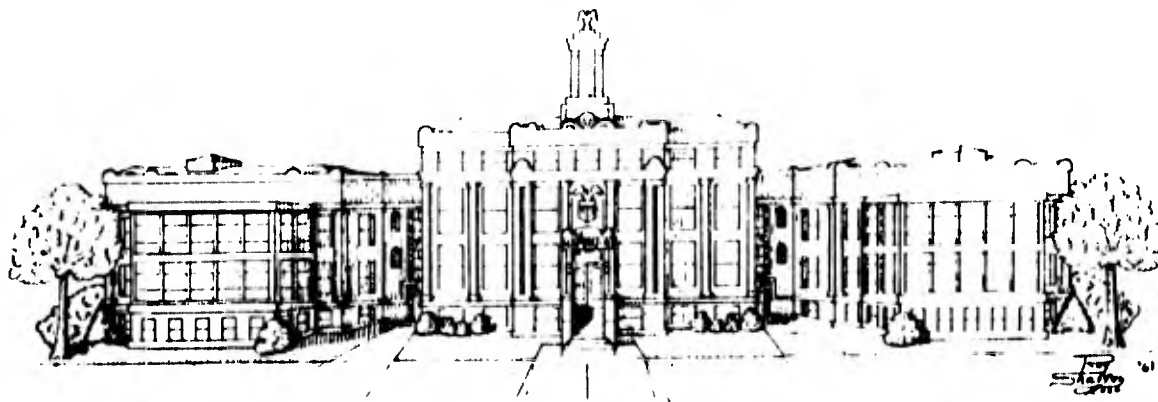


AD636116

NAVAL MEDICAL RESEARCH

UNIT No. 4



INFLUENCE OF pH ON RECOVERY OF MYCOPLASMA FROM THE HUMAN OROPHARYNX

1.

CLEARINGHOUSE FOR FEDERAL SCIENTIFIC AND TECHNICAL INFORMATION		
Hardcopy	Microfiche	
\$1.00	.50	4 pp
ARCHIVE COPY		

WILLIAM H. KRAYBILL and YORK E. CRAWFORD



DDC
RECORDED
AUG 4 1966
C

MR 005.09-1305.2
RU 66.17

JUNE 1966

UNITED STATES NAVAL MEDICAL RESEARCH UNIT 4		UNITED STATES NAVAL HOSPITAL GREAT LAKES, ILL.
---	--	--

BACTERIOLOGICAL PROCEEDINGS -- 1966

RT1. Influence of pH on Recovery of Mycoplasma from the Human Oropharynx.
WILLIAM H. KRAYBILL and YORK E. CRAWFORD. U.S. Naval Medical Research
Unit No. 4., U.S. Naval Hospital, Great Lakes, Illinois.

Recently published data indicate that a pH of 5.5 to 6.5 rather than usual pH 7.8 favors growth of T strain Mycoplasma and at least one classical species, M. salivarium. This information, based on laboratory-adapted cultures, raises the question of whether or not a pH lower than 7.8 would increase the sensitivity of PPLO agar for isolation of mycoplasmas from the human oropharynx. The number of colonies and variety of species from throat swabs of the first 50 patients was compared on pH 5.0, 6.0, 7.0, and 8.0 PPLO agar enriched with 10% horse serum. The recovery of M. pneumoniae from throat swabs of another 50 patients was compared at the above pH levels on PPLO agar containing 20% horse serum and 0.002% methylene blue. Positive cultures in the first group were as follows: 78% at pH 5.0, 94% at pH 6.0, 88% at pH 7.0, and 78% at pH 8.0. Highest incidence of M. pharyngis occurred at pH 7.0 and of M. salivarium at pH 5.0 and 6.0. The one M. hominis type 1 isolate grew evenly over the entire range of pH tested. In the second group, a pH of 7.0 and 8.0 was optimal for the recovery of M. pneumoniae. It was concluded that, excepting M. pneumoniae, the human oral mycoplasmas are more frequently isolated on PPLO agar of pH 6.0 and 7.0.

Security Classification

DOCUMENT CONTROL DATA - R&D		
<i>(Security classification of title, body of abstract and indexing annotation must be entered when the overall report is classified)</i>		
1 ORIGINATING ACTIVITY (Corporate author) Naval Medical Research Unit No. 4 U. S. Naval Hospital Great Lakes, Ill.		2a. REPORT SECURITY CLASSIFICATION Unclassified
		2b. GROUP
3 REPORT TITLE Influence of pH on Recovery of Mycoplasma from the Human Oropharynx		
4 DESCRIPTIVE NOTES (Type of report and inclusive dates)		
5 AUTHOR(S) (Last name, first name, initial) Kraybill, W.H. and Crawford, Y.E.		
6. REPORT DATE June 1966	7a. TOTAL NO. OF PAGES 1	7b. NO. OF REFS 0
8a. CONTRACT OR GRANT NO.	9a. ORIGINATOR'S REPORT NUMBER(S)	
b. PROJECT NO. MR 005.09-1305.2	RU 66.17	
c.	9b. OTHER REPORT NO(S) (Any other numbers that may be assigned this report)	
d.		
10. AVAILABILITY/LIMITATION NOTICES Unlimited distribution		
11. SUPPLEMENTARY NOTES		12. SPONSORING MILITARY ACTIVITY Bureau of Medicine and Surgery Navy Department Washington, D.C.
13. ABSTRACT <p>Recently published data indicate that a pH of 5.5 to 6.5 rather than usual pH 7.8 favors growth of T strain <u>Mycoplasma</u> and at least one classical species, <u>M. salivarium</u>. This information, based on laboratory-adapted cultures, raises the question of whether or not a pH lower than 7.8 would increase the sensitivity of PPLO agar for isolation of mycoplasmas from the human oropharynx. The number of colonies and variety of species from throat swabs of the first 50 patients was compared on pH 5.0, 6.0, 7.0, and 8.0 PPLO agar enriched with 10% horse serum. The recovery of <u>M. pneumoniae</u> from throat swabs of another 50 patients was compared at the above pH levels on PPLO agar containing 20% horse serum and 0.002% methylene blue. Positive cultures in the first group were as follows: 78% at pH 5.0, 94% at pH 6.0, 88% at pH 7.0, and 78% at pH 8.0. Highest incidence of <u>M. pharyngis</u> occurred at pH 7.0 and of <u>M. salivarium</u> at pH 5.0 and 6.0. The one <u>M. hominis</u> type 1 isolate grew evenly over the entire range of pH tested. In the second group, a pH of 7.0 and 8.0 was optimal for the recovery of <u>M. pneumoniae</u>. It was concluded that, excepting <u>M. pneumoniae</u>, the human oral mycoplasmas are more frequently isolated on PPLO agar of pH 6.0 and 7.0.</p>		

14 KEY WORDS	LINK A		LINK B		LINK C	
	ROLE	WT	ROLE	WT	ROLE	WT
Mycoplasma pH Recovery						

INSTRUCTIONS

1. **ORIGINATING ACTIVITY:** Enter the name and address of the contractor, subcontractor, grantee, Department of Defense activity or other organization (*corporate author*) issuing the report.

2a. **REPORT SECURITY CLASSIFICATION:** Enter the overall security classification of the report. Indicate whether "Restricted Data" is included. Marking is to be in accordance with appropriate security regulations.

2b. **GROUP:** Automatic downgrading is specified in DoD Directive 5200.10 and Armed Forces Industrial Manual. Enter the group number. Also, when applicable, show that optional markings have been used for Group 3 and Group 4 as authorized.

3. **REPORT TITLE:** Enter the complete report title in all capital letters. Titles in all cases should be unclassified. If a meaningful title cannot be selected without classification, show title classification in all capitals in parenthesis immediately following the title.

4. **DESCRIPTIVE NOTES:** If appropriate, enter the type of report, e.g., interim, progress, summary, annual, or final. Give the inclusive dates when a specific reporting period is covered.

5. **AUTHOR(S):** Enter the name(s) of author(s) as shown on or in the report. Enter last name, first name, middle initial. If military, show rank and branch of service. The name of the principal author is an absolute minimum requirement.

6. **REPORT DATE:** Enter the date of the report as day, month, year, or month, year. If more than one date appears on the report, use date of publication.

7a. **TOTAL NUMBER OF PAGES:** The total page count should follow normal pagination procedures, i.e., enter the number of pages containing information.

7b. **NUMBER OF REFERENCES:** Enter the total number of references cited in the report.

8a. **CONTRACT OR GRANT NUMBER:** If appropriate, enter the applicable number of the contract or grant under which the report was written.

8b, 8c, & 8d. **PROJECT NUMBER:** Enter the appropriate military department identification, such as project number, subproject number, system numbers, task number, etc.

9a. **ORIGINATOR'S REPORT NUMBER(S):** Enter the official report number by which the document will be identified and controlled by the originating activity. This number must be unique to this report.

9b. **OTHER REPORT NUMBER(S):** If the report has been assigned any other report numbers (either by the originator or by the sponsor), also enter this number(s).

10. **AVAILABILITY/LIMITATION NOTICES:** Enter any limitations on further dissemination of the report, other than those

imposed by security classification, using standard statements such as:

- (1) "Qualified requesters may obtain copies of this report from DDC."
- (2) "Foreign announcement and dissemination of this report by DDC is not authorized."
- (3) "U. S. Government agencies may obtain copies of this report directly from DDC. Other qualified DDC users shall request through _____."
- (4) "U. S. military agencies may obtain copies of this report directly from DDC. Other qualified users shall request through _____."
- (5) "All distribution of this report is controlled. Qualified DDC users shall request through _____."

If the report has been furnished to the Office of Technical Services, Department of Commerce, for sale to the public, indicate this fact and enter the price, if known.

11. **SUPPLEMENTARY NOTES:** Use for additional explanatory notes.

12. **SPONSORING MILITARY ACTIVITY:** Enter the name of the departmental project office or laboratory sponsoring (paying for) the research and development. Include address.

13. **ABSTRACT:** Enter an abstract giving a brief and factual summary of the document indicative of the report, even though it may also appear elsewhere in the body of the technical report. If additional space is required, a continuation sheet shall be attached.

It is highly desirable that the abstract of classified reports be unclassified. Each paragraph of the abstract shall end with an indication of the military security classification of the information in the paragraph, represented as (TS), (S), (C), or (U).

There is no limitation on the length of the abstract. However, the suggested length is from 150 to 225 words.

14. **KEY WORDS:** Key words are technically meaningful terms, or short phrases that characterize a report and may be used as index entries for cataloging the report. Key words must be selected so that no security classification is required. Identifiers, such as equipment model designation, trade name, military project code name, geographic location, may be used as key words but will be followed by an indication of technical context. The assignment of links, roles, and weights is optional.