Instructions for TSKgel Butyl-NPR

Support

Support prepared by introducing butyl groups into non-porous hydrophillic resin

Particle size : 2.5 μm

Column

Size : 35 x 4.6 mm I.D.

Soluvent : distilled water

pH range for separation

2 - 12

Salt concentration range.

less than 4 M

Flow rate range

less than 1.2 ml/min

Flow rates of 0.5 - 1.0 ml/min are recommended in general.

Column washing

0.1 - 0.2 N NaOH are very effective to wash or regenerate columns. Usually, columns can be regenerated by injecting 0.1 - 0.2 N NaOH of 0.5 - 1.0 ml several times using sample injector. When this procedure did not help, wash the columns by injecting 20 - 40 % acetic acid of 0.5 - 1.0 ml several times.

It is recommended to wash columns periodically (e.g., after use every day) with 0.1 - 0.2 N NaOH.

Test for column performance (resolution for a protein mixture)

Following conditions are recommended to test column performance.

Sample : a mixture of lysozyme (2.0 μg) and Ovalubumin (4.0 μg) in 10 μl.

Elution : 10 min linear gradient of ammonium sulfate from 1.8 M to 0 in 0.1 M sodium phosphate buffer (pH 7.0)

Flow rate : 1.0 ml/min

Detection : UV (280 nm)

Butyl-NPR columns have resolution more than 3.0 at the time of delivery.

VERY IMPORTANT !!!

Although it is not so difficult to regenerate Octadecyl-NPR columns when their performance goes down due to accumulation of adsorbed materials, it is difficult to regenerate them when small particles are trapped between support particles. If small particles exist in sample solutions or eluents, they are easily trapped between support particles because the space between the support particles is small. Therefore, it is highly recommended to filter eluent with membrane filter of 0.2 - 0.5 micron in pore size before use. It is also effective for a long service life of columns to use a line-filter containing membrane of 0.2 - 0.5 micron in pore size between a pump and sample injector.

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