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Evidential breath alcohol analysers (EBA)

Part 3: OIML Report format for type evaluation

TITRE DU CD (French):

OIML R 126

Ethylomètres

Partie 3 : OIML format du rapport pour l'évaluation de type

Original version in English

Version originale en anglais

Foreword

The International Organization of Legal Metrology (OIML) is a worldwide, intergovernmental organization whose primary aim is to harmonize the regulations and metrological controls applied by the national metrological services, or related organizations, of its Member States.

The main categories of OIML publications are:

- **International Recommendations (OIML R)**, which are model regulations that establish the metrological characteristics required of certain measuring instruments and which specify methods and equipment for checking their conformity. OIML Member States shall implement these Recommendations to the greatest possible extent;
- **International Documents (OIML D)**, which are informative in nature and which are intended to harmonize and improve work in the field of legal metrology;
- **International Guides (OIML G)**, which are also informative in nature and which are intended to give guidelines for the application of certain requirements to legal metrology; and
- **International Basic Publications (OIML B)**, which define the operating rules of the various OIML structures and systems.

OIML Draft Recommendations, Documents and Guides are developed by Project Groups linked to Technical Committees or Subcommittees which comprise representatives from the Member States. Certain international and regional institutions also participate on a consultation basis. Cooperative agreements have been established between the OIML and certain institutions, such as ISO and the IEC, with the objective of avoiding contradictory requirements. Consequently, manufacturers and users of measuring instruments, test laboratories, etc. may simultaneously apply OIML publications and those of other institutions.

International Recommendations, Documents, Guides and Basic Publications are published in English (E) and translated into French (F) and are subject to periodic revision.

Additionally, the OIML publishes or participates in the publication of **Vocabularies (OIML V)** and periodically commissions legal metrology experts to write **Expert Reports (OIML E)**. Expert Reports are intended to provide information and advice, and are written solely from the viewpoint of their author, without the involvement of a Technical Committee or Subcommittee, nor that of the OIML. Thus, they do not necessarily represent the views of the OIML.

This publication – reference OIML R 126-3, Edition 201x – was developed by Project Group 3 of OIML TC 17/SC 7 *Evidential breath analyzers*. It was approved for final publication by the International Committee of Legal Metrology in 201x and will be submitted to the International Conference on Legal Metrology in 201x for formal sanction.

OIML Publications may be downloaded from the OIML website in the form of PDF files. Additional information on OIML Publications may be obtained from the Organization's headquarters:

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EBA

Part 3 – Test report format

1 Introduction

Implementation of this report format is informative with regard to the implementation of OIML R 126-1 and -2 in national regulations. However, its implementation is mandatory within the framework of the *OIML Certificate System for Measuring Instruments*.

Note concerning the references: All references are to the combined publication OIML R 126-1 and -2:2012. In this report format this publication is referred to as “R 126”.

This report format applies for any kind of EBAs (independent of its technology). It presents a standardized format for recording the results of the various tests and examinations, described in R 126-2:2012, to which a type of EBA for alcohol detection shall be submitted with a view to its approval based on this OIML Recommendation.

The use of this report format as is, or translated into a different language, is recommended to all metrology services or laboratories evaluating and/or testing types of EBAs for alcohol detection according to OIML R 126, or according to national or regional regulations based on this Recommendation. If a translation is used, it is highly recommended to leave the structure and the clause numbers unchanged, in order to facilitate the interpretation of the contents by those readers who are not familiar with this other language.

The size of the fields should be adjusted as required to accommodate each specific record. Completely deleting an entry field should be avoided.

The report format, in its practical application, shall as a minimum contain clauses A–F (where applicable) in addition to a cover page issued by the Issuing Authority.

2 Applicability of this report format

In the framework of the *OIML Certificate System for Measuring Instruments* applicable to EBAs in conformity with R 126:2012, the use of this report format is mandatory. It shall be made available in English and/or in French and include copies translated into the national languages of the countries issuing such certificates, when appropriate. Concerning the implementation of OIML R 126:2012 in national regulations, this report format is informative.

3 Guidance for the application of this report format

Key to the symbols and expressions used on the following pages:

The “summary of the results” and the “results of the tests” shall be completed according to the following example:

Clause	Requirement or test	Yes	No	N.A.	Meaning
#	<name>	X			Passed
#	<name>		X		Failed
#	<name>			X	Requirement or test is not applicable to this instrument

- Notes:*
- (1) Unless prescribed otherwise, “Date” in the report refers to the date of testing.
 - (2) The name(s) or symbol(s) of the unit(s) used to express the test results shall be specified in each form.
 - (3) Where in a table one or several choices can be made, checkboxes are applied.
In such a case, some or all of the columns Y, N, N/A are not applicable and are thus presented grayed out or crosshatched (see the example below).

Clause	Description	Yes	No	Not applicable	Observations
		<input type="checkbox"/>			
		<input type="checkbox"/>			

If a prescribed test is not relevant for the type of instrument to be tested, the reason why the test is omitted shall be clearly stated in the field “Observations” (for instance surge tests on signal lines shorter than 30 m, tests related to AC mains supply in the case of an instrument only powered by DC mains supply, or partial testing after modification of a previously tested type).

The number of the report and the page numbers shall be completed in the heading.

4 The evaluation report

The format for the report is presented on the following pages, starting with space for the cover page.

Cover page
by the
Issuing Authority
in accordance with national custom or legislation

Contents of the evaluation report

A	References of the authority responsible for this report	10
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D	General information	13
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D.7	Adjustments, modifications and corrective action.....	Error! Bookmark not defined.
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E.4	Multiple indicating devices.....	Error! Bookmark not defined.
BASIC REQUIREMENTS		
E.5	Display	Error! Bookmark not defined.
E.6	Availability of measurement results	Error! Bookmark not defined.
E.7	Protection against fraud	Error! Bookmark not defined.
E.8	Checking operations	Error! Bookmark not defined.
E.9	Warm-up time	Error! Bookmark not defined.
E.10	Availability for measurement.....	Error! Bookmark not defined.
E.11	Condition of exhalation.....	Error! Bookmark not defined.
E.12	Continuity of exhalation	Error! Bookmark not defined.
E.13	Alcohol in the upper respiratory tract	Error! Bookmark not defined.
E.14	Software	Error! Bookmark not defined.
E.14a	Identification	Error! Bookmark not defined.
E.14b	Fraud protection	Error! Bookmark not defined.
OPTIONAL REQUIREMENTS		
E.15	Printing device	Error! Bookmark not defined.

E.16	Storage of data	Error! Bookmark not defined.
E.17	Automatic storing.....	Error! Bookmark not defined.
OPERATING INSTRUCTIONS		
E.18	Instruction manual	Error! Bookmark not defined.
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F.1	Maximum permissible errors and repeatability	Error! Bookmark not defined.
F.2	Drift.....	Error! Bookmark not defined.
F.3	Memory effects	Error! Bookmark not defined.
F.4	Influence factors of the conditions of injection	Error! Bookmark not defined.
INLUENCE FACTORS		
F.5	Static environmental temperatures (Dry heat and cold).....	Error! Bookmark not defined.
F.5a	Dry heat.....	Error! Bookmark not defined.
F.5b	Cold.....	Error! Bookmark not defined.
F.6	Damp heat, steady state (non condensing).....	Error! Bookmark not defined.
F.7	Atmospheric pressure.....	Error! Bookmark not defined.
F.8	Random vibration	Error! Bookmark not defined.
F.9	Mains voltage variations (DC and AC).....	Error! Bookmark not defined.
F.9a	Mains voltage variations - DC	Error! Bookmark not defined.
F.9b	Mains voltage variations - AC	Error! Bookmark not defined.
F.10	Mains frequency variations (AC).....	Error! Bookmark not defined.
F.12	Low voltage of internal battery	Error! Bookmark not defined.
F.12	Voltage variations of road vehicle battery	Error! Bookmark not defined.
F.13	Total fraction by volume of hydrocarbons in the environment.....	Error! Bookmark not defined.
F.14	Influence of the volume fraction of CO ₂	Error! Bookmark not defined.
DISTURBANCE TESTS		
F.15	Radiated, radio frequency, electromagnetic fields.....	Error! Bookmark not defined.
F.16	Conducted radio-frequency fields.....	Error! Bookmark not defined.
F.17	Electrostatic discharges.....	Error! Bookmark not defined.
F.18	Bursts on supply lines and on signal, data and control lines.	Error! Bookmark not defined.
F.18a	Bursts on supply lines	Error! Bookmark not defined.
F.18b	Bursts on signal, data and control lines.....	Error! Bookmark not defined.
F.19	Surges on signal, data and control lines.....	Error! Bookmark not defined.
F.20	AC mains voltage dips, short interruptions and voltage variations	Error! Bookmark not defined.
F.21	Electronical transient conduction for external batteries for a vehicle.	Error! Bookmark not defined.
F.22	Mechanical shocks	Error! Bookmark not defined.

F.23	Shakes	Error! Bookmark not defined.
F.24	Damp heat, cyclic (condensing).....	Error! Bookmark not defined.
F.25	Storage test.....	Error! Bookmark not defined.
F.26	Durability	Error! Bookmark not defined.

PHYSIOLOGICAL INFLUENCE QUANTITIES

F.27	Physiological influence quantities	Error! Bookmark not defined.
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A References of the authority responsible for this report

Name	
Address	
Report number	
Application number	
Period of execution of the tests	
Date of issuing this report	
Name and signature of the person responsible for the report and stamp(s) (if applicable)	

B Synopsis of the results of the evaluation*(To be completed by the Issuing Authority)*

The evaluated specimen (or specimens) fulfils all the applicable and required criteria stated in OIML R 126-1:2012	
<input type="checkbox"/>	Yes
<input type="checkbox"/>	No
Observations:	

C Summary of the results of the evaluation (examination and tests)*(To be completed by the Issuing Authority)***C.1 Examinations**

For details of the evaluation results refer to the corresponding records in clause E of this report.

OIML R 126 - Chapter	Examinations	Specimen(s) comply with referred clause			Details in
		Yes	No	N.A.	
XX	Units of measurement and decimal sign				E.1
XX	Measuring range				E.2
XX	Scale interval				E.3
XX	Multiple indicating devices				E.4
XX	Display				E.5
XX	Availability of measurement results				E.6
XX	Protection against fraud				E.7
XX	Checking operations				E.8
XX	Warm-up time				E.9
XX	Availability for measurement				E.10
XX	Condition of exhalation				E.11
XX	Continuity of exhalation				E.12
XX	Alcohol in the upper respiratory tract				E.13
XX	Software - Identification				E.14a
XX	Software - Fraud protection				E.14b
XX	Printing device				E.15
XX	Storage of data				E.16
XX	Automatic storing				E.17
XX	Instruction manual				E.18
XX	Additional instructions				E.19
XX	Inscription				E.20
XX	Sealing				E.21

C.2 Performance tests

For details of the test results refer to the corresponding records in clause F of this report

OIML R 139-2 Subclause	Performance tests	Specimen(s) comply with referred clause			Details in
		Yes	No	N.A.	
XX	Maximum permissible errors and repeatability				F.1
XX	Drift				F.2
XX	Memory effects				F.3
XX	Influence factors of the conditions of injection				F.4
XX	Static environmental temperatures - Dry heat				F.5a
XX	Static environmental temperatures - Cold				F.5b
XX	Damp heat, steady state (non condensing)				F.6
XX	Atmospheric pressure				F.7
XX	Random vibration				F.8
XX	Mains voltage variations - DC				F.9a
XX	Mains voltage variations - AC				F.9b
XX	Mains frequency variations (AC)				F.10
XX	Low voltage of internal battery				F.11
XX	Voltage variations of road vehicle battery				F.12
XX	Total fraction by volume of hydrocarbons in the environment				F.13
XX	Influence of the volume fraction of CO ₂				F.14
XX	Radiated, radio frequency, electromagnetic fields				F.15
XX	Conducted radio-frequency fields				F.16
XX	Electrostatic discharges				F.17
XX	Bursts on supply lines				F.18a
XX	Bursts on signal, data and control lines				F.18b
XX	Surges on signal, data and control lines				F.19
XX	AC mains voltage dips, short interruptions and voltage variations				F.20
XX	Electronical transient conduction for external batteries for a vehicle				F.21
XX	Mechanical shocks				F.22
XX	Shakes				F.23
XX	Damp heat, cyclic (condensing)				F.24
XX	Storage test				F.25
XX	Durability				F.26
XX	Physiological influence quantities				F.27

D General information**D.1 Manufacturer**

Company	
Address	

D.2 Applicant

Company		
Representative		
Address		
Reference		
Date of application		
Applicant is authorized by the manufacturer (documented)	<input type="checkbox"/> Yes	<input type="checkbox"/> No
It is verified that no application for OIML type evaluation for the same type has been made to any other OIML Issuing Authority (see OIML B 3, 5.1.2)	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Observations:		

D.3 Testing laboratories involved in the tests*(This table to be completed for each test laboratory)*

Name		
Address		
Application number		
Tests by this laboratory		
Date/period of tests		
Name(s) of test engineer(s)		
Details of relevant peer assessment or assessment by other means where applicable	QA standard	
	Accreditation number:	Expires (date):
Entry area for detailed information if tests have not been performed on the premises of this laboratory but at a different location		
Name of the responsible person		
Date of signature		
Stamp (where applicable) and signature of the responsible person		
Observations:		

D.4 General information concerning the type and the specimen(s) supplied for the tests

Information, indicated on the instrument	
Manufacturer's trade mark	
Designation	
Serial number(s) of the sample(s)	
Type of EBA	
Use T°C	
Measuring range	
Printing device	
Storage T°C	
Identification of software	
Electrical power (voltage, frequency...)	
Power supply	

Relevant external/internal photographs taken during the examination and tests:

Remarks:

D.5 Accessories, supplied by the applicant (if applicable)

Operating instructions	
battery	
Operating instructions	
Cables	
.....	
Examples are: Data printer (if applicable); ancillary devices, cabling and other accessories:	

D.6 Selection of specimens tested

If the tests and examinations are valid for more versions, present full details of these versions, according to the listing of parameters and type designation in the way presented in D.4:
Justification of the selection of the specimens:

The following specimens have taken part in the examination:

Specimen no.	Model	Serial no.
1		
2		
3		
4		
5		
...		

D.7 Adjustments, modifications and corrective action**D.7a Adjustments and modifications**

Adjustments, modifications, and repairs made to the specimens during the testing:

D.7b Correction & corrective action

Repairs, correction, analysis of the cause and corrective action made to the specimens when the results of a test are failed. Consequence of the tests performed before.

D.8 Additional information concerning the type

Additional observations and/or information (connection equipment, interfaces, etc.):

D.9 Documentation supplied by the applicant

Observations:

NB : this documentation should contains all the documentation mentioned in OIML R 126 : 2012 § 11.2

D.10 Results of previous tests that were taken into account

Details:

D.11 Information concerning the test equipment used for the type evaluation
(including details of simulations)

- ➔ Description of the testing apparatus
- ➔ Characteristic reference values of the test gas
- ➔ If simplified means, description of the simplified means.
- ➔ If a simplified mean is used, the correction based on the error in the reference conditions must be given

E Examinations*To be completed by the Evaluating Authority**For each item of chapter E, the minimum mandatory information are:***E.1 Units of measurement and decimal sign**

Date of the examination

Name of the technician

Serial number

Description of the test performed and Result

Passed ☐ Failed ☐ Non applicable ☐**E.2 Measuring ranges**

Date of the examination

Name of the technician

Serial number

Description of the test performed and Result

Passed ☐ Failed ☐ Non applicable ☐**E.3 Scale interval**

Date of the examination

Name of the technician

Serial number

Description of the test performed and Result

Passed ☐ Failed ☐ Non applicable ☐**E.4 Multiple indicating devices**

Date of the examination

Name of the technician

Serial number

Description of the test performed and Result

Passed ☐ Failed ☐ Non applicable ☐**E.5 Display**

Date of the examination

Name of the technician

Serial number

Description of the test performed and Result

Passed ☐ Failed ☐ Non applicable ☐**E.6 Availability of measurement results**

Date of the examination

Name of the technician

Serial number

Description of the test performed and Result

Passed ☐ Failed ☐ Non applicable ☐**E.7 Protection against fraud**

Date of the examination

Name of the technician

Serial number

Description of the test performed and Result

Passed ☐ Failed ☐ Non applicable ☐

E.8 Checking operations

Date of the examination

Name of the technician

Serial number

Description of the test performed and Result

Passed ☐ Failed ☐ Non applicable ☐**E.9 Warm-up time Date of the examination**

Name of the technician

Serial number

Description of the test performed and Result

Passed ☐ Failed ☐ Non applicable ☐**E.10 Availability for measurement**

Date of the examination

Name of the technician

Serial number

Description of the test performed and Result

Passed ☐ Failed ☐ Non applicable ☐**E.11 Condition of exhalation**

Date of the examination

Name of the technician

Serial number

Description of the test performed and Result

Passed ☐ Failed ☐ Non applicable ☐**E.12 Continuity of exhalation**

Date of the examination

Name of the technician

Serial number

Description of the test performed and Result

Passed ☐ Failed ☐ Non applicable ☐**E.13 Alcohol in the upper respiratory tract**

Date of the examination

Name of the technician

Serial number

Description of the test performed and Result

Passed ☐ Failed ☐ Non applicable ☐**E.14 Software****E.14a Software - Identification**

Date of the examination

Name of the technician

Serial number

Description of the test performed and Result

Passed ☐ Failed ☐ Non applicable ☐**E.14b Software – Fraud protection**

Date of the examination

Name of the technician

Serial number

Description of the test performed and Result

Passed ☐ Failed ☐ Non applicable ☐

E.15 Printing device

Date of the examination

Name of the technician

Serial number

Description of the test performed and Result

Passed ☐ Failed ☐ Non applicable ☐

E.16 Storage of data

Date of the examination

Name of the technician

Serial number

Description of the test performed and Result

Passed ☐ Failed ☐ Non applicable ☐

E.17 Automatic storing

Date of the examination

Name of the technician

Serial number

Description of the test performed and Result

Passed ☐ Failed ☐ Non applicable ☐

E.18 Instruction manual

Date of the examination

Name of the technician

Serial number

Description of the test performed and Result

Passed ☐ Failed ☐ Non applicable ☐

E.19 Additional instructions

Date of the examination

Name of the technician

Serial number

Description of the test performed and Result

Passed ☐ Failed ☐ Non applicable ☐

E.20 Inscription

Date of the examination

Name of the technician

Serial number

Description of the test performed and Result

Passed ☐ Failed ☐ Non applicable ☐

E.21 Sealing

Date of the examination

Name of the technician

Serial number

Description of the test performed and Result

Passed ☐ Failed ☐ Non applicable ☐

F Performance tests**F.1 Maximum permissible errors and repeatability**

Date of the examination

Name of the technician

Serial Number

Test apparatus used for the test

Test conditions before and after the test (T°C, HR% and P)

Description of the test performed and Result

Passed ☐ Failed ☐ Non applicable ☐

Reference Concentration (mg/L)		Number of tests	Smallest error value (mg/L)	Highest error value (mg/L)	Average error (± mg/L)	Maximum permissible error (mg/L)	Experimental standard deviation (mg/L)	Maximum permissible standard deviation (mg/L)
Min	Max							

F.2 Drift

Date of the examination

Name of the technician

Serial Number

Test apparatus used for the test

Test conditions before and after the test (T°C, HR% and P)

Description of the test performed and Result

Passed ☐ Failed ☐ Non applicable ☐

Test1				Test 2					
Reference Concentration (mg/L)		Number of tests	Average error (mg/L)	Reference Concentration (mg/L)		Number of tests	Average error (mg/L)	Difference between the mean values (mg/L)	Maximum permissible deviation (mg/L)
				Min	Max				

F.3 Memory effects

Date of the examination

Name of the technician

Serial Number

Test apparatus used for the test

Test conditions before and after the test (T°C, HR% and P)

Description of the test performed and Result

Passed ☐ Failed ☐ Non applicable ☐

Test1							Test 2							Difference between the mean values (mg/L)	Maximum permissible deviation (mg/L)
Reference concentration (mg/L)		Number of tests	Smallest error value (mg/L)	Highest error value (mg/L)	Maximum permissible error (mg/L)	Average error (mg/L)	Reference concentration (mg/L)		Smallest error value (mg/L)	Highest error value (mg/L)	Maximum permissible error (mg/L)	Average error (mg/L)			
Min	Max						Min	Max							

F.4 Influence factors of the conditions of injection

Date of the examination

Name of the technician

Serial Number

Test apparatus used for the test

Test conditions before and after the test (T°C, HR% and P)

Description of the test performed and Result

Passed ☐ Failed ☐ Non applicable ☐

Reference Concentration (mg/L)		Number of tests	Characteristic of the tests	Smallest error value (mg/L)	Highest error value (mg/L)	Average error (± mg/L)	Maximum permissible error (mg/L)
Min	Max						

F.5 Static environmental temperatures (Dry heat and cold)

Date of the examination

Name of the technician

Serial Number

Test apparatus used for the test

Test conditions before and after the test (T°C, HR% and P)

Description of the test performed and Result

Passed ☐ Failed ☐ Non applicable ☐

Test		Reference Concentration (mg/L)		Number of tests	Smallest error value (mg/L)	Highest error value (mg/L)	Average error (± mg/L)	Maximum permissible error (mg/L)
		Min	Max					
Dry heat and Cold	Special condition value of the test (-10°C...)							
	Special condition value of the test (+30°C...)							

F.6 Damp heat, steady state (non condensing)

Date of the examination

Name of the technician

Serial Number

Test apparatus used for the test

Test conditions before and after the test (T°C, HR% and P)

Description of the test performed and Result

Passed ☐ Failed ☐ Non applicable ☐

Test		Reference Concentration (mg/L)		Number of tests	Smallest error value (mg/L)	Highest error value (mg/L)	Average error (± mg/L)	Maximum permissible error (mg/L)
		Min	Max					
Damp heat, steady state	Special condition value of the test							

F.7 Atmospheric pressure

Date of the examination

Name of the technician

Serial Number

Test apparatus used for the test

Test conditions before and after the test (T°C, HR% and P)

Description of the test performed and Result

Passed ☐ Failed ☐ Non applicable ☐

Test		Reference Concentration (mg/L)		Number of tests	Smallest error value (mg/L)	Highest error value (mg/L)	Average error (± mg/L)	Maximum permissible error (mg/L)
		Min	Max					
Atmospheric pressure	Special condition value of the test							

F.8 Random vibration

Date of the examination

Name of the technician

Serial Number

Test apparatus used for the test

Test conditions before and after the test (T°C, HR% and P)

Description of the test performed and Result

Passed ☐ Failed ☐ Non applicable ☐

Test		Reference Concentration (mg/L)		Number of tests	Smallest error value (mg/L)	Highest error value (mg/L)	Average error (± mg/L)	Maximum permissible error (mg/L)
		Min	Max					
Random vibration	Special condition value of the test							

F.9 Mains voltage variations (DC and AC)

Date of the examination

Name of the technician

Serial Number

Test apparatus used for the test

Test conditions before and after the test (T°C, HR% and P)

Description of the test performed and Result

Passed ☐ Failed ☐ Non applicable ☐

Test		Reference Concentration (mg/L)		Number of tests	Smallest error value (mg/L)	Highest error value (mg/L)	Average error (± mg/L)	Maximum permissible error (mg/L)
		Min	Max					
Mains voltage variations	Special condition value of the test							

F.10 Mains frequency variations (AC)

Date of the examination

Name of the technician

Serial Number

Test apparatus used for the test

Test conditions before and after the test (T°C, HR% and P)

Description of the test performed and Result

Passed ☐ Failed ☐ Non applicable ☐

Test		Reference Concentration (mg/L)		Number of tests	Smallest error value (mg/L)	Highest error value (mg/L)	Average error (± mg/L)	Maximum permissible error (mg/L)
		Min	Max					
Main frequency variation (AC)	Special condition value of the test							

F.11 Low voltage of internal battery

Date of the examination

Name of the technician

Serial Number

Test apparatus used for the test

Test conditions before and after the test (T°C, HR% and P)

Description of the test performed and Result

Passed ☐ Failed ☐ Non applicable ☐

Test		Reference Concentration (mg/L)		Number of tests	Smallest error value (mg/L)	Highest error value (mg/L)	Average error (± mg/L)	Maximum permissible error (mg/L)
		Min	Max					
Low voltage of internal battery	Special condition value of the test							

F.12 Voltage variations of road vehicle battery

Date of the examination

Name of the technician

Serial Number

Test apparatus used for the test

Test conditions before and after the test (T°C, HR% and P)

Description of the test performed and Result

Passed ☐ Failed ☐ Non applicable ☐

Test		Reference Concentration (mg/L)		Number of tests	Smallest error value (mg/L)	Highest error value (mg/L)	Average error (± mg/L)	Maximum permissible error (mg/L)
		Min	Max					
Voltage variations of road vehicle	Special condition value of the test							

battery								
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F.13 Total fraction by volume of hydrocarbons in the environment

Date of the examination

Name of the technician

Serial Number

Test apparatus used for the test

Test conditions before and after the test (T°C, HR% and P)

Description of the test performed and Result

Passed ☐ Failed ☐ Non applicable ☐

Test		Reference Concentration (mg/L)		Number of tests	Smallest error value (mg/L)	Highest error value (mg/L)	Average error (± mg/L)	Maximum permissible error (mg/L)
		Min	Max					
Total fraction by volume of hydrocarbons in the environment	Special condition value of the test							

F.14 Influence of the volume fraction of CO₂

Date of the examination

Name of the technician

Serial Number

Test apparatus used for the test

Test conditions before and after the test (T°C, HR% and P)

Description of the test performed and Result

Passed ☐ Failed ☐ Non applicable ☐

Test		Reference Concentration (mg/L)		Number of tests	Smallest error value (mg/L)	Highest error value (mg/L)	Average error (± mg/L)	Maximum permissible error (mg/L)
		Min	Max					
Influence of the volume fraction of CO ₂	Special condition value of the test							

F.15 Radiated, radio frequency, electromagnetic fields

Date of the examination

Name of the technician

Serial Number

Test apparatus used for the test

Test conditions before and after the test (T°C, HR% and P)

Description of the test performed and Result

Passed ☐ Failed ☐ Non applicable ☐

Test		Reference Concentration (mg/L)		Number of tests	Smallest error value (mg/L)	Highest error value (mg/L)	Average error (± mg/L)	Maximum permissible error (mg/L)
		Min	Max					
Radiated, radio frequency, electromagnetic fields	Special condition value of the test							

F.16 Conducted radio-frequency fields

Date of the examination

Name of the technician

Serial Number

Test apparatus used for the test

Test conditions before and after the test (T°C, HR% and P)

Description of the test performed and Result

Passed ☐ Failed ☐ Non applicable ☐

Test		Reference Concentration (mg/L)		Number of tests	Smallest error value (mg/L)	Highest error value (mg/L)	Average error (± mg/L)	Maximum permissible error (mg/L)
		Min	Max					
Conducted radio frequency fields	Special condition value of the test							

F.17 Electrostatic discharges

Date of the examination

Name of the technician

Serial Number

Test apparatus used for the test

Test conditions before and after the test (T°C, HR% and P)

Description of the test performed and Result

Passed ☐ Failed ☐ Non applicable ☐

Test		Reference Concentration (mg/L)		Number of tests	Smallest error value (mg/L)	Highest error value (mg/L)	Average error (± mg/L)	Maximum permissible error (mg/L)
		Min	Max					
Electrostatic discharges	Special condition value of the test							

F.18 Bursts on supply lines and on signal, data and control lines

Date of the examination

Name of the technician

Serial Number

Test apparatus used for the test

Test conditions before and after the test (T°C, HR% and P)

Description of the test performed and Result

Passed ☐ Failed ☐ Non applicable ☐

Test		Reference Concentration (mg/L)		Number of tests	Smallest error value (mg/L)	Highest error value (mg/L)	Average error (± mg/L)	Maximum permissible error (mg/L)
		Min	Max					
Burst on supply lines and on signal, data and control lines	Special condition value of the test							

F.19 Surges on signal, data and control lines

Date of the examination

Name of the technician

Serial Number

Test apparatus used for the test

Test conditions before and after the test (T°C, HR% and P)

Description of the test performed and Result

Passed ☐ Failed ☐ Non applicable ☐

Test		Reference Concentration (mg/L)		Number of tests	Smallest error value (mg/L)	Highest error value (mg/L)	Average error (± mg/L)	Maximum permissible error (mg/L)
		Min	Max					
Surges on signal, data and control lines	Special condition value of the test							

F.20 AC mains voltage dips, short interruptions and voltage variations

Date of the examination

Name of the technician

Serial Number

Test apparatus used for the test

Test conditions before and after the test (T°C, HR% and P)

Description of the test performed and Result

Passed ☐ Failed ☐ Non applicable ☐

Test		Reference Concentration (mg/L)		Number of tests	Smallest error value (mg/L)	Highest error value (mg/L)	Average error (± mg/L)	Maximum permissible error (mg/L)
		Min	Max					
AC mains voltage dips, short interruptions and voltage variations	Special condition value of the test							

F.21 Electronical transient conduction for external batteries for a vehicle

Date of the examination

Name of the technician

Serial Number

Test apparatus used for the test

Test conditions before and after the test (T°C, HR% and P)

Description of the test performed and Result

Passed ☐ Failed ☐ Non applicable ☐

Test		Reference Concentration (mg/L)		Number of tests	Smallest error value (mg/L)	Highest error value (mg/L)	Average error (± mg/L)	Maximum permissible error (mg/L)
		Min	Max					
Electronical transient conduction for external batteries for a vehicle	Special condition value of the test							

F.22 Mechanical shocks

Date of the examination

Name of the technician

Serial Number

Test apparatus used for the test

Test conditions before and after the test (T°C, HR% and P)

Description of the test performed and Result

Passed ☐ Failed ☐ Non applicable ☐

Test		Reference Concentration (mg/L)		Number of tests	Smallest error value (mg/L)	Highest error value (mg/L)	Average error (± mg/L)	Maximum permissible error (mg/L)
		Min	Max					
Mechanical Shocks	Special condition value of the test							

F.23 Shakes

Date of the examination

Name of the technician

Serial Number

Test apparatus used for the test

Test conditions before and after the test (T°C, HR% and P)

Description of the test performed and Result

Passed ☐ Failed ☐ Non applicable ☐

Test		Reference Concentration (mg/L)		Number of tests	Smallest error value (mg/L)	Highest error value (mg/L)	Average error (± mg/L)	Maximum permissible error (mg/L)
		Min	Max					
Shakes	Special condition value of the test							

F.24 Damp heat, cyclic (condensing)

Date of the examination

Name of the technician

Serial Number

Test apparatus used for the test

Test conditions before and after the test (T°C, HR% and P)

Description of the test performed and Result

Passed ☐ Failed ☐ Non applicable ☐

Test		Reference Concentration (mg/L)		Number of tests	Smallest error value (mg/L)	Highest error value (mg/L)	Average error (± mg/L)	Maximum permissible error (mg/L)
		Min	Max					
Damp heat, cyclic	Special condition value of the test							

F.25 Storage test

Date of the examination

Name of the technician

Serial Number

Test apparatus used for the test

Test conditions before and after the test (T°C, HR% and P)

Description of the test performed and Result

Passed ☐ Failed ☐ Non applicable ☐

Test		Reference Concentration (mg/L)		Number of tests	Smallest error value (mg/L)	Highest error value (mg/L)	Average error (± mg/L)	Maximum permissible error (mg/L)
		Min	Max					

Storage test	Special condition value of the test							
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F.26 Durability

Date of the examination

Name of the technician

Serial Number

Test apparatus used for the test

The requirement is met if the instrument submitted to the accuracy tests and disturbance test passes each single test:

Passed ☐ Failed ☐ Non applicable ☐

F.27 Physiological influence quantities

Date of the examination

Name of the technician

Serial Number

Test apparatus used for the test

Test conditions before and after the test (T°C, HR% and P)

Description of the test performed and Result

Passed ☐ Failed ☐ Non applicable ☐

Concentration of the reference gas (mg/L \pm 5%)	Nominal value for vapour mass concentration (mg/L \pm 5%)	Number of tests	Results of the EBA without the interfering substances (mg/L)	Results of the EBA with the interfering substances (mg/L)	Variation (\pm mg/L)	Maximum permissible variation (mg/L)