

Experiment 12: Preparation of chitosan hydrochloride

Duration: 15 minutes.

Equipment: Beaker (250 ml), magnetic stirrer with heating plate, stirring rod, filter, filter rack, filter paper, desiccator.

Reagents and materials: Chitosan, hydrochloric acid, $c(\text{HCl}) = 2 \text{ mol/l}$, silica gel blue.

Procedure: 2 g of chitosan are mixed with 100 ml of hydrochloric acid and the mixture is heated to boiling. After cooling the precipitate is filtered off and dried in the desiccator over silica gel blue.

Observation: The chitosan dissolves completely at boiling heat. On cooling the solution a fine, white and crystalline precipitate is formed.

Faults and precautions: Chitosan hydrochloride only dissolves completely at boiling. Already at temperatures just below the boiling point the chitosan is not dissolved or precipitates immediately as chitosan hydrochloride.

Waste disposal: The filtrate is neutralized and poured down the sink.

