

# DIN EN ISO 12966-4:2015-11 (E)

## Animal and vegetable fats and oils - Gas chromatography of fatty acid methyl esters - Part 4: Determination by capillary gas chromatography (ISO 12966-4:2015)

---

<b>Contents</b>	<b>Page</b>
Foreword.....	3
<b>1 Scope</b> .....	<b>4</b>
<b>2 Normative references</b> .....	<b>4</b>
<b>3 Principle</b> .....	<b>4</b>
<b>4 Reagents and materials</b> .....	<b>4</b>
4.1 Reference fatty acid methyl esters (FAMES).....	5
4.2 Internal standards.....	5
<b>5 Apparatus</b> .....	<b>6</b>
<b>6 Sampling</b> .....	<b>7</b>
<b>7 Preparation of test sample</b> .....	<b>7</b>
<b>8 Preparation of methyl esters from fats, oils, and fatty acids</b> .....	<b>7</b>
<b>9 Procedure</b> .....	<b>7</b>
9.1 General.....	7
9.2 GC conditions.....	7
9.3 Performance check.....	8
<b>10 Calculations</b> .....	<b>8</b>
10.1 Qualitative analysis and peak identification.....	8
10.2 Quantitative analysis.....	8
10.2.1 Calculation of the composition of fatty acid methyl esters.....	8
10.2.2 Calculation of the composition of fatty acid methyl esters using correction factors.....	9
10.2.3 Calculation of the composition of fatty acid methyl esters using an internal standard.....	9
<b>11 Precision</b> .....	<b>10</b>
11.1 Results of interlaboratory test.....	10
11.2 Repeatability.....	10
11.3 Reproducibility.....	10
<b>12 Test report</b> .....	<b>10</b>
<b>Annex A (informative) Theoretical flame ionization detector correction factor (TCF) for fatty acid methyl esters (FAMES)</b> .....	<b>11</b>
<b>Annex B (informative) Examples of chromatograms</b> .....	<b>12</b>
<b>Annex C (informative) Comparison of FAME composition with two different GC columns</b> .....	<b>14</b>
<b>Annex D (informative) Results of an interlaboratory trial</b> .....	<b>16</b>
<b>Bibliography</b> .....	<b>22</b>