

# ACHIEVE MORE WITH THE POLYMER ANALYSIS PEOPLE

The Measure of Confidence

Providing you access to a full-circle partner you can trust, Agilent delivers:

- Over 35 years of industry-leading solutions for characterizing and separating polymers by GPC/SEC
- A comprehensive portfolio of industry-leading columns and calibrants
- A full lineup of instruments and software, for accurate polymer analysis
- Innovative solutions for Fast GPC
- 24/7 worldwide technical support
- Unsurpassed global logistics for on-time delivery of critical supplies



To get the most from your analysis, use Agilent calibration standards. To learn more about calibrating your GPC columns, refer to the primer **Calibrating GPC Columns - A Guide to Best Practice** (5991-2720EN).

Get your copy, and the other valuable information listed below, at: [www.agilent.com/chem/GPCresources](http://www.agilent.com/chem/GPCresources)

- Application compendia for Energy and Chemicals, Pharma, and Food
- Selection guides
- Primers
- Quick reference guides for instrument supplies
- And more



**Agilent Technologies**

## Choosing a column for GPC/SEC

Columns shown in **Bold** are the best initial choice

Molecular weight	Recommendation	Comments
High (up to several millions)	Aqueous solvents <b>PL aquagel-OH MIXED-H 8 µm</b> or combination of PL aquagel-OH 40 and 60 15 µm	The 15 µm column combination is best only where sample viscosity is very high, otherwise 8 µm columns give greater resolution
	Organic solvents <b>PLgel 10 µm MIXED-B</b> or PLgel 20 µm MIXED-A	The PLgel MIXED-A column resolves higher than the PLgel MIXED-B but at lower efficiency due to larger particle size
Intermediate (up to hundreds of thousands)	Aqueous solvents <b>PL aquagel-OH MIXED-M 8 µm</b>	A wide-ranging column that covers most water-soluble polymers
	Organic solvents <b>PLgel 5 µm MIXED-C</b> or PLgel 5 µm MIXED-D, PolyPore or ResiPore	The PLgel columns are the most widely applicable for the majority of applications; PolyPore and ResiPore columns are alternatives
	Mixed solvents <b>PolarGel-M</b>	Covers most applications
Low (up to tens of thousands)	Aqueous solvents Combination of <b>PL aquagel-OH 40 and PL aquagel-OH 30 8 µm</b>	These two columns in a combined set cover the low end of the molecular weight range
	Organic solvents <b>PLgel 3 µm MIXED-E</b> or MesoPore	The PLgel column provides high resolution and is designed for low molecular weight applications; the MesoPore column is an alternative
	Mixed solvents <b>PolarGel-L</b>	For low molecular weight applications
Very low (a few thousand)	Aqueous solvents <b>PL aquagel-OH 20 5 µm</b>	This high-performance column gives high resolution at low molecular weight
	Organic solvents <b>OligoPore</b> or PLgel 3 µm 100Å	The OligoPore column offers the best possible oligomer separation. PLgel also works well.
Unknown	Aqueous solvents <b>PL aquagel-OH MIXED-M 8 µm</b>	Covers the molecular weight ranges of most polymer samples
	Organic solvents <b>PLgel 5 µm MIXED-C</b> or PolyPore	This PLgel column is the most widely applicable for the majority of applications
	Mixed solvents <b>PolarGel-M</b>	Covers the majority of applications

## Selecting calibration standards

Columns shown in **Bold** are the best initial choice

Eluent	Recommendation	Comments
Water or water buffer with up to 50% methanol	<b>Polyethylene glycol (PEG)/oxide (PEO)</b> (PL2080-0201)	These standards perform in all water-based systems in convenient Agilent EasiVial format
Typical organic solvent such as THF, chloroform, toluene	<b>Polystyrene (PS)</b> (High MW = PL2010-0201; medium MW = PL2010-0301; low MW = PL2010-0401)	Polystyrene is the most commonly used standard in convenient EasiVial format
Organic/water mixtures or polar organics such as DMF, NMP	<b>Polyethylene glycol/oxide</b> (PL2080-0201)	Polar standards perform well

## GPC/SEC Start-up Kits

If you are new to GPC or looking to upgrade your current GPC set up, then GPC/SEC Start-up Kits are ideal. There are two kits available, one for organic and one for aqueous GPC. Each kit contains a 20-page GPC/SEC primer plus a carefully chosen column and set of standards with the widest MW range, suitable for most ambient GPC applications - perfect to get you up-and-running quickly and easily.

Description	Part number
Organic GPC/SEC Start-up Kit	PL2010-0700
Aqueous GPC/SEC Start-up Kit	PL2080-0700



## Looking for vials?

Quickly and easily find the right vials for Agilent and other major brands of HPLC and GC instruments at

[www.agilent.com/chem/SelectVials](http://www.agilent.com/chem/SelectVials)

## Agilent Ordering Information

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