DIN EN ISO 16634-2:2016-11 (E)

Food products - Determi nation of the total nitrogen content by combustion according to the Dumas principle and calculation of the crude protein content - Part 2: Cereals, pulses and milled cereal products (ISO 16634-2:2016)

Contents

Page

European foreword ... **3**

Foreword ... **4**

Introduction ... **5**

1 Scope ... **6**

2 Normative references ... **6**

3 Terms and definitions ... **6**

4 Principle ... **7**

5 Reagents ... **7**

6 Apparatus ... **8**

7 Sampling ... **8**

8 Preparation of the test sample ... **8**

9 Procedure ... **9**
9.1 General ... 9
9.2 Test portion ... 9
9.3 Control of oxygen supply ... 9
9.4 Calibration ... 10
9.5 Determination ... 10
9.6 Detection and data processing ... 10

10 Calculation and expression of results ... **11**
10.1 Calculation ... 11
10.1.1 Nitrogen content ... 11
10.1.2 Crude protein content ... 11
10.2 Expression of results ... 11

11 Precision ... **11**
11.1 Interlaboratory tests ... 11
11.2 Repeatability ... 12
11.3 Reproducibility ... 12
11.4 Critical difference ... 12
11.4.1 Comparison of two groups of measurements in the same laboratory ... 12
11.4.2 Comparison of two groups of measurements in two different laboratories ... 13
11.5 Uncertainty ... 13

12 Test report ... **13**

Annex A (informative) **Flowchart for a basic Dumas apparatus** ... **14**

Annex B (informative) **Schematic diagrams of suitable types of Dumas apparatus** ... **15**

Annex C (informative) **Equipment calibration** ... **18**

Annex D (informative) **Results of interlaboratory tests** ... **20**

Bibliography ... **27**