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Observations on Serological Reactions with Albumose Preparations.

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In continuation of the experiments briefly reported in this journal,[1] the following observations were made.

Immune sera prepared with azoheteroalbumose or azoprotoalbumose did not distinguish between the azocompounds of heteroalbumose and protoalbumose of the same origin. There was a distinct specificity, however, with some immune sera in tests with azoalbumoses derived from different material such as horse serum, eggwhite or Witte peptone. The reactions just mentioned were inhibited by azoalbumoses, particularly those of the same origin as the material used for immunization.

Since in most of the experiments described, crude preparations were used, the question arises whether the precipitin reactions with the azoalbumose preparations are due to the albumoses themselves or to the presence of other substances, such as metaprotein or plastein. Evidence against the latter assumption is the fact that reactions were also obtained with azocompounds of purified hetero- and protoalbumose* from Witte peptone and that the reactions with azometaprotein and azoplastein were rather weaker than those given by the azoalbumoses.

By immunization with a crude preparation of heteroalbumose (not coupled with diazobenzene) made by peptic digestion of horse serum, immune sera were obtained which gave precipitin reactions of moderate strength with the substance used for immunization and furthermore with metaprotein, prepared by short peptic digestion of horse serum, and with unchanged horse serum. No reactions took place with heteroalbumoses made from egg white or Witte peptone. On the other hand, in conformity with previous work,[2] a common anti-horse serum precipitin reacted only with horse serum but not at all with the metaprotein and the heteroalbumose from horse serum. The reactions of the immune serum

[1] Landsteiner, K., and Van der Scheer, J., PROC. SOC. EXP. BIOL. AND MED., 1930, **27**, 812.

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[2] Michaelis, L., *Deutsche Med. Wochenschr.*, 1904, **34**, 1240.

TABLE I.

Three drops of immune serum were added to 0.2 *cc.* of the antigen. The dilutions refer to 5% stock solutions.

Immune serum prepared by injection of azoheteroalbumose from	Reading after	Azoheteroalbumoses prepared from											
		Horse serum dilution 1:				Egg white dilution 1:				Witte peptone (purified preparation) dilution 1:			
		100	500	2500	12500	100	500	2500	12500	100	500	2500	12500
Horse serum	hours 3	++±	++	±	0	0	ftr	0	0	±	+	ftr	0
Witte peptone	3	tr	±	ftr	0	0	tr	ftr	0	+	++	±	0

produced by the injection of the albumose could be inhibited by addition of a sufficient amount of a solution of the preparations of hetero-, proto-, or deuteroalbumose from horse serum, whereas albumoses of other origin, used in the same concentration, had no appreciable effect.