# ISO 12228-1:2014-07 (E)

## Determination of individual and total sterols contents - Gas chromatographic method - Part 1: Animal and vegetable fats and oils

## Contents

Page


Foreword ..... iv

1 Scope ..... 1

2 Normative references ..... 1

3 Termsanddefinitions ..... 1

4 Principle ..... 1

5 Reagents ..... 2

6 Apparatus ..... 3

7 Sample ..... 3
7.1 Sampling ..... 3
7.2 Preparation of the test sample ..... 3

8 Procedure ..... 4
8.1 Preparation of the aluminium oxide column ..... 4
8.2 Test portion ..... 4
8.3 Extraction of the unsaponifiable matter ..... 4
8.4 Thin-layer chromatography ..... 4
8.5 Isolation of the sterols ..... 4
8.6 Preparation of sterol trimethylsilyl ethers ..... 5
8.7 Gas chromatography ..... 5

9 Expression of results ..... 5
9.1 Identification of sterols ..... 5
9.2 Composition of sterols ..... 5
9.3 Determination of the total sterol content ..... 6

10 Precision ..... 7
10.1 Interlaboratory test ..... 7
10.2 Repeatability limit, r ..... 7
10.3 Reproducibility limit, R ..... 7

11 Test report ..... 7

Annex A (informative) Figures ..... 8

Annex B (informative) Interlaboratory trial ..... 15

Bibliography ..... 24