

DIN EN 1601:2014-07 (E)

Liquid petroleum products - Unleaded petrol - Determination of organic oxygenate compounds and total organically bound oxygen content by gas chromatography (O-FID)

Contents		Page
Foreword		3
1	Scope	4
2	Normative references	4
3	Principle	4
4	Reagents and materials	5
4.1	Gases	5
4.2	Reagents for the preparation of calibration samples	5
4.3	Internal standards	6
4.4	Oxygenate free petrol	6
5	Apparatus	6
5.1	Gas chromatographic assembly	6
5.2	Other equipment	7
6	Sampling	7
7	Procedure	8
7.1	Setting up the apparatus	8
7.2	Calibration	8
7.3	Determination of density of the sample	9
7.4	Preparation of test sample	9
7.5	Introduction of test portion	9
7.6	Examination of chromatogram	9
8	Calculation	9
8.1	Calculation of mass of each component in the test sample	9
8.2	Calculation of each component in the sample as a percentage by mass	10
8.3	Calculation of each component in the sample as a percentage by volume	10
9	Procedure for the determination of a higher oxygenate compound content	11
9.1	General	11
9.2	Dilution of the sample	11
9.3	Preparation of the sample D for analysis	12
9.4	Analysis of the test sample D	12
9.5	Calculation and expression of results	12
9.5.1	Calculation of the component of interest in the sample D as a percentage by mass	12
9.5.2	Calculation of the component of interest in the test sample as a percentage by mass	12
9.5.3	Calculation of the component of interest in the test sample as a percentage by volume	12
10	Total organically bound oxygen content	12
11	Expression of results	13
12	Precision	13
12.1	General	13

12.2	Repeatability, r	13
12.3	Reproducibility, R	13
13	Test report	14
Annex A (informative) Guidance on the oxygen selective detection (O-FID) technique		15
A.1	Description	15
A.2	Summary of the analysis conditions	16
Bibliography		19