ISO/TS 12788:2022-05 (E)

Rapeseed - Determination of glucosinolate content - Spectrometric method for total glucosinolates by glucose release

Contents

Page

Foreword ... iv

Introduction ... v

1 Scope ... 1

2 Normative references ... 1

3 Terms and definitions ... 1

4 Principle ... 1

5 Reagents ... 1

6 Apparatus ... 3

7 Sampling ... 4

8 Preparation of the test sample ... 5
- 8.1 Reduction of test sample to laboratory sample ... 5
- 8.2 Moisture and volatile matter content ... 5
- 8.3 Grinding ... 5

9 Procedure ... 5
- 9.1 Test portion ... 5
- 9.2 Extraction of glucosinolates ... 5
  - 9.2.1 General ... 5
  - 9.2.2 Principle ... 5
  - 9.2.3 Operating mode ... 5
- 9.3 Hydrolysis and collection of glucose from glucosinolates by myrosinase and column chromatography ... 6
- 9.4 Glucose determination ... 6
  - 9.4.1 General ... 6
  - 9.4.2 Glucose oxidase/peroxidase glucose assay (5.4) ... 6
  - 9.4.3 Glucose hexokinase/glucose-6-phosphate dehydrogenase assay (5.8) ... 7

10 Calculation of glucosinolate content ... 8

11 Expression of results ... 9

12 Precision ... 9
- 12.1 Interlaboratory test ... 9
- 12.2 Repeatability ... 9
- 12.3 Reproducibility ... 9
- 12.4 Critical difference ... 9
  - 12.4.1 General ... 9
  - 12.4.2 Comparison of two groups of measurements in one laboratory ... 9
  - 12.4.3 Comparison of two groups of measurements in two laboratories ... 10

13 Test report ... 10

Annex A (informative) **Extraction and purification of myrosinase from *Sinapis alba* L., also called white or yellow mustard** ... 11

Annex B (informative) **Determination of recovery of glucosinolates** ... 15

Annex C (informative) **Results of the interlaboratory test** ... 18

Bibliography ... 20