

# ISO 22854:2016-03 (E)

## Liquid petroleum products - Determination of hydrocarbon types and oxygenates in automotive-motor gasoline and in ethanol (E85) automotive fuel - Multidimensional gas chromatography method

---

<b>Contents</b>		<b>Page</b>
Foreword .....		iv
Introduction .....		v
<b>1</b>	<b>Scope .....</b>	<b>1</b>
<b>2</b>	<b>Normative references .....</b>	<b>2</b>
<b>3</b>	<b>Terms and definitions .....</b>	<b>2</b>
<b>4</b>	<b>Principle .....</b>	<b>3</b>
<b>5</b>	<b>Reagents and materials .....</b>	<b>3</b>
<b>6</b>	<b>Apparatus .....</b>	<b>4</b>
<b>7</b>	<b>Sampling .....</b>	<b>5</b>
<b>8</b>	<b>Procedure .....</b>	<b>5</b>
8.1	Conditioning .....	5
8.2	Sample preparation .....	5
8.2.1	Procedure B only - Sample dilution .....	5
8.2.2	Procedure A and B - Sample cooling .....	5
8.3	Test sample injection volume .....	5
8.4	Verification of the apparatus and test conditions .....	5
8.5	Validation .....	5
8.6	Preparation of the test sample .....	6
8.7	Preparation of the apparatus and test conditions .....	6
<b>9</b>	<b>Calculation .....</b>	<b>6</b>
9.1	General .....	6
9.2	Calculation as % (m/m) .....	6
9.3	Calculation as % (V/V) .....	7
9.4	Calculation of total oxygen content in % (m/m) .....	9
9.5	Data report according to automotive motor gasoline specification .....	9
<b>10</b>	<b>Expression of results .....</b>	<b>9</b>
10.1	Procedure A .....	9
10.2	Procedure B .....	10
<b>11</b>	<b>Precision .....</b>	<b>10</b>
11.1	General .....	10
11.2	Repeatability, r .....	10
11.3	Reproducibility, R .....	10
<b>12</b>	<b>Test report .....</b>	<b>11</b>
<b>Annex A (informative)</b>	<b>Instrument specifications .....</b>	<b>12</b>

<b>Annex B (informative) Examples of typical chromatograms .....</b>	<b>14</b>
<b>Bibliography .....</b>	<b>19</b>