

Image Cover Sheet

CLASSIFICATION

SYSTEM NUMBER

135285

UNCLASSIFIED



TITLE

U.S. NAVAL OINTMENT \ (SPECIAL PASTE 461. FORMULA G.P.-BB\) AS A DECONTAMINANT
AGAINST LIQUID MUSTARD ON THE SKIN

System Number:

Patron Number:

Requester:

Notes:

DSIS Use only:

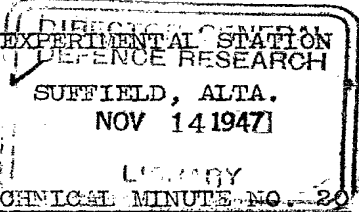
Deliver to:



A

ESS/TM/20

Index on Dev List



X 9 Mar 43.

U.S. NAVAL OINTMENT (SPECIAL PASTE 461. FORMULA G.P.-BB)

AS A DECONTAMINANT AGAINST LIQUID MUSTARD ON THE SKIN.

Part 1

A COMPARISON OF U.S. NAVAL OINTMENT (SPECIAL PASTE 461 FORMULA G.P./BB) WITH A.G. 5 AS A DECONTAMINANT AGAINST LIQUID MUSTARD ON THE SKIN.

PURPOSE:

To compare the efficiency of U.S. Naval Ointment with A.G. 5 in the prevention of skin lesions from liquid mustard.

PROCEDURE:

Identical areas were selected on the flexor surface of the forearms of twenty human observers. To the right arm a 2 mm. drop (5.3 mgm.) of pure "H" was applied and left on for 5 minutes and then U.S. Naval ointment was applied and rubbed in for 1 minute.

The same amount of pure "H" was placed on the corresponding area of the left arm and after 5 minutes was decontaminated as before with A.G.5.

Measurements were made after 24 and 48 hours and the maximum reaction was recorded. (For the basis of measurements and calculations see Technical Minute #16).

RESULTS:

A summary of the results is shown in Appendix I. Statistical analysis showed that while there was no significant difference between the two areas of erythema, the area of vesication in the area decontaminated with A.G.5 was significantly smaller than when decontamination was carried out using U.S. Naval ointment.

CONCLUSIONS:

Under the conditions of these tests U.S. Naval Ointment (Special Paste 461 Formula G.P.-BB) was found to be as effective as A.G.5 in reducing the erythema produced by a 2 mm. drop of pure "H", but was not as effective in the reduction of vesication.

Abstracts on
54354-16-1
29-18

Classification / Designation u/u
 Changed to (Revised) per _____
 By Agreement of C. Lafore
 Sur l'Autoclassification _____
 Date 25 Feb 98 D. Kuseler
 Appointment _____
 Fonction _____

EFFICIENCY OF U.S. NAVAL OINTMENT (SPECIAL PASTE 461 FORMULA G.P.-BB) STORED UNDER DIFFERENT STORAGE CONDITIONS, COMPARED WITH U.S. NAVAL OINTMENT STORED UNDER NORMAL CONDITIONS AS A DECONTAMINANT AGAINST LIQUID MUSTARD.

OBJECT:

To determine whether there was any deterioration in the efficiency of U.S. Naval ointment under various conditions of storage. Conditions tested were: (1) 1 month at 50°C. (2) after 1 month at 0°C. (3) after 1 month at room temperature in sunlight. (4) after one month at room temperature with lid removed.

PROCEDURE:

Identical areas were chosen on the flexor surfaces of each forearm of human observers, for the application of "H". To the right forearm a 2 mm. drop (5.3 mgm.) of pure "H" was applied, left on for two to five minutes, and then the area was decontaminated for 1 minute with the U.S. Naval ointment to be tested. This procedure was repeated on the left forearm using U.S. Naval Ointment (normal) in the same manner.

Measurements were made at the end of 24 and 48 hours and the maximum reaction recorded (see Appendix I).

Chemical analyses were made under each condition of storage. (See Appendix II).

RESULTS:

Results show that storage of U.S. Naval Ointment (Special Paste 461 Formula G.P.-BB Lot 346707) under the following conditions resulted in no impairment of decontaminating powers:

- (1) for 1 month at 50°C.
- (2) for 1 month at 0°C.
- (3) for 1 month at room temperature in sunlight.
- (4) for 1 month at room temperature with lid removed.

Statistical analysis of the results (Student's Test) were made in each case and there was no significant difference between the areas of the lesions produced by the pure "H", whether treated with U.S. Naval Ointment stored under normal conditions or stored under the conditions mentioned above.

The results of chemical analyses showed that there was no appreciable alteration in composition in any of the samples tested (see Appendix II).

CONCLUSIONS:

Under the various conditions of storage described, U.S. Naval Ointment showed no loss in efficiency. This conclusion is in agreement with the chemical analyses of the ointment carried out at the same time.

This Technical Minute was prepared by Major ^XW. Somerville, R.A.M.C.,
Surg/Lt. ^XD.D. Bonnycastle, R.C.N.V.R., F/Lt. E.L. Dobson and
R.C.A.F. of the Physiology Section. ^X

E. L. Davies
(E. L. Davies),
Chief Superintendent,
Experimental Station.

APPENDIX II

CHEMICAL ANALYSIS OF U.S. NAVAL OINTMENT
(SPECIAL PASTE 461 FORMULA G.P.-BB) UNDER
DIFFERENT CONDITIONS OF STORAGE. LOT 346707.

The following figures were obtained by chemical analysis:

<u>Storage</u>	<u>Ointment</u> <u>% available Cl.</u>
As received	14.80
After one month at 50°C	14.55
After one month at 0°C,	14.76 (1)
After one month at room temp. in dark	14.80
After one month at room temp. in sunlight	14.87
After one month at room temp. with lid removed	14.81 (2)

(1) A considerable amount of oil separated. The analyses refer to the sample after mixing

(2) Analysis of the surface showed 14.63% available Cl. This figure is for the sample after mixing.

Appendix I. A Comparison of the Results of Decontamination of 2 mm. Drops of Pure "H" with U.S. Naval Ointment after Storage under Varying Conditions. U.S. Naval Ointment Kept Under Normal Conditions* was used as a control. Also a comparison of the Effect on a 2 mm. Drop of Pure "H" of A.G.5 and U.S. Naval Ointment Kept Under Normal Conditions.

NORMAL U.S. NAVAL OINTMENT COMPARED WITH	No. of Cases	Average Erythema in Control Area-Sq cm.	Range of Erythema in control Area-Sq. cm.	Average Erythema in test Area Sq. cm.	Range of Erythema in test area Sq. cm.	# Significance of Difference #	Average Vesication in control in Test Area Sq. cm.	Range of Vesication in test Area Sq. cm.	Average Vesication in Test Area Sq. cm.	Range of Vesication in test Area Sq. cm.	P#	Significance of difference #
U.S.N. Ointment Stored 1 month at 0°C.	6	12.1	7.7-15.8	12.2	5.8-20.1	.9 Not Sign.	1.1	0.0-5.4	1.3	0.0-5.4	.2	Not Sign
U.S.N. Ointment Stored 1 month at 5°C.	6	9.3	5.2-16.6	11.3	5.0-20.3	.4 Not Sign.	0.3	0.0-0.7	0.3	0.0-2.6	.5	Not Sig.
U.S.I. Ointment Stored 1 month at Room Temp. in the Sun - ight	18	6.4	0.8-12.0	7.6	1.1-15.1	.4 Not Sig. .3	0.5	0.0-5.2	0.3	0.0-2.9	.4 .3	Not Sig.
U.S.J. Ointment Stored 1 month at Room Temp. with lid removed.	15	7.7	0.5-18.4	8.4	0.2-15.3	.3 Not Sig.	0.8	0.0-10.8	0.4	0.0-2.9	.4	Not Sig
A.G.5	20	11.2	0.7-21.9	10.7	2.1-20.3	.7 Not Sig.	2.2	0.0-7.4	0.8	0.0-4.4	.02 .01	Sig.

* The Normal storage conditions for the U.S. Naval Ointment was at room temperature in the dark.

The statistical analysis was carried out applying Student's test.

TO: [Illegible]
FROM: [Illegible]
SUBJECT: [Illegible]

[Illegible text block]

**DIRECTORATE OF
SCIENTIFIC INFORMATION
SERVICES
DEFENCE RESEARCH BOARD
ROOM 4744, "A" BUILDING
OTTAWA 4, ONT., CANADA**

OCT 16 1963

Date: _____
From: _____
Copy No. 1 of 1
Acc. No. 4712768

AK

#138285

10/16/63

[Faint, mostly illegible text and markings on the right side of the page]