

Calibration Standards for SEC

When measuring molecular weight distribution of polymers using size exclusion chromatography (SEC), it is necessary to obtain a calibration curve using standard samples with known molecular weights.

Shodex STANDARDS are stable polymer standard samples with little branching and an extremely narrow molecular weight distribution. Shodex STANDARDS are proudly recommended for the preparation of calibration curves.

Polystyrene (PS)

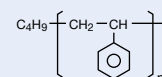
Features

- SL-105**
 - For organic solvent SEC (GPC)
- SM-105**
 - Less branched polystyrene with anionic polymerization
- SH-75**
 - Easily soluble in tetrahydrofuran (THF), chloroform, toluene, and o-dichlorobenzene (ODCB)

Standard kit

Product Code	Product Name	Contents	Molecular Weight (Mp) Range
F8601105	STANDARD SL-105	0.5 g x 10 kinds	580 - 18,000
F8602105	STANDARD SM-105	0.5 g x 10 kinds	1,180 - 3,210,000
F8603075	STANDARD SH-75	0.5 g x 7 kinds	662,000 - 6,550,000

Structural formula of S series



◆ SL-105

Std.No.	Mp	Mw/Mn
S-18	18,000	1.02
S-13	13,400	1.02
S-9.8	9,320	1.02
S-6.7	6,660	1.03
S-4.9	4,910	1.03
S-3.3	3,320	1.04
S-2.0	1,990	1.05
S-1.2	1,180	1.07
S-0.9	940	1.07
S-0.6	580	1.13

◆ SM-105

Std.No.	Mp	Mw/Mn
S-3210	3,210,000	1.06
S-1570	1,570,000	1.04
S-607	607,000	1.03
S-298	298,000	1.04
S-129	129,000	1.03
S-49	49,400	1.04
S-17	17,100	1.03
S-6.3	6,250	1.03
S-3.3	3,320	1.04
S-1.2	1,180	1.06

◆ SH-75

Std.No.	Mp	Mw/Mn
S-6550	6,550,000	1.07
S-3550	3,550,000	1.05
S-3020	3,020,000	1.03
S-2330	2,330,000	1.03
S-1860	1,860,000	1.04
S-885	885,000	1.05
S-662	662,000	1.04

(Note)
Molecular weights (Mp, Mw/Mn) of each standard kit may vary depending on production lot.

Polymethylmethacrylate (PMMA)

Features

- M-75**
 - For organic solvent SEC (GPC)
 - Narrow molecular weight distribution range
 - Easily soluble in hexafluoroisopropanol (HFIP) and N,N-dimethylformamide (DMF)

Standard kit

Product Code	Product Name	Contents	Molecular Weight (Mp) Range
F8604075	STANDARD M-75	0.5 g x 7 kinds	3,310 - 1,230,000

(Note)
Molecular weights (Mp, Mw/Mn) of a standard kit may vary depending on production lot.

◆ M-75

Std.No.	Mp	Mw/Mn
M-1230	1,230,000	1.09
M-539	539,000	1.02
M-210	210,000	1.02
M-60	60,300	1.02
M-18	17,900	1.03
M-6.9	6,940	1.10
M-3.3	3,310	1.09

Pullulan

Features

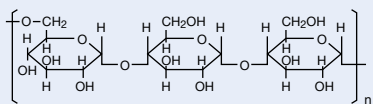
- P-82**
 - For aqueous SEC (GFC)
 - Unbranched pullulan standard
 - High solubility in water eliminates the possibility of recrystallization

Standard kit

Product Code	Product Name	Contents	Molecular Weight (Mp) Range
F8400000	STANDARD P-82	0.2 g x 8 kinds	6,400 - 692,000

(Note)
Molecular weights (Mp, Mw/Mn) of a standard kit may vary depending on production lot.

Structural formula of P series



◆ P-82

Std.No.	Mp	Mw/Mn
P-800	692,000	1.30
P-400	354,000	1.22
P-200	218,000	1.16
P-100	110,000	1.12
P-50	49,400	1.08
P-20	21,900	1.10
P-10	9,800	1.07
P-5	6,400	1.08