



DEAE Sephadex A-25

Catalog Number: HP013, HP014, HP015, HP016

Table 1. Package and Storage

| Cat No. | Material | Unit Size | Storage | Stability |
|---------|--------------------|-----------|---------|--|
| HP013 | DEAE Sephadex A-25 | 25 g | 2-30°C | The product is stable for 3 years when stored as directed. |
| HP014 | DEAE Sephadex A-25 | 50 g | | |
| HP015 | DEAE Sephadex A-25 | 100 g | | |
| HP016 | DEAE Sephadex A-25 | 500 g | | |

Product Description

DEAE Sephadex A-25 is a weak anion exchanger based on the well documented and well proven Sephadex base matrix. The ion exchange group is diethylaminoethyl which remains charged and maintains consistently high capacity below pH 9.

DEAE Sephadex ion exchanger is produced by introducing diethylaminoethyl functional group onto the cross-linked dextran matrix. This group is attached to glucose units in the matrix by stable ether linkages.

The product is repacked from cytiva DEAE Sephadex™ A-25 (catalog number 17017003).

Characteristics of DEAE Sephadex A-25 are summarized in Table 1.

Table 1. DEAE Sephadex A-25 characteristics

| | |
|-------------------------|---------------------------------|
| Matrix | Cross-linked dextran, spherical |
| Particle size | 40 to 100 µm |
| Ion exchange type | Weak anion |
| Ionic capacity | 3.0-4.0 mmol/g dry resin |
| pH ligand fully charged | Below 9 |
| pH stability | 2 to 13 |
| Chemical stability | All commonly used buffers |
| Autoclavability | 30 min at 121°C in 0.1 M NaCl |
| Storage | 20% ethanol, 2°C to 30°C |

Operation

Preparing the resin

DEAE Sephadex A-25 resin is supplied as dry powder. Weigh out the required amount of dry powder and suspend it in the binding buffer.

DEAE Sephadex A-25 resin must be swollen at the pH to be used in the experiment. Complete swelling takes one day at room temperature.

The binding buffer must contain the same ion as that originally present in the ion exchanger.

After the initial swelling, remove the supernatant and wash the DEAE Sephadex A-25 resin extensively on a Büchner funnel with binding buffer.

Prepare a slurry with binding buffer in a ratio of 75% settled resin to 25% buffer.

Packing column

Pour the slurry into the column in one continuous motion. Pouring the slurry down a glass rod held against the wall of the column will minimize the introduction of air bubbles.

Immediately fill the remainder of the column with buffer, mount the column top piece onto the column and connect the column to a pump.

Open the bottom outlet of the column and set the pump to run at the desired flow rate.

Equilibration

Before starting a run, make sure that the resin has reached equilibrium. This is done by pumping start buffer through the column until the conductivity and/or pH of the effluent is the same as that of the incoming start buffer.

The column is now equilibrated and ready for use.

Binding

The most common procedure is to let the molecules of interest bind to the ion exchanger and allow the others to pass through.

For adsorption, it is critical to choose a buffer with an appropriate pH. The ionic strength of the buffer must be kept low, so as not to interfere with sample binding. The recommended operating pH is within 0.5 pH units of the buffer's pKa and at least one pH unit above the isoelectric point (pI) of the molecule of interest.

Elution

Elution is achieved using either an increasing salt gradient (continuous or step wise) or a decreasing pH gradient (continuous or step wise).

Storage

Store swollen resin in 20% ethanol at 2°C to 30°C.