

UNCLASSIFIED

AD NUMBER
AD404553
NEW LIMITATION CHANGE
TO Approved for public release, distribution unlimited
FROM Distribution authorized to U.S. Gov't. agencies and their contractors; Foreign Government Information; MAR 1963. Other requests shall be referred to Army Biological Laboratory, Fort Detrick, MD 21701.
AUTHORITY
smufd, d/a ltr, 4 feb 1972

THIS PAGE IS UNCLASSIFIED

6334

404 553

CATALOGED BY ASTIA
AS AD NO. _____

404553

**THE ROLE OF WATER
IN THE ETIOLOGY OF ANIMAL BOTULISM
METHOD OF DETECTION
OF BOTULISMUS TOXIN C IN WATER**

TRANSLATION NO.

751

MARCH 1963

**U.S. ARMY BIOLOGICAL LABORATORIES
FORT DETRICK, FREDERICK, MARYLAND**

GCBL: FD2-3742 (T-51-1)
JPRS: R-3038-D

18 March 1963

**THE ROLE OF WATER IN THE ETIOLOGY OF ANIMAL BOTULISM
METHOD OF DETECTION OF BOTULISMUS TOXIN C IN WATER**

ASTIA AVAILABILITY NOTICE

Qualified requestors may obtain copies of this document from ASTIA.

This publication has been translated from the open literature and is available to the general public. Non-DOD agencies may purchase this publication from the Office of Technical Services, U. S. Department of Commerce, Washington 25, D. C.

Translated for:

**U.S. CHEMICAL CORPS BIOLOGICAL LABORATORIES
Ft. Detrick, Md.**

By:

**U. S. DEPARTMENT OF COMMERCE
OFFICE OF TECHNICAL SERVICES
JOINT PUBLICATIONS RESEARCH SERVICE
BUILDING T-30
Ohio Dr. and Independence Ave., S.W.
Washington 25, D.C.**

THE ROLE OF WATER IN THE ETIOLOGY OF ANIMAL BOTULISM
METHOD OF DETECTION OF BOTULISMUS TOXIN C IN WATER

by L. Pigoury, C. Michel, and C. Chabassel

Published in Revue du Corps de
Santé des Armées (Armed Forces
Medical Review) Vol. 3, Suppl 3,
1962, p. 649.

SUMMARY

Botulism contracted through water is of considerable interest in veterinary medicine. The animals become contaminated by the ingestion of spores or of the toxin which is usually found in water or enters it occasionally.

By experimenting with the toxin C, we have developed a method of detecting the botulismus toxin in water which is based on concentration of lyophilization.

We lyophilize 50 ml of water filtered with a "Chardin" filter and add 50% dextran or 5% heated horse serum. To this are added 2 ml of distilled water containing 100 units of penicillin and 5 mg of streptomycin. This is injected into the peritoneum of a mouse. The method is suitable for use with multiples of 50 ml, depending on the number of mice it is desired to inoculate (toxotypy).

Taking into account a lowering of titration by 50% after lyophilization, the minimum quantity of detectable toxin C is about 1/25 D₅₀ of mouse per ml of water or a dose about 10 times less than when inoculating the same volume of non-concentrated water.

It would seem possible to extend the method to the concentration of other types of toxins and to the detection of small quantities of such toxins in organ specimens or in samples of food.

(Research Institute of the Biological and Veterinary Services of the Armed Forces, Alfort.)