



Aqueous SEC Column (GFC)

PROTEIN KW-800 series 管柱

- ① 以 Silica-based 為填充材質
- ② 適用於分析蛋白質與酵素
- ③ USP L20, L33, and L59

(Standard columns)

| Product name | *Plate number (TPN/column) | Particle size (μm) | Size (mm) I.D. x Length | Shipping solvent |
|-----------------------------------|-------------------------------|------------------------------------|----------------------------|---------------------|
| PROTEIN KW-802.5 | $\geq 21,000$ | 5 | 8.0 x 300 | H ₂ O |
| PROTEIN KW-803 | $\geq 21,000$ | 5 | 8.0 x 300 | H ₂ O |
| PROTEIN KW-804 | $\geq 16,000$ | 7 | 8.0 x 300 | H ₂ O |
| PROTEIN KW-G 6B (PROTEIN KW-G) | (guard column) | 7 | 6.0 x 50 | H ₂ O |

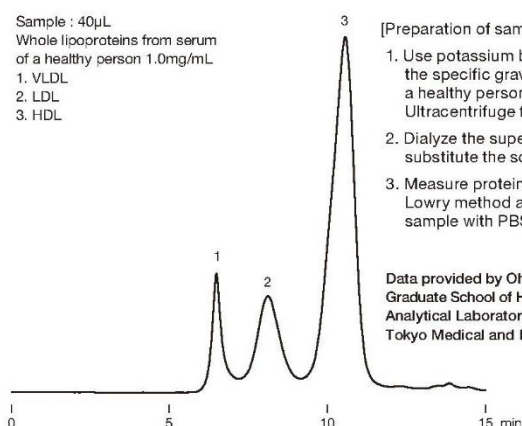
Lipoproteins in serum

Sample : 40 μL
Whole lipoproteins from serum
of a healthy person 1.0mg/mL
1. VLDL
2. LDL
3. HDL

[Preparation of sample]

1. Use potassium bromide to adjust the specific gravity of serum from a healthy person to 1.210g/mL. Ultracentrifuge for 24 hours.
2. Dialyze the supernatant and then substitute the solvent with PBS*.
3. Measure protein concentration by Lowry method and dilute the sample with PBS* to 1.0mg/mL.

Data provided by Ohkawa Ryunosuke,
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Analytical Laboratory Chemistry,
Tokyo Medical and Dental University



Column : Shodex PROTEIN KW-G + KW-804

Eluent : 10-fold diluted x 10 PBS* with H₂O

Flow rate : 1.0mL/min

Detector : UV (280nm)

Column temp. : 30°C

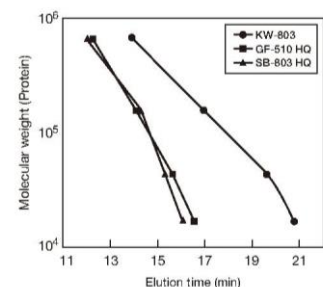
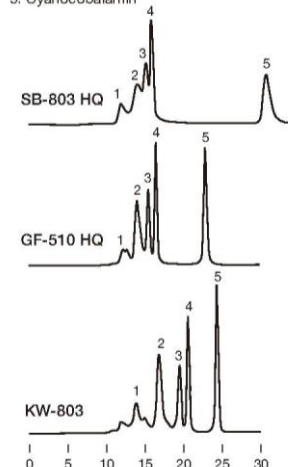
x10 PBS* : 80g NaCl + 29g Na₂HPO₄ · 12H₂O + 2g KCl + 2g KH₂PO₄ in 1000mL of H₂O

Comparing three GFC columns for the separation of Common proteins

Sample :

1. Thyroglobulin (bovine)
2. γ -Globulin (bovine)
3. Ovalbumin (chicken)
4. Myoglobin (horse)
5. Cyanocobalamin

Separation performances of three aqueous SEC columns (SB-803 HQ, GF-510 HQ, and KW-803) were compared. KW-803, silica-based column, showed the best separation performance for the analysis of protein standards.



Column : Shodex OHpak SB-803 HQ
Shodex Asahipak GF-510 HQ
Shodex PROTEIN KW-803
Eluent : 0.2M Phosphate buffer (pH6.9)
Flow rate : 0.5mL/min
Detector : UV (280nm)
Column temp. : 30°C



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[Target molecular weight range and exclusion limit]

Please use the following tables for reference purposes only when selecting columns.

Measured with protein (eluent: phosphate buffer)

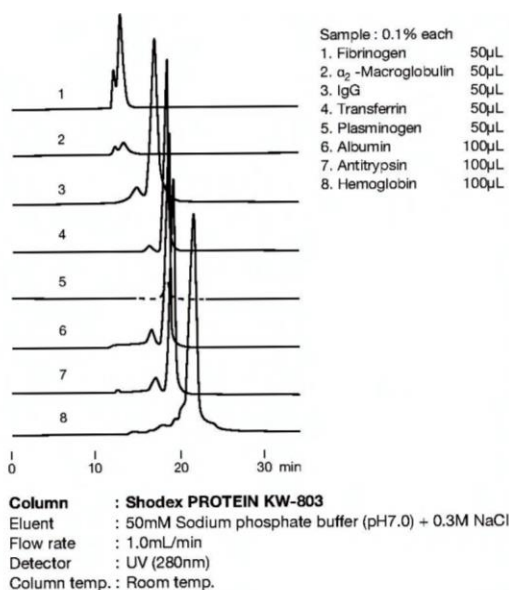
| Product name | Target molecular weight range | Exclusion limit |
|------------------|-------------------------------|-----------------|
| PROTEIN KW-802.5 | 5,000 - 100,000 | 150,000 |
| PROTEIN KW-803 | 10,000 - 700,000 | ** (1,000,000) |
| PROTEIN KW-804 | 30,000 - ** (4,000,000) | ** (4,000,000) |

** () Estimated value

Measured with pullulan (eluent: ultrapure water)

| Product name | Target molecular weight range | Exclusion limit |
|------------------|-------------------------------|-----------------|
| PROTEIN KW-802.5 | 2,000 - 50,000 | 60,000 |
| PROTEIN KW-803 | 5,000 - 100,000 | 170,000 |
| PROTEIN KW-804 | 20,000 - 300,000 | 500,000 |

Proteins in human blood serum



Analysis of impurities (high molecular weight proteins) in insulin glargine following USP method

