

STN	Gélová permeačná chromatografia (GPC) Časť 3: Voda ako eluent (ISO 13885-3: 2020)	STN EN ISO 13885-3 67 3058
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Gel permeation chromatography (GPC) - Part 3: Water as eluent (ISO 13885-3:2020)

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 11/21

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**Gel permeation chromatography (GPC) - Part 3: Water as
eluent (ISO 13885-3:2020)**

Chromatographie par perméation de gel (GPC) - Partie
3: Eluant à l'eau (ISO 13885-3:2020)

Gelpermeationschromatographie (GPC) - Teil 3:
Wasser als Elutionsmittel (ISO 13885-3:2020)

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Contents	Page
European foreword.....	3

European foreword

The text of ISO 13885-3:2020 has been prepared by Technical Committee ISO/TC 35 "Paints and varnishes" of the International Organization for Standardization (ISO) and has been taken over as EN ISO 13885-3:2021 by Technical Committee CEN/TC 139 "Paints and varnishes" the secretariat of which is held by DIN.

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Gel permeation chromatography (GPC) —

Part 3: Water as eluent

Chromatographie par perméation de gel (GPC) —

Partie 3: Eluant à l'eau



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ISO copyright office
CP 401 • Ch. de Blandonnet 8
CH-1214 Vernier, Geneva
Phone: +41 22 749 01 11
Email: copyright@iso.org
Website: www.iso.org

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Contents

Page

Foreword	v
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
4 Principle	2
5 Apparatus	2
5.1 Eluent supply	3
5.2 Pump	3
5.3 Injection system	3
5.4 Separation columns	3
5.5 Column temperature control	5
5.6 Detector	6
6 Reagents	6
7 Calibration of the apparatus	6
7.1 General	6
7.2 Specification for the calibration standard	6
7.3 Preparation of the calibration solutions for injection	7
7.4 Conditions for calibration runs	7
7.5 Measurement of elution volume	7
7.6 Plotting the calibration curve	7
8 Sampling	8
9 Preparation for the test	8
9.1 Preparation of the injection solution	8
9.2 Preparation of the apparatus	9
10 Analytical parameters	9
11 Data acquisition and evaluation	9
11.1 General	9
11.2 Calculation of the net chromatogram from the raw data	10
11.2.1 Determination of the baseline	10
11.2.2 Correction of the measured values and of the net chromatogram	10
11.2.3 Evaluation limits	10
11.3 Calculation of the average values	10
11.4 Calculation of the distribution curves	11
12 Precision	12
12.1 General	12
12.2 Repeatability	12
12.3 Reproducibility	12
13 Test report	13
13.1 General	13
13.2 General data on the equipment and settings	13
13.2.1 Data on the equipment used	13
13.2.2 Calibration	13
13.2.3 Evaluation	14
13.3 Special data on the sample	14
Annex A (informative) Conversion of experimental parameters for variant column sizes	15
Annex B (informative) Example of a data sheet for a polymer standard	16
Annex C (informative) Explanations	18

ISO 13885-3:2020(E)

Bibliography	23
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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 35, *Paints and varnishes*.

A list of all parts in the ISO 13885 series can be found on the ISO website.

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Gel permeation chromatography (GPC) —

Part 3: Water as eluent

WARNING — This document can involve hazardous materials, operations or equipment. It does not purport to address all of the safety problems, if any, associated with its use. It is the responsibility of the user to establish appropriate safety and health practices and to ensure compliance with any national regulatory conditions.

1 Scope

This document specifies the determination of the molar-mass distribution and the average molar mass values M_n (number average) and M_w (weight average) of polymers that are soluble in water by gel permeation chromatography (GPC).

NOTE Also known as size exclusion chromatography (SEC).

This method is applicable to neutral polymers and polyanions (e.g. polycarboxylates, polysaccharides, fully hydrolyzed polyvinyl alcohols and high-molecular polyethylene oxides). It is not applicable to polycations [e.g. polyvinylpyrrolidone, polyvinylpyridine, salts of poly(diallyl-N,N-dimethyl-azacyclopentane), chitosan].

Despite good solubility in the mobile phase and even though the chromatograms obtained show good repeatability, it is possible that this method cannot be used with certain polymer types because of specific interactions (e.g. adsorption) within the sample/eluent/column system (see also [Clause 12](#)).

The conditions specified in this document are not applicable to the GPC analysis of polymer samples with M_w values greater than 10^6 g/mol and/or polymers with elution limits outside the calibration range (see [7.6](#) and [Annex C](#)).

This document includes no correction methods (e.g. for the elimination of peak broadening). If absolute molar mass values are required, an absolute method (e.g. membrane osmometry for M_n or light scattering for M_w) can be used.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 1513, *Paints and varnishes — Examination and preparation of test samples*

ISO 4618, *Paints and varnishes — Terms and definitions*

ISO 15528, *Paints, varnishes and raw materials for paints and varnishes — Sampling*

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