



Column

Shodex ODP2 HP series

Sample

toluene, naphthalene, BSA, barbital

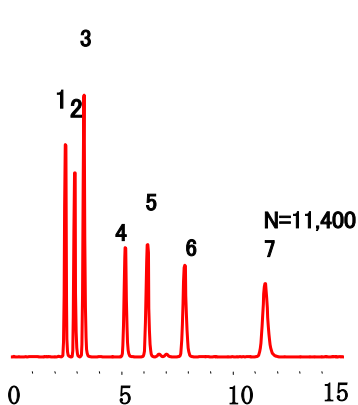
**New
Product**

new reversed phase column Shodex ODP2 HP

1. Higher TPN than ODP-50
2. ODP2 HP can retain high polarity substances.
3. ODP2 HP can separate drugs from protein.

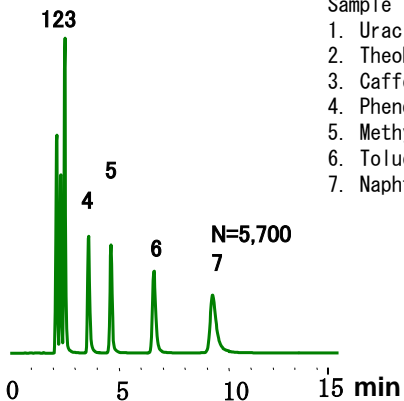
ODP2 HP-4D

(4.6mmID x 150mm)
H₂O/CH₃CN=55/45
0.6mL/min, 40°C



Polymer column (current)

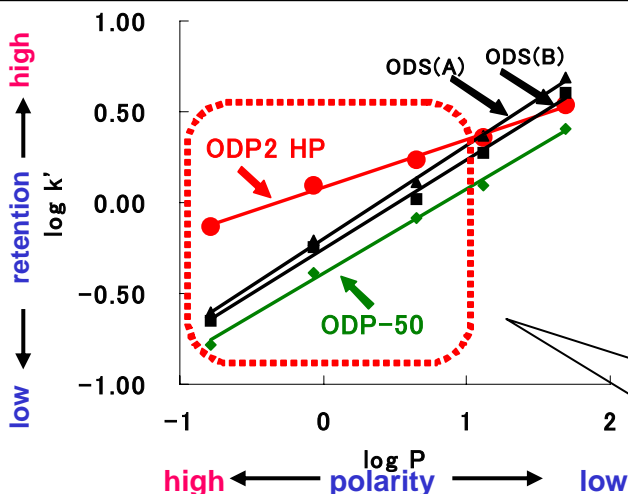
ODP-50 4D (4.6mmID x 150mm)
H₂O/CH₃CN=35/65
0.6mL/min, 40°C



Sample : 5 μL

1. Uracil	30mg/L
2. Theobromine	75mg/L
3. Caffeine	130mg/L
4. Phenol	300mg/L
5. Methyl benzoate	350mg/L
6. Toluene	1000mg/L
7. Naphthalene	150mg/L

Fig.1 Comparison between ODP2 HP and current ODP-50



Eluent : 10mM CH₃COONH₄ aq. CH₃CN=75/25
Flow rate : 1.0mL/min
Column temp. : 40°C

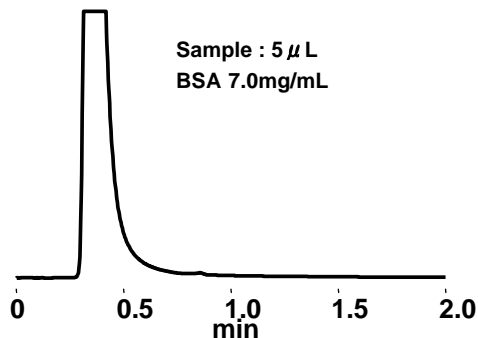
Fig.2 Relationship between retention and polarity

ODP2 HP-4D was compared with current polymer reversed phase column ODP-50. ODP2 HP shows

- * Twice better TPN
- * Higher retention factor of higher polarity substances and good separation.

Fig.2 shows relationship between hydrophobic parameter and retention of several columns. ODP2 HP is the column with strong retention of high polarity substances.

* Small Log P value means high polarity, and high Log k' value means high retention.



Column : Shodex ODP2 HP-2B(2.0mmID x 50mm)
 Eluent : 1mM CH₃COONH₄ aq./CH₃CN=90/10
 Flow rate : 0.2mL/min
 Detector : UV(220nm)
 Column temp. : 30 deg-C

Fig.3 Elution pattern of BSA

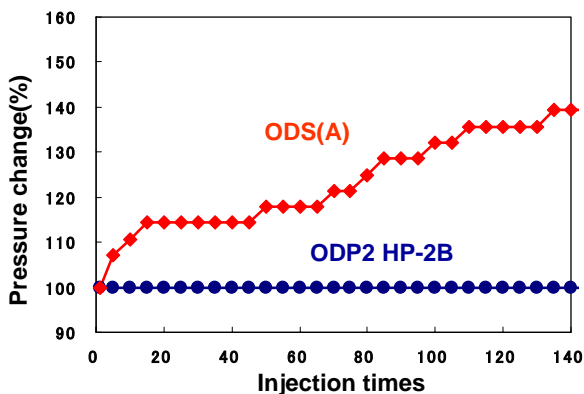
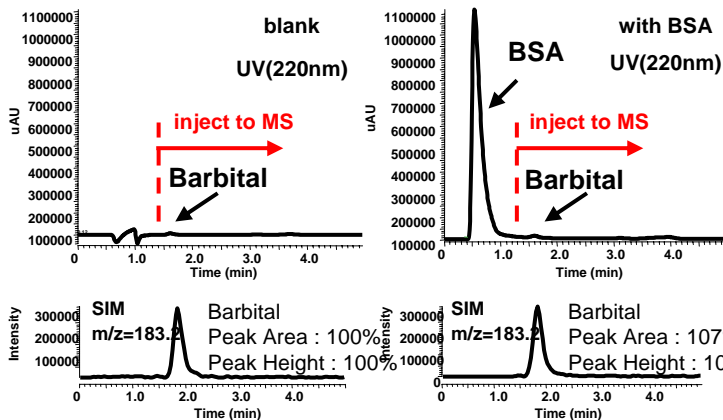


Fig.4 Injection times of BSA and pressure

* Protein are not adsorbed in ODP2 HP and its elution peak is sharp, so ODP2 HP is suitable for analysis of drugs contained in biological fluid.
 * On the other hand ODS(A) adsorbed BSA and its pressure was getting high and performance was getting worse as analysis time.



There is no ion suppression by protein, because ODP2 HP can separate drugs from proteins. So ODP2 HP is a suitable column for LC/MS.

Column : ODP2 HP-2B (2.0mmID x 50mm)
 Eluent : 10mM CH₃COONH₄ aq./CH₃CN=70/30
 Flow rate : 0.2mL/min
 Detector : UV(220nm), ESI-MS (SIM)
 Column temp. : 30 deg0-C

Fig.5 Barbitol in BSA (LC/MS)

Products		particle (um)	TPN (per column)	ID x L (mm)
F7622001	ODP2 HP-4B	5	≥ 3,500	4.6 x 50
F7622002	ODP2 HP-4D	5	≥ 11,000	4.6 x 150
F7622003	ODP2 HP-4E	5	≥ 17,000	4.6 x 250
F6714010	ODP2 HPG-4A	5	guard column	4.6 x 10
F7622004	ODP2 HP-2B	5	≥3,000	2.0 x 50
F7622005	ODP2 HP-2D	5	≥ 7,000	2.0 x 150
F6714011	ODP2 HPG-2A	5	guard column	2.0 x 10

For more detail information, please contact follows.

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