro 2,2-difluoroethane #(I)	76-11-9	8000.00	0.00	0.00	5.00	1.00	6.00	2.00
453	Diphenyldichlorosilane	80-10-4	1050.00	1.00	2.00	2.50	2.50	6.00	2.00
454	Ethyltrichlorosilane T3	115-21-9	1330.00	1.00	2.00	2.50	2.50	6.00	1.00
455	Phenyltrichlorosilane-T3*	98-13-5	2390.00	0.00	2.00	2.50	2.50	5.00	1.00
456	Picrite	556-88-7	10200.00	0.00	4.00	0.00	5.00	5.00	5.00
457	1-Chloro-1-nitropropane #(I)	600-25-9	50.00	3.00	3.00	1.25	2.50	6.75	2.00
458	Nitroethane #(T3)	79-24-3	1100.00	1.00	3.00	1.25	2.50	4.75	3.00
459	Tetramethyllead-T3*	75-74-1	105.00	2.00	3.00	1.25	2.50	5.75	2.00
460	Vinyl toluene #(I)	25013-15-4	2255.00	0.00	2.00	2.50	2.50	5.00	1.00
461	Isopropyl glycidyl ether #(I)	4016-14-2	4200.00	0.00	2.00	2.50	2.50	5.00	1.00
462	Amyltrichlorosilane R	107-72-2	2340.00	0.00	2.00	2.50	2.50	5.00	1.00
463	Diglycidyl ether #(T3)	2238-07-5	450.00	2.00	4.00	0.00	2.50	4.50	1.00

Rank	Chemical	CAS Number	DWCP Data			Probability Section		Total Score
			Production Score	# of Global Distribution Sites	Distribution Score	Relative Probability Score	Threat Scores	
433	1,2-Dichloroethylene #(T3)	540-59-0	0.00	2.00	1.00	1.00	0.00	8.00
434	Nitromethane #(T3)	75-52-5	0.00	20.00	3.00	3.00	0.50	8.00
435	Dichlorotetrafluoroethane #(T3)	76-14-2	0.00	6.00	2.00	2.00	0.00	8.00
436	Dinitrophenol, Dry or wet T3	25550-58-7 (51-28-5)	0.00	0.00	0.00	0.00	0.00	8.00
437	Methacrylonitrile-T3*	126-98-7	0.00	1.00	1.00	1.00	0.00	8.00
438	Crotonaldehyde, (E)- T3	123-73-9	0.00	2.00	1.00	1.00	0.00	8.00
439	Dodecyltrichlorosilane Sc	4484-72-41	0.00	3.00	1.00	1.00	0.00	8.00
440	Diethyldichlorosilane R	1719-53-5	0.00	2.00	1.00	1.00	0.00	8.00
441	Ammonium perchlorate T3	7790-98-9	0.00	16.00	3.00	3.00	0.00	8.00
442	Ethyleneimine	151-56-4	0.00	3.00	1.00	1.00	0.00	7.75
443	Halothane (T:V)	151-67-7	0.00	4.00	1.00	1.00	0.50	7.75
444	sec Hexyl acetate #(I)	108-84-9	0.00	0.00	0.00	0.00	0.00	7.50
445	Hexaethyl tetraphosphate and compressed gas mixtures	757-58-4	0.00	0.00	0.00	0.00	0.00	7.50
446	Vinylidene fluoride-T3*	75-38-7	0.00	8.00	2.00	2.00	0.00	7.50
447	Nitrotriazolone	932-64-9	0.00	0.00	0.00	0.00	0.00	7.50
448	HMX T3	2691-41-0	0.00	2.00	1.00	1.00	0.00	7.25
449	2-pentene (E)	646-04-8	0.00	1.00	1.00	1.00	0.00	7.25
450	Chlorine dioxide	10049-04-4	1.00	33.00	3.00	4.00	0.00	7.00
451	Phenyl etherbiphenyl mixture (vapor) #(I)	8004-13-5	0.00	3.00	1.00	1.00	0.00	7.00
452	1,1,1,2-Tetrachloro 2,2-difluoroethane #(I)	76-11-9	0.00	3.00	1.00	1.00	0.00	7.00
453	Diphenyldichlorosilane	80-10-4	0.00	5.00	1.00	1.00	0.00	7.00
454	Ethyltrichlorosilane T3	115-21-9	0.00	2.00	1.00	1.00	0.00	7.00
455	Phenyltrichlorosilane-T3*	98-13-5	0.00	9.00	2.00	2.00	0.00	7.00
456	Picrite	556-88-7	0.00	8.00	2.00	2.00	0.00	7.00
457	1-Chloro-1-nitropropane #(I)	600-25-9	0.00	0.00	0.00	0.00	0.00	6.75
458	Nitroethane #(T3)	79-24-3	0.00	8.00	2.00	2.00	0.00	6.75
459	Tetramethyllead-T3*	75-74-1	0.00	2.00	1.00	1.00	0.00	6.75
460	Vinyl toluene #(I)	25013-15-4	0.00	3.00	1.00	1.00	0.00	6.00
461	Isopropyl glycidyl ether #(I)	4016-14-2	0.00	1.00	1.00	1.00	0.00	6.00
462	Amyltrichlorosilane R	107-72-2	0.00	2.00	1.00	1.00	0.00	6.00
463	Diglycidyl ether #(T3)	2238-07-5	0.00	1.00	1.00	1.00	0.00	5.50

Oral Toxicity Database									
Rank	Chemical	CAS Number	Oral Toxicity Value (In mg/kg unless otherwise noted)	Oral Toxicity Score	Reactivity Number	Stability Score	Physical State	Toxic (Operational) Hazard Score	# of Countries Producing
464	Diethyleneglycol dinitrate R	693-21-0	753.00	2.00	4.00	0.00	2.50	4.50	2.00
465	Trifluorochloroethylene-E3*	79-38-9	268.00	2.00	3.00	1.25	1.00	4.25	1.00
466	Germane T3	7782-65-2	1250.00	1.00	3.00	1.25	1.00	3.25	2.00
467	Chlorodiphenyl (42% chlorine)* #(T3)	53469-21-9	4250.00	0.00	2.00	2.50	2.50	5.00	0.00
468	Vinyl methyl ether-R*	107-25-5	4900.00	0.00	2.00	2.50	1.00	3.50	1.00

Rank	Chemical	CAS Number	DWCP Data			Probability Section		Total Score
			Production Score	# of Global Distribution Sites	Distribution Score	Relative Probability Score	Threat Scores	
464	Diethyleneglycol dinitrate R	693-21-0	0.00	4.00	1.00	1.00	0.00	5.50
465	Trifluorochloroethylene-E3*	79-38-9	0.00	5.00	1.00	1.00	0.00	5.25
466	Germane T3	7782-65-2	0.00	6.00	2.00	2.00	0.00	5.25
467	Chlorodiphenyl (42% chlorine)* #(T3)	53469-21-9	0.00	0.00	0.00	0.00	0.00	5.00
468	Vinyl methyl ether-R*	107-25-5	0.00	3.00	1.00	1.00	0.00	4.50

Critical Oral Hazard Chemicals Toxic Hazard Score greater than 12 and Relative Probability Score greater than 1

Rank	Chemical	CAS Number	Toxic (Operational) Hazard Score	Probability Section		Total Score
				Relative Probability Score	Threat Scores	
1	Sodium hydroxide	1310-73-2	12.75	10.00	0.50	23.25
2	Arsenic Trioxide	1327-53-3	14.00	4.00	5.00	23.00
3	Sodium cyanide	143-33-9	14.00	6.00	2.50	22.50
4	Methomyl	16752-77-5	13.00	3.00	5.00	21.00
5	Chlorpyrifos	2921-88-2	13.00	5.00	2.50	20.50
6	Potassium cyanide	151-50-8	14.00	4.00	2.50	20.50
7	Mercuric chloride	7487-94-7	15.00	3.00	2.50	20.50
8	Cobalt dichloride	7646-79-9	13.00	6.00	0.50	19.50
9	Iodine	7553-56-2	13.00	5.00	0.50	18.50
10	Sodium fluoride	7681-49-4	13.00	5.00	0.50	18.50
11	Endosulfan	115-29-7	13.00	4.00	0.50	17.50
12	Red mercuric oxide	21908-53-2	13.00	4.00	0.50	17.50
13	Dimethoate	60-51-5	13.00	4.00	0.50	17.50
14	Methyl parathion	298-00-0	14.00	3.00	0.50	17.50
15	Methamidophos	10265-92-6	14.00	3.00	0.50	17.50
16	Aldicarb	116-06-3	15.00	2.00	0.50	17.50
17	Methidathion	950-37-8	13.00	2.00	2.50	17.50
18	Phosphorus	7723-14-0	12.75	4.00	0.50	17.25
19	Camphor (synthetic)	76-22-2	13.00	4.00	0.00	17.00
20	Warfarin	81-81-2	14.00	3.00	0.00	17.00
21	Fenpropathrin	39515-41-8	13.00	3.00	0.50	16.50
22	Bifenthrin Tox est. on Pyr.	82657-04-3	13.00	3.00	0.50	16.50
23	Azinphosmethyl	86-50-0	14.00	2.00	0.50	16.50
24	Phenamiphos	22224-92-6	14.00	2.00	0.50	16.50
25	2-chloroacetophenone	532-27-4	13.00	3.00	0.00	16.00
26	Dinitrobenzene* (o, m, p isomers)	528-29-0; 99-65-0; 100-25-4	13.00	3.00	0.00	16.00
27	alpha-Chloroacetophenone	532-27-4	13.00	2.00	0.50	15.50
28	Thallium sulfate	7446-18-6	13.00	2.00	0.00	15.00
29	Pentachlorophenol	87-86-5	13.00	2.00	0.00	15.00

High Priority Oral Hazard Chemicals

#	Chemical	CAS Number	Toxic (Operational) Hazard Score	Probability Section		Total Score
				Relative Probability Score	Threat Scores	
1	Arsenic Trioxide	1327-53-3	14.00	4.00	5.00	23.00
2	Chlorpyrifos (organophosphorus ins.)	2921-88-2	13.00	5.00	2.50	20.50
3	Endosulfan (organochloride/sulfite ester	115-29-7	13.00	4.00	0.50	17.50
4	Fenpropathrin #(AEGL-3 of Cyano group	39515-41-8	13.00	3.00	0.50	16.50
5	Iodine (Oxidizer)	7553-56-2	13.00	5.00	0.50	18.50
6	Mercuric chloride #(T3 of Hg)	7487-94-7	15.00	3.00	2.50	20.50
7	Methomyl (Carbamate pesticide)	16752-77-5	13.00	3.00	5.00	21.00
8	Pentachlorophenol * #(T3)	87-86-5	13.00	2.00	0.00	15.00
9	Phosphorus	7723-14-0	12.75	4.00	0.50	17.25
10	Sodium cyanide #(T3)	143-33-9	14.00	6.00	2.50	22.50
11	Sodium hydroxide #(E3)	1310-73-2	12.75	10.00	0.50	23.25
12	Thallium sulfate #(T3 of Tl)	7446-18-6	13.00	2.00	0.00	15.00