

# Calibration Standards for SEC

## Polystyrene (PS)

<https://www.shodex.de/calibration-standards-for-sec>

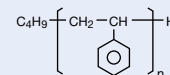
### Features

- 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	<b>STANDARD SL-105</b>	<b>0.5 g x 10 kinds</b>	580 - 18,000
F8602105	<b>STANDARD SM-105</b>	<b>0.5 g x 10 kinds</b>	1,180 - 3,210,000
F8603075	<b>STANDARD SH-75</b>	<b>0.5 g x 7 kinds</b>	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 dimethylformamide (DMF)

### Standard kit

Product Code	Product Name	Contents	Molecular Weight (Mp) Range
F8604075	<b>STANDARD M-75</b>	<b>0.5 g x 7 kinds</b>	3,310 - 1,020,000

### ◆ M-75

Std.No.	Mp	Mw/Mn
M-1020	1,020,000	1.04
M-539	539,000	1.02
M-210	210,000	1.02
M-60	60,300	1.02
M-20	20,500	1.04
M-6.9	6,940	1.10
M-3.3	3,310	1.09

(Note)

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

## Pullulan

### Features

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

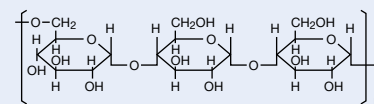
### Standard kit

Product Code	Product Name	Contents	Molecular Weight (Mp) Range
F8400000	<b>STANDARD P-82</b>	<b>0.2 g x 8 kinds</b>	6,300 - 739,000

(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	739,000	1.24
P-400	348,000	1.33
P-200	216,000	1.22
P-100	107,000	1.12
P-50	49,400	1.08
P-20	22,000	1.08
P-10	9,800	1.07
P-5	6,300	1.09