

Isoelectric precipitation of sunflower protein in a tubular precipitator

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Abstract

Isoelectric precipitation of sunflower protein was carried out in a 10-m long, 6-mm internal diameter glass tubular precipitator. The effects of feed flow rate, protein concentration in the feed stream, and volumetric feed ratio of precipitant (HCl aqueous solution) to protein solution on solid protein recovery and particle size distribution were studied. The dispersion range of the tubular precipitator was modelled to predict the experimental results. Calculated initial growth rates of protein particles were found to: increase with increases in feed flow rate and protein concentration in the feed stream, and decrease with increases in volumetric feed ratio.