

	Total N per Gram.	Percentage of Non-coagulable N.				Post Mor-tem Autolysis.
		Imme- diate.	6 Hrs.	24 Hrs.	3 Days.	
Normal.....	0.034 gr.	10.5	13.5	20	23	12.5%
Anaphylactic....	0.032 gr.	13.5	16	21.5	26	12.5%
Immune.....	0.029 gr.	14.5	16.5	22	30.5	16 %
Selected cases ..	.022-.026 gr.	16-18	18-20	25-30	40-45	26 %

The table shows a slight decrease in the average total N per gram of liver tissue in the anaphylactic animals, and a distinct decrease in the immune animals, the decrease being particularly marked in certain selected cases.

The table also shows a distinct increase in the average percentage of non-coagulable N in both anaphylactic and immune animals, confirming data recently published by Pick and Hashimoto.¹

Contrary to their findings, however, the anaphylactic livers showed no increase in the amount of post-mortem autolysis.

A distinct increase in post-mortem autolysis, however, was observed in the immune livers, the phenomenon being particularly marked in certain selected cases. The selected animals were for the most part guinea pigs in which a marked Arthus phenomenon had been produced.

100 (1164)

Hepatic bacteriolysins. (Preliminary report.)

By **W. H. MANWARING** and **HARRY C. COE.**

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If pneumococci are deposited by perfusion methods in the liver of a normal rabbit, in the presence of normal rabbit blood, and the infected organ is now incubated at 37° C., a slight multiplication of the deposited pneumococci takes place. After 5 or 6 hours, the tissues begin to be distinctly overgrown by the microorganisms.

¹ Pick and Hashimoto, *Arch. f. exper. Path. u. Pharm.*, 76, 1914, p. 89; *Zeit. f. Immunitätsf.*, 21, 1914, p. 237. Compare also Barger and Dale, *Biochem. Jour.*, 8, 1914, p. 670.

If pneumococci are similarly deposited in the liver of an actively immunized rabbit, in the presence of immune rabbit blood, a gradual decrease in the deposited pneumococci is observed. By the end of 5 or 6 hours' incubation, the tissues have usually become relatively sterile. The few remaining microorganisms usually multiply later to form distinct colonies. The microorganisms in the larger hepatic blood vessels, not in contact with the specific parenchyma cells, are not so destroyed.

This hepatic destruction of the pneumococci is not associated with leucocytic accumulations, nor is it necessarily accompanied by phagocytosis by the endothelial cells. There is apparently an hepatic mechanism in the immune animals for the extra-cellular destruction or digestion of the microorganisms. Pneumococci taken up by the endothelial cells are apparently protected to a certain extent from this destruction.

101 (1165)

A method for the determination of small amounts of sugar in urine.

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All human urines probably contain small amounts of sugar, as has quite recently been pointed out by both Cole¹ and Folin,² who have described tests for the detection of this small amount of sugar. It has been found possible to determine this reducing substance by precipitating the creatinine and uric acid, and probably other interfering substances with picric acid as suggested by Folin for his qualitative test, and then employing a technique similar to that introduced by Benedict and Lewis³ for the estimation of the sugar of the blood.⁴ It is presumed that the re-

¹ Cole, S. W., *Lancet*, 1913, II, 861.

² Folin, O., *J. Biol. Chem.*, 1915, XXII, 327.

³ Lewis, R. C., and Benedict, S. R., *J. Biol. Chem.*, 1915, XX, 61. See also Myers, V. C., and Bailey, C. V., *J. Biol. Chem.*, 1916, XXIV, 147.

⁴ In a recent conversation with Professor S. R. Benedict, he informed me that Mr. Oesterberg, of the Cornell Chemical Laboratory, had likewise utilized this method for urine.