amount of sodium hydroxide, the incubation temperature being 37° C.

Results: (1) Bile from carrier rabbits of *B. typhosus* shows a lower hydrogen ion concentration than that from normal animals. In the first the general mean was 8.33 while the latter gave 7.41.

(2) *B. typhosus* is viable in vivo in rabbit bile even when the hydrogen ion concentration is depressed to P_H 9.4.

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The conditions under which the ratio between the urea content of the urine and of the blood remain constant.

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Simultaneous measurements of the hourly rate of urea excretion and of the blood urea concentration have been made under various conditions in man in order to determine whether the ratio between the urine and blood urea ever becomes approximately constant. After the administration of urea and large amounts of water the ratio shows at first a considerable variability, but after the maximum urea concentration in the blood has been attained and the concentration is slowly falling the ratio becomes constant for each individual within fairly narrow limits. Food, excitement, and the various other factors produce marked variations even under these conditions. We have not been able to confirm the conclusion of Austin, Stillman and Van Slyke, that the ratio of urea excretion varies with the square root of the volume of urine when the blood urea concentration is constant.

Under the special conditions outlined above, the rate varies directly with changes in the blood urea concentration from 118 to 20 mgs. per 100 cc.