

U. S. ARMY NATICK LABORATORIES

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Technical Report  
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**U. S. ARMY NATICK LABORATORIES**  
Natick, Massachusetts

**Technical Report**

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**BIBLIOGRAPHY**

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**May 1964**

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5. \_\_\_\_\_ Rations of the future. New England Wholesale Food Distributors Association, Boston, 5 September
6. \_\_\_\_\_ Remarks. Conference on Food Science, NLABS, Natick, 19 November
7. \_\_\_\_\_ Remarks. International Conference on Radiation Research, NLABS, Natick, 14 January
8. \_\_\_\_\_ Remarks - combat feeding equipment and air delivery equipment. U. S. Army Materiel Command R&D Symposium, NLABS, Natick, 5-6 August
9. \_\_\_\_\_ Remarks - irradiated food. Members of the Joint Committee on Atomic Energy, NLABS, Natick, 13 May; and Capitol Army Reserve Group, NLABS, Natick, 14 June
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### Technical Papers (continued)

173. JOSEPHSON, E. S. Radiation preservation of foods. Middlesex County Homemaker's Day, Waltham, Mass., 15 May; Tennessee Valley Public Power Association Meeting, Nashville, 9 September; Western Massachusetts Home Economists Association Meeting, Westfield, 25 September; Monthly Meeting of Bnai-Brith, Brookline, Mass., 20 October; Eastern Experiment Station Collaborators' Conference on Food Processing Techniques, U. S. Dept. of Agriculture, Philadelphia, 21 October; Fall 1963 Conference of the Society for the Advancement of Food Service Research, NLABS, Natick, 7 November; Seminar, Stage II Exploring Food Systems of the Future, N. Y. State College of Agriculture, Cornell University, Ithaca, 18 November; and Rhode Island Chapter of the American Institute of Chemical Engineers Meeting, Providence, 12 December
174. \_\_\_\_\_ Radiation preservation of foods and its potential contribution to closing the world's nutrition gap. Temple Israel Meeting House, Boston, 7 March
175. \_\_\_\_\_ Status of the food irradiation program. R&D Associates 17th Annual Meeting, San Francisco, 23 April
176. KAPSALIS, J. G., M. DRIVER, K. R. JOHNSON, I. T. NII, and A. S. HENICK Application of reflectance spectrophotometry to the stability of canned peas. 23rd Annual Meeting, Institute of Food Technologists, Detroit, Michigan, 27 May
177. \_\_\_\_\_ M. DRIVER, K. R. JOHNSON, I. T. NII, and A. S. HENICK Studies of reflectance spectrophotometry in foods. 23rd Annual Meeting, Institute of Food Technologists, Detroit, Michigan, 27 May
178. \_\_\_\_\_ M. WOLF, M. DRIVER, and A. S. HENICK Relative humidity and moisture measurements in dehydrated foods. International Symposium on Humidity and Moisture Measurement and Control, Washington, D. C., 24 May
179. KLICKA, M. V. Current developments in operational rations and proposed feeding methods. QM Subsistence School, Fort Lee, Virginia, 22 October
180. \_\_\_\_\_ Current developments in operational rations and proposed feeding methods. Operational rations of other nations. QM Subsistence School, Fort Lee, Virginia, 13 June
181. \_\_\_\_\_ Development of space foods. 4th Annual Meeting of the American Dietetic Association, 17 October
182. \_\_\_\_\_ New developments in packaged operational rations. U. S. Army Medical Service Veterinary School, Chicago, 4 February
183. LEE, F. H. Dehydrated foods from test kitchen to you. Central Pennsylvania Dietetic Association, Harrisburg, 7 March

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Technical Papers (continued)

184. MARTIN, T. G. Operational health physics at the U. S. Army QMREC Radiation Laboratory. New England Chapter, Health Physics Society, NLABS, Natick 22 October
185. MASON, O. E. Research on instant bread mix and other cereal products for use by the Armed Forces. QM Subsistence School, Fort Lee, Virginia, 12 March; Subsistence Officer Class 63-2. 19 April; and Subsistence Officer Class 64-1, 3 December
186. MEHRLICH, F. P. Advances in food processing of interest to the military. Institute of Food Technologists - Tri-Sectional Meeting of the Western New York, Central New York, and Mohawk Valley Sections, Geneva, 17 October
187. \_\_\_\_\_ The Army radiation preservation of foods program - past. Eighth Contractors' Meeting, Radiation Preservation of Foods Program, NLABS, Natick, 7-9 October
188. \_\_\_\_\_ Economics of freeze dehydration and radiation preservation. Food Forum of the Grocery Manufacturers of America, New York City, 8 November
189. \_\_\_\_\_ Events in agricultural diplomacy. Business and Professional Women's Club, Illinois State Federation, Chicago, 3 May
190. \_\_\_\_\_ Here and now. R&D Associates 17th Annual Meeting, San Francisco, 23-25 April
191. \_\_\_\_\_ A look to the future (in food products and processes). American School Food Service Association, Atlantic City, N. J., 30 October
192. \_\_\_\_\_ New products and techniques of interest to restaurateurs, caterers, etc. Northern Illinois Food Service Executives Association, Inc., Chicago, 11 February
193. \_\_\_\_\_ What's going on in new product development. Institutional Food Manufacturers Association - Annual Meeting and Management Seminar, Chicago, 22 November
194. OSTER, M. S. Progress and problems in preparation of food specifications. U. S. Army Medical Service Veterinary School, Chicago, 24 January and 15 February
195. \_\_\_\_\_ Standardization and specification development. U. S. Army Medical Service Veterinary School, Chicago, 9 January and 1 March
196. PERYAM, D. R. Consumer preference evaluation of the storage stability of foods. 23rd Annual Meeting, Institute of Food Technologists, Detroit, Michigan, 27-28 May

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Technical Papers (continued)

197. PERYAM, D. R. Psychological methods for measuring flavor effects. Conference on Advances in Flavor Research, U. S. Dept. of Agriculture, New Orleans, La., 25-26 March
198. RAUCH, A. C. The first one hundred thousand quick-serve meals. R&D Associates 17th Annual Meeting, San Francisco, 23-25 April
199. ROBY, M. T. Dehydrated fruits and vegetables. QM Subsistence School, Fort Lee, Virginia, 14 March
200. SIMON, M., and F. HEILIGMAN Radiation preservation of foods. Pittsburgh Section, American Nuclear Society, Pittsburg, Pa., 21 May
201. STRICKLAND, R. M. Current research at the Armed Forces Food & Container Institute. Iowa State University, Iowa City, 12 July
202. TUOMY, J. M. Inspection of freeze-dehydrated foods. U. S. Army Medical Service Veterinary School, Chicago, 4 February
203. \_\_\_\_\_ and R. J. LECHNIR Effect of cooking temperature and time on the tenderness of pork. 23rd Annual Meeting, Institute of Food Technologists, Detroit, Michigan, 27-28 May
204. \_\_\_\_\_ R. J. LECHNIR, and T. MILLER Effect of cooking temperature and time on the tenderness of beef. 23rd Annual Meeting, Institute of Food Technologists, Detroit, Michigan, 27-28 May
205. WERNTZ, O. G. Space foods today. Illinois Wing, Civil Air Patrol, Chicago, 16 May
206. WHITE, V. M. Food preferences in the Armed Forces. Radio Station WNAC, Boston, Mass., July
207. \_\_\_\_\_ Radiated and dehydrated food as used by the Army. Radio Station WNAC, Boston, Mass., July
208. WIERBICKI, E. Development of methods for controlling texture changes in irradiated meats. 23rd Annual Meeting, Institute of Food Technologists, Detroit, Michigan, 29 May
209. \_\_\_\_\_ Flexible packaging for radiation sterilized foods. Eighth Contractors' Meeting on Radiation Preservation of Foods Program, NLABS, Natick, 8 October

MECHANICAL ENGINEERING DIVISION

Technical Papers

210. BEAUDET, J. W., I. TARLOW, and I. M. WEITZLER Development of the rough terrain vehicular materials handling equipment for the Army. 1963 Annual SAE Meeting, Detroit, Michigan, 14-18 January
211. MONEGO, C. J. Air-supported tents for military use. Conference on Aerospace Expandable Structures, Air Force Aero Propulsion Laboratory and Air Force Flight Dynamic Laboratory, Wright-Patterson Air Force Base, Dayton, Ohio, 22 October



## PIONEERING RESEARCH DIVISION

### Reports

212. A field survey of the microbiological contamination present in JP-4 fuel and 115/145 avgas in a military fuel distribution system, by M. R. ROGERS and A. M. KAPLAN. Microbiological Deterioration Series Report No. 6, June
213. Further studies of the jet compressor, by H. J. HOGE and R. A. SEGARS. Technical Report No. PR-9, May
214. Human factors evaluation of clothing and personal equipment in Thailand and the Republic of Viet Nam, by J. M. CHAFFIN and E. W. YOUNGLING. Engineering Psychology Laboratory Report, August
215. The microbiological deterioration of hydrocarbons and the related degradation of equipment used for the storage, distribution and handling of petroleum products - a selected bibliography. Supplement no. 2, by M. R. ROGERS and A. M. KAPLAN. July
216. Minutes of the eleventh conference on prevention of microbiological deterioration of military materiel, by A. G. KEMPTON. April
217. Organometallic research - final report, by M. C. HENRY. Research Report, Organic Chemistry Series No. 7, February
218. A preliminary human engineering study of four load-carrying systems, by J. M. MCGINNIS and J. T. TAMBE. Research Study Report EPR-4, August
219. Preparation and transesterification of methylthiomethyl thiolacetate, by M. R. ALTAMURA, T. HASSELSTROM, and L. LONG, JR. Research Report, Organic Chemistry Series No. 6, December 1962
220. The role of reciprocity in thermal radiation damage, by E. S. COTTON. Radiation Physics Laboratory Report T-36, DASA 1350, 25 February

### Journal Articles

221. ALTAMURA, M., T. HASSELSTROM, and L. LONG, JR. Synthesis of di-(methylthiomethyl) polysulfides. J. Org. Chem. 28: 2438 (September)
222. BALL, D. H., J. M. WILLIAMS, and L. LONG, JR. Potential radiation-protective compounds. Synthesis of the three isomeric three-carbon aminohydroxy Bunte salts and related compounds. J. Org. Chem. 28: 1589 (June)
223. BLUHM, A. L., J. WEINSTEIN, and J. A. SOUSA. Photochromic nitrobenzylpyridines. J. Org. Chem. 28: 1989 (August)

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Journal Articles (continued)

224. CLAPP, R. C., L. LONG, JR., and T. HASSELSTROM Transoxazolination. Preparation of disulfides of 2-(2-mercaptoethylamino)-2-oxazolines. J. Org. Chem. 28: 1308 (May)
225. DEGERING, E. F., C. MERRITT, JR., M. BAZINET, and G. J. CALDARELLA Irradiation factor-dependency: exploratory studies, irradiation cycle and degassing. Ind. Eng. Chem. Prod. Res. Develop. 2: 114 (June)
226. HEINMETS, F., and R. BLUM Conductivity measurements on pure ice. Trans. Far. Soc. 59, part 5: 1141 (May)
227. HENRY, M. C., and W. DAVIDSON New considerations in organogermanium-sulfur chemistry. Can. J. Chem. 41: 1276 (May)
228. \_\_\_\_\_ and A. W. KREBS The synthesis of organolead-sulfur compounds. J. Org. Chem. 28: 225 (January)
229. KEMPTON, A. G., H. MAISEL, and A. M. KAPLAN A study of the deterioration of fungicide-treated fabrics in soil burial. Textile Res. J. 33: 87 (February)
230. \_\_\_\_\_ M. R. ROGERS, and A. M. KAPLAN Behavior of methylolmelamine-treated cotton under environmental stress. Am. Dyestuff Repr. 52(20): 19 (20 September)
231. KREBS, A. W., and M. C. HENRY Some reactions of hexaphenyldilead. J. Org. Chem. 28: 1911 (August)
232. LEVINSON, H. S., and M. T. HYATT Bacterial spore germination with special reference to Bacillus megaterium. Ann. N. Y. Acad. Sci. 102(3): 773 (21 January)
233. LOCONTI, J. D., and J. W. CAHILL Zone-refining fractionation of polymers. J. Polymer Sci. Part A, 1: 3163 (October)
234. MANDELS, G. R. Endogenous respiration of fungus spores in relation to dormancy and germination. Ann. N. Y. Acad. Sci. 102(3): 724 (21 January)
235. MERRITT, C., JR. and J. T. WALSH Programmed cryogenic temperature gas chromatography applied to the separation of complex mixtures. Anal. Chem. 35: 110 (January)
236. \_\_\_\_\_ M. L. BAZINET, J. H. SULLIVAN, and D. H. ROBERTSON Mass spectrometric determination of the volatile components from ground coffee. J. Agr. Food Chem. 11: 152 (March-April)
237. PERLIN, A. S., and E. T. REESE Dimensions of the substrate site involved in the enzymolysis of a polysaccharide. Can. J. Biochem. Physiol. 41: 1842 (August)

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### Journal Articles (continued)

238. REESE, E. T., and A. S. PERLIN Enzymatic preparation of 3-O- $\beta$ -cellobiosyl D-glucose. Biochem. Biophys. Res. Commun. 12(3): 194 (August)
239. SMITH, L. W., JR. and J. T. WHITLAW A device to aid survival of Aedes Aegypti (L) adults in emerging from the pupal stage. Mosquito News 23: 263 (September)
240. SOUSA, J. A., and J. WEINSTEIN Cryostat for absorption spectrophotometry. Rev. Sci. Instr. 34: 150 (February)
241. WETTERMARK, G., and R. RICCI General acid catalysis of the fading of photoisomerized 2,4-dinitrotoluene. J. Chem. Phys. 39: 1218 (September)
242. \_\_\_\_\_ and J. SOUSA Quantum yields for the photochromism of 2-(2-nitro-4-cyanobenzyl) pyridine. J. Phys. Chem. 67: 874 (April)
243. WHARTON, D. R. A., E. D. BLACK, and C. MERRITT, JR. Sex attractant of the American cockroach: a critique. Science 142: 1257 (6 December)

### Book Chapters

244. HEINMETS, F. Elucidation of induction and repression mechanisms in enzyme synthesis by analysis of model-system(s) with the analog computer. In "Electronic Aspects of Biochemistry," NATO Symposium on Molecular Biology, Ravello, Italy (16-18 September)
245. KOBRICK, J. L. Compatibility of personal equipment with workspace. Chapter 9 in "Human Factors in Technology" by E. Bennett, J. Degan and J. Spiegel, editors. McGraw-Hill Book Co., Inc., New York
246. MANDELS, M., and E. T. REESE Inhibition of cellulases and  $\beta$ -glucosidases. In "Advances in Enzymic Hydrolysis of Cellulose and Related Materials," Pergamon Press, London, pp 115-157
247. REESE, E. T., and M. MANDELS Enzymic hydrolysis of  $\beta$ -glucans. In "Advances in Enzymic Hydrolysis of Cellulose and Related Materials," Pergamon Press, London, pp 197-234
248. \_\_\_\_\_ and M. MANDELS Enzymic hydrolysis of cellulose and its derivatives. In "Methods in Carbohydrate Chemistry," R. L. Whistler, editor. Academic Press, New York, pp 139-143
249. SIMMONS, E. G. Fungus cultures. Conservation and taxonomic responsibility. In "Culture Collections: Perspectives and Problems," University of Toronto Press, pp 100-110

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### Book Chapters (continued)

250. SUSICH, G., and L. M. DOGLIOTTI The microscopic structure of pryographite. In Proceedings of the Fifth Carbon Conference, " Vol. II, Pergamon Press, New York, pp 467-470

### Books Edited

251. REESE, E. T. "Advances in Enzymic Hydrolysis of Cellulose and Related Materials," American Chemical Society Symposium sponsored in part by the Army Research Office. Pergamon Press, London, 290 p

### Technical Papers

252. BALL, D. H., R. CHALK, and L. LONG, JR. Some carbohydrate disulfides. Symposium on Thio Derivatives of Carbohydrates, Carbohydrate Division, American Chemical Society, New York City, September
253. \_\_\_\_\_ J. M. WILLIAMS, and L. LONG, JR. Potential radiation-protective compounds. Synthesis of the three isomeric three-carbon aminohydroxy Bunte salts and related compounds. Division of Medicinal Chemistry, American Chemical Society, Los Angeles, April
254. DEGERING, E. F., G. J. CALDARELLA, and F. E. EVANS Irradiation "factor dependency": irradiation-induced polymerization of trihydroperfluoroalkyl acrylates. Symposium on Fluorine Compounds, American Chemical Society, New York City, September
255. DUSEK, E. R. Effects of climate variables on psychological and psychomotor performance. Great Lakes Naval Research and Development Clinic, Ohio State University, Columbus, June
256. \_\_\_\_\_ Human factors research and the design of equipment. Guggenheim Center for Aerospace Health and Safety, Harvard School of Public Health, Boston, March
257. EVELEIGH, D. E., G. DATEO, and E. T. REESE Enzymatic hydrolysis of complex glycosides; ustilagic acid. Symposium on Biosynthesis of Carbohydrates, American Chemical Society, New York City, September
258. HEINMETS, F. Computer analysis of oscillatory processes at genetic level. Biophysical Society, New York City, April
259. \_\_\_\_\_ Elucidation of induction and repression mechanisms in enzyme synthesis by analysis of model systems with the analog computer. NATO Symposium on Electronic Aspects of Biochemistry, Ravello, Italy, September

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### Technical Papers (continued)

260. HEINMETS, F., and M. O. DAYHOFF Simulation of cellular processes program CELSIM. 16th Annual Conference on Engineering in Medicine and Biology, Baltimore, Maryland, November
261. KAPLAN, A. M. Microbial deterioration and contamination of materials. Seminar, Institute of Agricultural and Industrial Microbiology, University of Massachusetts, Amherst, February
262. \_\_\_\_\_ Microbiological contamination of fuels. Symposium, Annual Meeting of the Society of Automotive Engineers, Detroit, Michigan, January
263. KRONMAN, M. J. Conformational changes of alpha lactalbumin. Seminar, Northwestern University Medical School, Chicago, April
264. \_\_\_\_\_ Properties of alpha lactalbumin at acid pH. Seminar, Eastern Regional Research Laboratory, U. S. Dept. of Agriculture, Philadelphia, February; and Seminar, Western Regional Research Laboratory, U. S. Dept. of Agriculture, Albany, California, April
265. \_\_\_\_\_ R. A. ANDREOTTI, and L. HOLMES Inter and intramolecular interactions in alpha lactalbumin. Division of Colloid and Surface Chemistry, American Chemical Society, Los Angeles, April
266. LEVINSON, H. S. Alteration of spore germination characteristics, heat resistance, and chemical composition by alteration of the conditions for spore production. 12th Conference on Prevention of Microbiological Deterioration of Military Materiel, NLABS, Natick, November
267. \_\_\_\_\_ Germination of bacterial spores. Graduate Seminar, Dept. of Food Science and Technology, University of Massachusetts, Amherst, April
268. \_\_\_\_\_ The microorganism. Discussion Leader, Gordon Research Conference, New Hampton, N. H., August
269. \_\_\_\_\_ and M. T. HYATT Bacillus megaterium germination and postgerminative development. U. S. Army Conference on Food Science, NLABS, Natick, November
270. \_\_\_\_\_ and M. T. HYATT Effect of sporulation medium on Bacillus megaterium germination. Paper G-2, 63rd Annual Meeting, American Society for Microbiology, Cleveland, Ohio, May
271. LONG, L., JR. Introductory remarks. Symposium on Thio Derivatives of Carbohydrates, American Chemical Society, New York City, September

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Technical Papers (continued)

272. MANDELS, M., and E. T. REESE Fungal cellulases and the degradation of cotton fiber. Mycological Society of America, Amherst, Mass., August
273. MERRITT, C., JR. Mass spectroscopy. Symposium on Methods for Studying Proteins, Lipoproteins and Lipids in Animal Tissues. 16th Annual Reciprocal Meat Conference, Oklahoma State University, Stillwater, June
274. \_\_\_\_\_ Programmed cryogenic temperature gas chromatography. Seminar, Eastern Research Laboratory, Dow Chemical Co., Framingham, Mass., February
275. \_\_\_\_\_ Qualitative gas chromatographic analysis. Fisher Award Symposium Honoring Prof. David N. Hume, American Chemical Society, Los Angeles, Calif., April; and Seminar, Western Regional Research Laboratory, U. S. Dept. of Agriculture, Albany, Calif., April
276. \_\_\_\_\_ Qualitative gas chromatographic analysis of complex mixtures. Seminar, Dept. of Chemistry, University of Vermont, Burlington, February
277. REESE, E. T., and M. MANDELS A new  $\alpha$ -glucanase, mycodextranase. Symposium on Biosynthesis of Carbohydrates, American Chemical Society, New York City, September
278. ROTH, L. M. Mechanisms controlling mating behavior in the cockroach, Nauphoeta cinerea. Entomological Club, Harvard University, Cambridge, Mass., May
279. \_\_\_\_\_ Mechanisms controlling reproduction in cockroaches. Zoology Colloquium, University of Rhode Island, Providence, November
280. \_\_\_\_\_ Neuroendocrine control of mating behavior in cockroaches. Entomological Club, Harvard University, Cambridge, Mass., October
281. \_\_\_\_\_ Receptivity in females of the cockroach, Nauphoeta cinerea. International Congress of Zoology, Washington, D. C., August
282. \_\_\_\_\_ Size of nymphs of cockroaches incubating eggs internally. Annual Meeting of the Entomological Society of America, St. Louis, Mo., December
283. WETTERMARK, G., and R. RICCI Flash photolysis of o-nitrotoluene derivatives. Photochemistry Symposium, University of Rochester, Rochester, N. Y., March

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