

that this unsaturated acid is an intermediate product in the metabolism of dextrin.

The product isolated has been shown to be an unsaturated acid which in every way corresponds to propiolic acid.

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### Reversibility of Specific Adsorption of Bacterial Agglutinin.

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The adsorption of agglutinin by specific organisms in the presence of low concentrations of electrolytes is a reversible reaction. This has been shown by the following experiment: Immune serum was diluted 1 to 50 with distilled water and added to distilled water suspensions of *B. coli* throughout a pH range of 2.5 to 10.5. Maximum adsorption as determined by titration of the supernatant after centrifuging occurs at pH 5.8 to 6.0, the adsorption becoming progressively less with either increasing acidity or alkalinity. At pH 3.0 and 10.5 adsorption was always less than 5% compared to 98 to 99% at pH 6.0. Washed organisms were used for adsorption and for the agglutinin determination.

When adsorption occurred at pH 6.0 and the sedimented bacteria were resuspended in distilled water at various pH values a reversal of adsorption occurred in both acid and alkali. The titer of these extracts was always distinctly lower than was the residual titer of the supernatant following adsorption at the same pH. If, however, the eluted extracts were mixed with the supernatant obtained after adsorption at pH 6.0, from which over 98% of the agglutinin activity had been adsorbed, the titer was now restored to that of the supernatant after simple adsorption at the corresponding pH. The addition of normal rabbit serum to the extracts to give the same content of normal serum constituents exerted the same effect.

The work demonstrates that reversal of adsorption is possible and indicates the dependence of agglutination upon the presence of normal serum constituents. This last factor appears to have been neglected by previous workers who have studied the reversibility of agglutinin adsorption.