Errata Notice

This document contains references to PSS or Polymer Standards Service. Please note that PSS is now Agilent. This document will be republished as an Agilent document in the future.





10303 - Column Application Note Characterization of Poly(isobutylene)

Poly(isobutylene) (PIB), a synthetic rubber, an elastomer that is impermeable to air. It is used in many applications requiring an airtight rubber. PIB is used in adhesives, agricultural chemicals, fiber optic compounds, caulks/sealants, cling film, electrical fluids, lubricants, paper and pulp, personal care products, pigment concentrates, as a fuel additive and in chewing gum. The first major application of butyl rubber was tire inner tubes. This remains an important segment of its market even today.

Experimental Setup

Mobile Phase: Tetrahydrofuran Stationary Phase: PSS SDV Flow rate [mL/min]: 1,00

Temperature [°C]: 1,00

Detection: GPC1200 Refractive index Kit Poly(isobutylene)

Data processing: PSS WinGPC



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

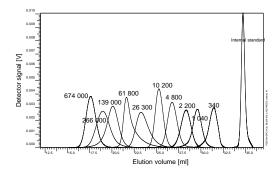
Suitable Columns

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)

ultrahigh molecular weights: P/N 202-0001 (set of 3)

Overlay of different molar masses. separation on PSS SDV

separation on PSS SDV







PSS Polymer Standards Service GmbH In der Dalheimer Wiese 5 55120 Mainz | Germany Phone +49 6131 96239-0 Fax +49 6131 96239-11 E-Mail info@pss-polymer.com

Web www.pss-polymer.com

Polymer Standards Service-USA, Inc. 160 Old Farm Rd, Suite A Amherst | MA 01002 | USA
 Phone
 +1 413 835-0265

 Fax
 +1 413 835-0354

 E-Mail
 pssusa@pss-polymer.com

 Web
 www.pss-polymer.com

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