

# ISO 19929:2017-03 (E)

## Plastics - Determination of average molecular mass and mixture ratio of poly(ethylene glycol) and its derivatives by MALDI-T OF-MS

---

<b>Contents</b>		<b>Page</b>
Foreword .....		iv
Introduction .....		v
1	Scope .....	1
2	Normative references .....	1
3	Terms and definitions .....	1
4	Principles .....	3
5	Reagents .....	3
6	Apparatus .....	4
7	Procedure .....	5
7.1	General .....	5
7.2	Sample preparation .....	5
7.2.1	General .....	5
7.2.2	Preparation of polymer standard mixtures .....	6
7.2.3	Preparation of polymer/matrix/salt solutions .....	6
7.2.4	Deposition of the sample on the sample plate (target) .....	6
7.2.5	Preparation of biopolymer/matrix solutions .....	7
7.3	Instrument settings .....	7
7.4	Spectra recording .....	8
8	Data acquisition and processing .....	8
8.1	General .....	8
8.2	Calibration of mass axis .....	8
8.2.1	General .....	8
8.2.2	Calibration of mass axis using synthetic polymer standards .....	9
8.2.3	Calibration of mass axis using biopolymer standards .....	9
8.2.4	Self-calibration method .....	9
8.3	Generation of mass calibration curve .....	9
8.4	Calibration of intensity axis .....	9
9	Expression of results .....	10
9.1	Calculation of molecular mass distribution (MMD) .....	10
9.2	Calculation of the number-average molecular mass .....	10
9.3	Calculation of peak area .....	10
9.4	Constructing calibration curve for intensity .....	10
9.5	Calculation of mass ratio .....	11
10	Precision .....	11
11	Test report .....	11
11.1	General .....	11
11.2	Apparatus .....	11
11.3	Calibration .....	11
11.4	Results .....	11

<b>Annex A (normative) Calibrants .....</b>	<b>12</b>
<b>Bibliography .....</b>	<b>13</b>