amounts of 1 and 10 μg./ml. The results of a representative experiment are summarized in Table 2.

It is evident that streptomycin prevents or inhibits the growth of the organism. Attention may be called to the fact that the size of the inoculum influences the degree of bacteriostasis. All 12 strains tested were inhibited by streptomycin in amounts ranging between 1 and 10 μg./ml. This finding corresponds closely to the results obtained on solid culture media: *H. influenzae* is inhibited by 5 μg./ml. of agar. Using yeast autolysate as the culture medium, the results may be obtained within 18 hours. Furthermore, it appears from the data presented above that such a test can be carried out even if only small numbers or organisms are available for the inoculation of the yeast autolysate medium.

TABLE 2

BACTERIOSTATIC EFFECTS OF STREPTOMYCIN UPON *H. influenzae* TYPE b IN 10 PER CENT YEAST AUTOLYSATE-BRAIN HEART INFUSION

Hours of observation	Streptomycin 10 μg./ml.	1 μg./ml.	0 μg./ml.
	Inoculum 0.2 ml. of undiluted culture		
18	−	++++	++++
24	−	++++	++++
48	−	++++	++++
	Inoculum 0.2 ml. of 1:100 diluted culture		
18	−	++++	++++
24	−	++++	++++
48	−	++++	++++
	Inoculum 0.2 ml. of 1:10,000 diluted culture		
18	−	+	++++
24	−	++	++++
48	−	++++	++++
	Inoculum 0.2 ml. of 1:1,000,000 diluted culture		
18	−	−	++++
24	−	−	++++
48	−	−	++++

− = no visible growth; + to ++++ = various degrees of visible growth.

The experiments presented revealed that yeast autolysate contains the essential growth factors required by *H. influenzae*. All strains tested thus far could be grown and maintained both in 10 per cent yeast autolysate-saline solution and in yeast autolysate-brain heart infusion. It is worthy of note that these culture media promote rapid multiplication of the organism and that the resulting growth causes grossly visible cloudiness. This observation seems to be of significance, since, as stated by Hoagland and his associates (*4*) in 1942, "turbidity produced by growth of *H. influenzae* is rarely great, even under optimum conditions." The question remains as to the nature of the X factor present in yeast autolysate. Studies are needed to determine whether this material contains a factor identical with, or similar to, the active component in hemin or whether some other substance such as catalase acts as X factor.

From a practical point of view the demonstration of the growth-promoting properties of yeast autolysate may find several applications. It seems quite possible that yeast autolysate infusion broth may be used to advantage for the growth of *H. influenzae*, particularly for the isolation of this organism from spinal fluid, blood, pus, etc. Preliminary studies indicate that growth may be obtained in the yeast autolysate medium more rapidly and with smaller inocula than on hemoglobin-proteose #3 agar. It is worthy of note that all type b strains grown in yeast autolysate produced the type-specific soluble substance. Studies are indicated, therefore, to determine quantitatively the amount of SSS formed in this culture medium. Such a study may yield information on the potential value of yeast autolysate cultures as immunizing antigens used in rabbits, a procedure which may be employed for the production of therapeutically effective antiserum. It has been shown, furthermore, that yeast autolysate-brain heart infusion can be used in tests designed to determine the streptomycin sensitivity of strains of *H. influenzae*.

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A Simple Method for Changing Units

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Students and research workers frequently experience difficulty in converting a quantity from one system of units to another. The following rule, which the writer has used in his classes for several years, eliminates the uncertainty in such computations by reducing them to a routine procedure.

Rule: *Write the quantity with its units in the first system. Give to each unit the coefficient 1. Substitute for each of these units its value in the second system. Reduce all numerical factors to a single coefficient, which is the numerical value of the quantity in the second system of units.*

Example: Given, the coefficient of thermal conductivity of glass:

$$k = 0.00250 \frac{\text{cal. cm.}}{\text{cm.}^2\ ^\circ\text{C. sec.}}.$$

Required, k in terms of B.t.u. per in. thickness per ft.^{2} per °F. per hr.

Applying the rule,

$$k = 0.00250 \frac{[1\ \text{cal.}]\,[1\ \text{cm.}]}{[1\ \text{cm.}^2]\,[1^\circ\text{C.}]\,[1\ \text{sec.}]}$$

$$= 0.00250 \frac{\left[\frac{1}{252}\ \text{B.t.u.}\right]\left[\frac{1}{2.54}\ \text{in.}\right]}{\left[\frac{1}{30.48}\ \text{ft.}\right]^2\left[\frac{9}{5}\ ^\circ\text{F.}\right]\left[\frac{1}{3{,}600}\ \text{hr.}\right]}$$

$$= 7.26 \frac{\text{B.t.u. in.}}{\text{ft.}^2\ ^\circ\text{F. hr.}}.$$