SUMMARY

Human liver glucoamylase was purified using four conventional steps viz. fractional precipitation with ammonium sulphate, ion exchange chromatography on DEAE - cellulose, molecular sieving on Bio gel P-100 and the pattern was confirmed by polyacrylamide gel electrophoresis technique, even though the molecular size of the isoenzymes was very close to each other.

Human liver glucoamylase and Rhizopus glucoamylase were immobilized on CNBr activated agaropectin.

Human liver glucoamylase was characterized and showed pH optima of 4.4 and 5.6, temperature optima 50°C and 45°C, Km charasteristics towards starch 26.6 mg/ml and 15.4 mg/ml, towards maltose 11.4 mg/ml and 16.6 mg/ml for free and immobilized form. Rhizopus glucoamylase exhibited pH optima 4.0 and 6.0, temperature optima 45°C and 50°C, Km characteristics towards starch 22 mg/ml and 16.6 mg/ml for free and immobilized form respectively.

The drug penicillin competitively inhibited the glucoamylase activity while streptomycin accelerated the activity of the reaction.

The pateints suffering from infections are given heavy doses of antibiotics. Their action could alter the amylolytic activity, this may change the glucose supply to the brain and other tissues via blood glucose. In normal individuals too, the effect of antibiotics which are attributed to as side effects of these antibiotics, may in reality be due to their effect on any of the vital enzymes essential for metabolism.