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

Contents

Page

Foreword iv

Introduction v

1 Scope 1

2 Normative references 1

3 Termsanddefinitions 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

Annex A (normative) Calibrants **12**

Bibliography **13**