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A note on the antiseptic properties of olive oil.

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While studying the antiseptic properties of various benzyl compounds described elsewhere,¹ the authors examined a number of drugs which were insoluble in water, in order to test their bactericidal or antiseptic properties. Solutions of these drugs were made in various oils and the effects of the oily solutions were studied on staphylococcus pyogenes aureus. In this connection some interesting observations on the effect of the oils themselves were noted which were deemed worth while reporting in this place. In order to determine the antiseptic efficiency of the drugs in oil check or control experiments were made with the oils themselves by the following method.

Twenty-four hour broth cultures of staphylococcus pyogenes aureus were used for these tests, the cultures being filtered through glass wool before use to remove clumps of organism. 2 c.c. of the sterile oil to be tested was inoculated with one standard loopful of culture. Specimens for plating were removed at the end of 1 minute, 1 hour, 3 hours and 5 hours, each specimen being 0.1 c.c. drawn from the emulsion by means of a capillary pipette attached by a rubber stopper to a Tuberculin syringe. Dilutions in two parallel series were made in sterile 0.875 per cent. sodium chloride solution. Agar plates were made from these dilutions, and after 48 hours at 37.5 C°, the two parallel plates of the same dilution which showed the most suitable number of colonies for counting were selected, the colonies counted and the number of bacteria per c.c. estimated.

The following oils were examined; olive oil, cottonseed oil, liquid petrolatum or albolene (mineral oil), peach kernel oil and oil of sweet almonds. The results obtained are expressed in the subjoined table. It will be noted that olive oil exhibited an action very different from all the other oils studied. It was distinctly antiseptic and germicidal. The number of organisms was rapidly decreased after one hour and the cultures were com-

pletely sterilized at the end of five hours. Albolene after an initial drop at the end of one hour, showed a marked increase in the number of organisms after that time. Cottonseed oil and peach kernel oil showed an increase of organisms at the end of the first hour. Oil of almonds although greatly reducing the number of organisms in five hours showed a marked increase in organisms before that time. The most striking observation in this study is the antiseptic effect of olive oil. This could not be attributed to impurity or acidity of the oil as only the purest product, neutral in reaction, was employed in the tests. The above findings may be of interest to such clinicians as larynologists, rhinologists and others who have occasion to use solutions of antiseptics and other drugs in oil.

ACTION OF OILS AGAINST STAPHYLOCOCCUS PYOGENES AUREUS

Oil.	1 minute.		1 hour.		3 hours.		5 hours.	
	Number of organisms per c.c.	Per cent.	Number of organisms per c.c.	Per cent.	Number of organisms per c.c.	Per cent.	Number of organisms per c.c.	Per cent.
Olive oil	110,000	100	16,500	15.	1,350	1.2	0	0.
Cotton seed oil....	136,000	100	145,000	106.6	30,910	22.7	25,450	18.7
Albolene	59,000	100	1,500	25.4	67,500	144.4	67,500	144.4
Oil of almonds....	1,400,000	100	5,150,000	367.8	250,000	17.8	16,000	1.1
Peach kernel oil..	530,000	100	1,160,000	218.8	1,885,000	355.6	440,000	83.0

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On the estimation of organic phosphorus.

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In attempting to use the methods of Bloor and Bell and Doisy for estimating liopoid phosphorus, difficulty was experienced in securing uniform results. A study of these methods was therefore made using pure inorganic phosphate solutions. Complete recovery was rarely possible and the apparent losses were quite variable. After excluding other steps in the processes as possible