

Urease of the soy bean hydrolyzed urea at temperatures as low as 0° C.

When *rennin* acts on milk it first transforms the casein into paracasein and then precipitates the latter compound as a coagulum. The first stage of the reaction occurs at 0° C.; the second stage likewise takes place at that temperature, but the precipitate separates in a finely-divided condition without the formation of a distinct curd.

SUMMARY.

The power to survive prolonged exposure to low temperatures is possessed by various enzymes, including those producing hydrolysis of fats, of carbohydrates, and of proteins, those concerned in biochemical oxidations and reductions, the clotting enzymes and that of alcoholic fermentation. The enzymes retained their catalytic power after exposure, either *in situ* or in solution *in vitro*, to temperatures varying from a few degrees above 0° C. to the temperature of liquid air (-180° to -191° C.). The shortest periods of holding, invariably less than one day and usually less than one hour, were at the temperature of liquid air. The longest period of holding was eighty-nine months at a temperature of -9.4° to -12.2° C.

The activity of certain of these enzymes, including *rennin*, *zymase*, and those hydrolyzing fats, carbohydrates, and proteins, has been studied at low temperatures, varying from that of an ice-box to one of -9° to -12° C. While the enzymes produced autolytic digestion or acted on artificial media at these temperatures, the velocity of the reaction was always lessened to a considerable degree.

Electric Tanning. O. J. WILLIAMS. (*Collegium*, dxv, 76-78.)—Electric tanning not having been successful, the author investigates in this preliminary note whether the electric current destroys the tannic acid as observed by Nierenstein. Electrolyzing pure tannic acid (five per cent. aqueous solution) 15° C. between carbon plates with continuous currents of 0.004 amp./cm.² he finds that the optical activity (Nierenstein's method) of the solution is rapidly diminished. In other experiments in which platinum electrodes and currents of up to 0.075 amp./cm.² continuous or 93 periods per second were used, the alternating currents did not destroy the tannin whilst favoring the electric endosmose, in accordance with F. Rolver. The electromotive force applied is not stated.