

# DIN EN ISO 13885-3:2021-11 (E)

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

---

<b>Contents</b>		<b>Page</b>
<b>European foreword</b> .....		4
<b>Foreword</b> .....		5
<b>1</b>	<b>Scope</b> .....	6
<b>2</b>	<b>Normative references</b> .....	6
<b>3</b>	<b>Terms and definitions</b> .....	6
<b>4</b>	<b>Principle</b> .....	7
<b>5</b>	<b>Apparatus</b> .....	7
5.1	Eluent supply .....	8
5.2	Pump .....	8
5.3	Injection system .....	8
5.4	Separation columns .....	8
5.5	Column temperature control .....	10
5.6	Detector .....	11
<b>6</b>	<b>Reagents</b> .....	11
<b>7</b>	<b>Calibration of the apparatus</b> .....	11
7.1	General .....	11
7.2	Specification for the calibration standard .....	11
7.3	Preparation of the calibration solutions for injection .....	12
7.4	Conditions for calibration runs .....	12
7.5	Measurement of elution volume .....	12
7.6	Plotting the calibration curve .....	12
<b>8</b>	<b>Sampling</b> .....	13
<b>9</b>	<b>Preparation for the test</b> .....	13
9.1	Preparation of the injection solution .....	13
9.2	Preparation of the apparatus .....	14
<b>10</b>	<b>Analytical parameters</b> .....	14
<b>11</b>	<b>Data acquisition and evaluation</b> .....	14
11.1	General .....	14
11.2	Calculation of the net chromatogram from the raw data .....	15
11.2.1	Determination of the baseline .....	15
11.2.2	Correction of the measured values and of the net chromatogram .....	15
11.2.3	Evaluation limits .....	15
11.3	Calculation of the average values .....	15
11.4	Calculation of the distribution curves .....	16
<b>12</b>	<b>Precision</b> .....	17
12.1	General .....	17
12.2	Repeatability .....	17
12.3	Reproducibility .....	17
<b>13</b>	<b>Test report</b> .....	18
13.1	General .....	18
13.2	General data on the equipment and settings .....	18
13.2.1	Data on the equipment used .....	18
13.2.2	Calibration .....	18
13.2.3	Evaluation .....	19
13.3	Special data on the sample .....	19

<b>Annex A (informative) Conversion of experimental parameters for variant column sizes</b> .....	<b>20</b>
<b>Annex B (informative) Example of a data sheet for a polymer standard</b> .....	<b>21</b>
<b>Annex C (informative) Explanations</b> .....	<b>23</b>
<b>Bibliography</b> .....	<b>28</b>