

Shodex™



HPLC Columns

MANUAL

USPpak MN-431

SHOWA
DENKO
EUROPE

Columns manufactured by Showa Denko K.K Japan
Made in Japan

Shodex HPLC Columns
Europe, Middle East, Africa, Russia

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Operation Manual

Shodex™ USPpak™ MN-431

(Please read this manual carefully before using the column to keep its good performance and life.)

1. Introduction

Shodex USPpak MN-431 was designed for the mannitol analysis of USP method (United States Pharmacopeia L23).

Mannitol and Sorbitol can be analyzed easily under aqueous eluent condition.

2. Specification

Column size:	I.D.: 4.0mm; Length: 250mm.
Connector:	Internally-threaded type, No. 10-32 UNF.
Column material:	316 stainless steel.
Packing material:	Styrene-divinylbenzene copolymer counter ion is Sulfo (Ca ²⁺).
In-column eluent:	Pure water.
Theoretical plate number:	>4,000/column 0.5% mannitol 10μL.
Resolution factor:	>2.5 (Mannitol/Sorbitol).

3. Analysis condition

Eluent:	Pure water.
Flow rate column:	Temp. 51 ~ 85°C < 0.6 ml/min. Temp. 31 ~ 50°C < 0.5 ml/min. Temp. ~ 30°C < 0.3 ml/min.
Pressure:	< 3.5 MPa per column.
Temperature:	30 ~ 85°C.

4. Caution

1) Beginning of analysis:

Set the flow rate with less than 0.3 mL/min, then start the pump. After the column temperature is raised, change the flow rate to analysis condition.

2) End of analysis:

Set the flow rate with less than 0.3 mL/min, after the column is cooled down to room temperature the column, stop the pump.

3) Sample:

*Remove pollution such as proteins and metals before the injection, in most cases these are cause of column trouble.

*Alkaline or acidic samples must be neutralized before injection.