Resorcin.—The method of the U. S. Pharmacopeia was used. The total bromin absorption of 25 c.c. Lavoris was 3.68 c.c. tenth-normal bromin solution. This would be equivalent to 0.00675 gm. resorcin in 25 c.c. or 0.02700 gm. in 100 c.c. In a duplicate test, 25 c.c. Lavoris required 3.8 c.c. tenth-normal bromin solution equivalent to 0.00697 gm. resorcin or 0.02788 gm. in 100 c.c. Since oil of cinnamon absorbs bromin, 50 c.c. of Lavoris was boiled until very little or no odor of the oil was noted, keeping the volume nearly constant by adding a little water from time to time, and the bromin absorption then taken. In one experiment, 0.36 c.c. of tenth-normal bromin solution was consumed, and in a duplicate no bromin was absorbed. This shows the absence of resorcin.

Residue.—On evaporating 25 c.c. Lavoris on a steam bath and subsequent drying of the residue at 100 C., 0.0455 gm. of residue was obtained. This is equivalent to 0.1820 gm. in 100 c.c.

Saccharin.—Saccharin was detected in the residue and ether-extract of the residue by its intense sweet taste when a little sodium bicarbonate was added to it.

Formaldehyd.—This could be detected by the Jarrison test. The color was not very pronounced and the quantity of formaldehyd was small.

Oil of Cinnamon.—The odor and taste of Lavoris is characteristic of cinnamon.

Menthol and Oil of Cloves.—The odor of menthol and of oil of cloves could not be detected, but no tests were made to demonstrate their presence.

The analysis thus indicates that the Lavoris of today contains no resorcin but does contain a small amount of formaldehyd, a little saccharin, and oil of cinnamon (menthol and oil of cloves could not be detected by the odor, but were not tested for). The analysis showed that the principal constituent of Lavoris is zinc chlorid, of which there is about 0.1 gm. per 100 c.c. (about $\frac{1}{2}$ grain to the ounce).

The amount of zinc chlorid given in the published formula, i. e., 1.04, is meaningless because the unit of weight or measure is not given; furthermore the analysis shows that it is inaccurate for any unit of weight that might be assumed from the published figures. Since the amount of the most active medicinal ingredient is both indefinite and inaccurate, the composition of the preparation is essentially secret. Lavoris is indirectly advertised to the public by having included in the package a circular giving a list of diseases for which the preparation was recommended. The combination of zinc chlorid, formaldehyd and oil of cinnamon (assuming the menthol and oil of cloves to be present as flavors) in a mixture is irrational and likely to lead its users to ascribe a false and exaggerated value to the preparation. The name is objectionable in that it does not indicate the composition of the potent ingredients of the mixture, but instead suggests its use as a mouth wash.

From a standpoint of public safety, the most serious objection to Lavoris, however, lies in the many unwarranted therapeutic claims and suggestions. It is generally held that zinc chlorid solutions which possess a strength of from 1 to 200 up to 1 to 500 exercise a weak antiseptic action. The strength of zinc chlorid in Lavoris is approximately 1 to 1,000. The directions for its use recommend that Lavoris should be diluted. A dilution of 1 to 4 is recommended for a variety of mouth conditions while for cystitis irrigations and as a vaginal douche, it is recommended that one tablespoonful be added to a quart of warm water or salt solution. The strength of zinc chlorid in the last suggested dilution would approximate 1 to 64,000. It is evident that no antiseptic action could be expected from such dilutions.

The recommendation that diluted Lavoris be used for the treatment of coryza, nasal catarrh, hay fever, inflamed eyes, hemorrhoids and leucorrhea is objectionable and irrational. Especially dangerous is the recommendation that members of a family exposed to diphtheria or scarlet fever should use Lavoris freely as a preventive. Such recommendations can but give a false sense of security and lead to the neglect of proved methods for preventing the spread of these diseases. Equally unwarranted is the recommendation that in gonorrhea one teaspoonful of Lavoris to eight of warm water be used with a blunt end syringe.

The use of Lavoris as recommended would not only prove valueless in many instances but might lead to serious consequences because really valuable methods of prevention or treatment might be neglected. For these reasons the preparation is in conflict with Rule 6.

The Council declared Lavoris ineligible for New and Nonofficial Remedies.

Correspondence

"SELF-SACRIFICE IN THE WARFARE AGAINST DISEASE"

To the Editor:—On reading the letter of the Surgeon-General of the Navy in THE JOURNAL, October 25, with its account of the eighty-three enlisted sailors who, during the height of the terrible influenza epidemic in Boston, subjected themselves voluntarily and after having the danger fully explained to them, to experimentation with a view of promoting medical research which might help the surgeons in finding a remedy, I feel deeply impressed with the thought that honors should be conferred on these men—at least honorable mention of their names in THE JOURNAL or in some permanent public record. I do not know whether they would be entitled to the Carnegie hero medal, but no one could be more worthy of it. I hope the Surgeon-General can be interested in the matter. He pays a deserved tribute to the surgeons of the navy in this connection and truly calls these men "heroes in the fullest and most beautiful meaning of the word." Of course, the men should be consulted as to the making public of their names, and any who did not wish to be thus mentioned need not be. I am assuming there is no rule in the Navy against such action.

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METABOLISM AND SEX

To the Editor:—A recent editorial (THE JOURNAL, Aug. 23, 1919, p. 612) emphasizes the relationship obtaining between basal metabolism and sexual expression, as evidenced by Miles' account of the diminished sex activities of a group of men on a reduced ration experiment. As Miles intimates these results have been foreshadowed by Riddle. Riddle (Theory of Sex, *Science*, N. S. 46:19-24 [July 6] 1917; *J. Washington Acad. Sc.* 7:319, 2, 1917, for references to earlier papers) has revived the metabolic theory of sex through extensive experiments on pigeons in which he has affected the metabolism of the germs (egg yolks) through such measures as reproductive overwork and hybridity, thereby producing abnormal sex ratios, while the dietetic factor has been held constant. (An excess of females is produced by overwork, and an excess of males from wide crosses.) He has further shown that when these sex reversals take place they are quantitative in nature (as measured by sex behavior and gonad size), just as chemical and calorimetric analyses of the ova show quantitative changes in the storage metabolism, coinciding with the severity of the method used to produce the change in sex ratios.

Drummond (*Biochem. J.* 12:25, 1919) has observed in his feeding experiments that when rats are kept on a diet deficient in water soluble B (vitamin) that the males exhibited a lowered sex activity, and indeed were sexually impotent, the testes showing degeneration. More recently Osborne and Mendel (*J. Biol. Chem.* 38:223, 1919) have observed that when yeast is given to rats as the only source of protein and water soluble B, the males thus fed, although grown vigorously to adult size, were with very few exceptions sterile.

R. McCarrison (*Indian J. M. Res.* 6:275 [Jan.] 1919; 550 [April] 1919) has measured the changes in weight of the organs of pigeons on diets adequate except for water soluble B. His results are based on seventy-two control and 168 experimental pigeons, and the data show that the testes lose 93 per cent. of their weight, while the ovaries lose only 69