

## Errata Notice

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# # 10298 - Column Application Note Characterization of Poly(butadiene-1.4)

Poly(butadiene) is a synthetic rubber formed from the polymerization of the monomer 1,3-butadiene. It has a high resistance to wear and is used especially in the manufacture of tires and golf balls. It has also been used to coat or encapsulate electronic assemblies, offering extremely high electrical resistivity. 1,3-butadiene is normally copolymerized with other monomers such as styrene and acrylonitrile to form products with various properties. The most common form is styrene-butadiene copolymer, which is a commodity material for car tires. It is also used in block copolymers and tough thermoplastics such as ABS terpolymers. Since Poly(butadiene) has a double bond, it is sensitive to ozone cracking.

## Experimental Setup

Mobile Phase:	Tetrahydrofuran
Stationary Phase:	PSS SDV
Flow rate [mL/min]:	1,00
Temperature [°C]:	25
Detection:	GPC1200 Refractive index
Calibration:	Kit Poly(butadiene-1.4)
Data processing:	PSS WinGPC



## Recommendations for Sample Concentration

narrow PDI

M 100 Da - 10 000 Da:	2 g/L
M 10 000 Da - 1 000 000 Da:	1-2 g/L
M > 1 000 000 Da:	0.5 g/L or less

broad PDI (>1.5)

all molar masses:	3.0 - 5.0 g/L
Injection volume [µL]:	20

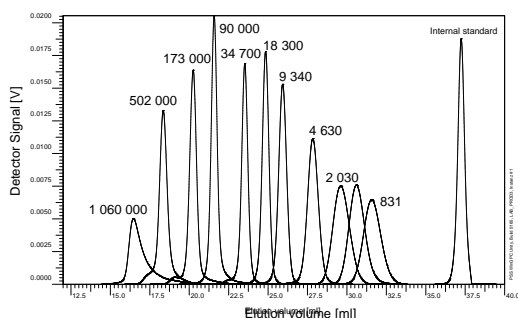
## Suitable Columns

low molecular weights:	P/N 201-0001 (set of 3) OR sda083003lis (1 linear)
medium molecular weights:	P/N 201-0002 (set of 2) OR sda083005lim (1 linear)
high molecular weights:	P/N 201-0003 (set of 3) OR sda083005lxl (1 linear)

## Overlay of different Poly(butadiene-1.4) standards.

separation on PSS SDV

separation on PSS SDV



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DE52131611

5994-6313EN  
July 1, 2023