

# Calibration Standards for SEC

## [Polystyrene (PS)]

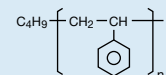
### Features

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

### Kit type

Product Code	Product Name	Contents	MW Range
F8601105	<b>STANDARD SL-105</b>	0.5g x 10 kinds	580 – 19,500
F8602105	<b>STANDARD SM-105</b>	0.5g x 10 kinds	1,220 – 2,700,000
F8603075	<b>STANDARD SH-75</b>	0.5g x 7 kinds	591,000 – 6,870,000

### Structural formula of S series



### ■ SL-105

Std. No.	Mp	Mw/Mn
S-19	19,500	1.03
S-13	13,300	1.02
S-9.9	9,970	1.03
S-6.9	6,940	1.03
S-4.8	4,830	1.04
S-2.7	2,780	1.04
S-1.8	1,860	1.04
S-1.3	1,390	1.05
S-0.8	860	1.07
S-0.5	580	1.11

### ■ SM-105

Std. No.	Mp	Mw/Mn
S-2700	2,700,000	1.07
S-1390	1,390,000	1.06
S-661	661,000	1.04
S-326	326,000	1.02
S-124	124,000	1.03
S-47	47,200	1.03
S-18	18,300	1.03
S-6.9	6,940	1.03
S-3.0	2,980	1.04
S-1.2	1,220	1.06

### ■ SH-75

Std. No.	Mp	Mw/Mn
S-6870	6,870,000	1.09
S-5190	5,190,000	1.03
S-3990	3,990,000	1.05
S-2350	2,350,000	1.04
S-1820	1,820,000	1.04
S-991	991,000	1.05
S-591	591,000	1.02

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

## [Polymethylmethacrylate (PMMA)]

### Features

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

### Kit type

Product Code	Product Name	Contents	MW Range
F8604075	<b>STANDARD M-75</b>	0.5g x 7 kinds	2,880 – 1,050,000

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

Std. No.	Mp	Mw/Mn
M-1050	1,050,000	1.07
M-569	569,000	1.04
M-211	211,000	1.02
M-69	68,800	1.02
M-18	17,800	1.04
M-6.8	6,850	1.10
M-2.9	2,880	1.08

## [Pullulan]

### Features

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

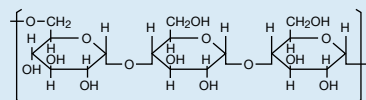
### Kit type

Product Code	Product Name	Contents	MW Range
F8400000	<b>STANDARD P-82</b>	0.2g x 8 kinds	6,100 – 642,000

### Single type

Product Code	Product Name	Contents	Mp	Mw/Mn
F8400800	<b>STD P-800</b>	0.5g	642,000	1.23
F8400400	<b>STD P-400</b>	0.5g	337,000	1.12
F8400200	<b>STD P-200</b>	0.5g	194,000	1.09
F8400100	<b>STD P-100</b>	0.5g	107,000	1.13
F8400050	<b>STD P-50</b>	0.5g	47,100	1.07
F8400020	<b>STD P-20</b>	0.5g	21,100	1.09
F8400010	<b>STD P-10</b>	0.5g	9,600	1.09
F8400005	<b>STD P-5</b>	0.5g	6,100	1.05

### Structural formula of P series



Std. No.	Mp	Mw/Mn
STD P-800	642,000	1.23
STD P-400	337,000	1.12
STD P-200	194,000	1.09
STD P-100	107,000	1.13
STD P-50	47,100	1.07
STD P-20	21,100	1.09
STD P-10	9,600	1.09
STD P-5	6,100	1.05

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