

## 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.