Umwelt Bundesamt

TÜVRheinland®
Precisely Right.

CERTIFICATE

of Product Conformity (QAL1)

Certificate No.: 0000032300_01

AMS designation:	VOC72M for Benzene
Manufacturer:	Environnement S.A. 111 Boulevard Robespierre 78304 Poissy cedex France
Test Laboratory:	TÜV Rheinland Energy GmbH

This is to certify that the AMS has been tested and certified according to the standards VDI 4202-1 (2010), VDI 4203-3 (2010), EN 14662-3 (2005), EN 15267-1 (2009) and DIN EN 15267-2 (2009).

Certification is awarded in respect of the conditions stated in this certificate (this certificate contains 6 pages).

TÜVRheinland® CERTIFIED

Suitability Tested
Complying with
2008/50/EC
EN 15267
Regular
Surveillance

www.tuv.com
ID 0000032300

Publication in the German Federal Gazette (BAnz) of 05 March 2013

This certificate will expire on:
04 March 2023

German Federal Environment Agency
Dessau, 05 March 2018

TÜV Rheinland Energy GmbH
Cologne, 04 March 2018

Dr. Marcel Langner
Head of Section II 4.1

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TÜV Rheinland Energy GmbH
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51105 Köln

Test institute accredited to EN ISO/IEC 17025:2005 by DAkkS (German Accreditation Body).
This accreditation is limited to the accreditation scope defined in the enclosure to the certificate D-PL-11120-02-00.

10/221 2.08

Test Report:	936/21217807/A dated 16 August 2012
Initial certification:	05 March 2013
Expiry date:	04 March 2023
Certificate:	Renewal (of previous certificate 0000032300 dated 22 March 2013 valid until 04 March 2018)
Publication:	BAnz AT 05.03.2013 B10, chapter IV no. 1.1

Approved application
The certified AMS is suitable for continuous ambient air monitoring of benzene (stationary operation).

The suitability of the AMS for this application was assessed on the basis of a laboratory test and a three-months field test.

The AMS is approved for an ambient temperature range of +5 °C to +35 °C.

The notification of suitability of the AMS, performance testing and the uncertainty calculation have been effected on the basis of the regulations applicable at the time of testing. As changes in legal provisions are possible, any potential user should ensure, in consultation with the manufacturer, that this AMS is suitable for monitoring the limit values relevant to the application.

Any potential user should ensure, in consultation with the manufacturer, that this AMS is suitable for ambient air applications at which it will be installed.

Basis of the certification
This certification is based on:

- Test report 936/21217807/A dated 16 August 2012 issued by TÜV Rheinland Energie und Umwelt GmbH
- Suitability announced by the German Federal Environment Agency (UBA) as the relevant body
- The ongoing surveillance of the product and the manufacturing process

Publication in the German Federal Gazette: BAnz AT 05.03.2013 B10, chapter IV no. 1.1, UBA announcement dated 12 February 2013:

AMS designation:
VOC72M for Benzene

Manufacturer:
Environnement S. A., Poissy, France

Field of application:
For continuous ambient air monitoring of benzene (stationary operation)

Measuring range during performance testing:

Component	Certification range	Unit
Benzene	0–50	µg/m³

Software version:
3.0.9

Restriction:
The measuring system may only be operated in temperature ranges of 5 °C–35 °C.

Notes:

1. Given the method used, the instrument does not provide a living zero.
2. The measuring system must be operated inside a lockable measurement container.
3. The test report on performance testing is available on the internet at www.qal1.de.

Test Report:
TÜV Rheinland Energie und Umwelt GmbH, Cologne
Report no.: 936/21217807/A dated 16 August 2012

Publication in the German Federal Gazette: BAnz AT 26.08.2015 B4, chapter V notification 45,
UBA announcement dated 22 July 2015:

45 Notification as regards Federal Environment Agency (UBA) notices of 12 February 2013 (BAnz AT 05.03.2013 B10, chapter IV number 1.1)

The current software version of the VOC72M measuring system for benzene manufactured by Environnement S.A. is:

v3.3.8

The KNF PMF1476-86 sample gas pump was replaced by a sample gas pump type KNF PMF1559-86.

The KNF PML9399-NF25 pump used for cooling the separating column was replaced by a new pump type KNF PML10386-NF25.

Statement issued by TÜV Rheinland Energie und Umwelt GmbH dated 16 March 2015

Certified product
This certification applies to automated measurement systems conforming to the following description:

The VOC72M ambient air monitor has been designed to analyse volatile organic compounds. The measuring principle relies on separating the measured compounds by way of gas chromatography and then using photoionization for detection.

Sampling is ensured via a gas trap filled with a specific adsorbent. The standard cycle takes 15 minutes.

The VOC72M measuring system entirely consists of a compact housing. The instrument can be operated via a display at its front panel. The user is able to check measurement data and instrument information, change parameters and check correct functionality of the AMS.

The current software version is:	v3.3.8
The current manual version is	April 2013

General remarks

This certificate is based upon the equipment tested. The manufacturer is responsible for ensuring that on-going production complies with the requirements of the EN 15267. The manufacturer is required to maintain an approved quality management system controlling the manufacturing process for the certified product. Both the product and the quality management systems shall be subject to regular surveillance.

If a product of the current production does not conform to the certified product, TÜV Rheinland Energy GmbH must be notified at the address given on page 1.

A certification mark with an ID-Number that is specific to the certified product is presented on page 1 of this certificate.

This document as well as the certification mark remains property of TÜV Rheinland Energy GmbH. Upon revocation of the publication the certificate loses its validity. After the expiration of the certificate and on request of TÜV Rheinland Energy GmbH this document shall be returned and the certificate mark must no longer be used.

The relevant version of this certificate and its expiration date are also accessible on the internet at **qal1.de**.

Certification of the VOC72M measuring system is based on the documents listed below and the regular, continuous surveillance of the manufacturer's quality management system:

Initial certification according to EN 15267

Certificate no. 0000032300: 22 March 2013
Expiry date of the certificate: 04 March 2018

Test report: 936/21217807/A dated 16 August 2012
TÜV Rheinland Energie und Umwelt GmbH, Cologne
Publication: BAnz AT 05.03.2013 B10, chapter IV no. 1.1
UBA announcement dated 12 February 2013

Notification in accordance with EN 15267

Statement issued by TÜV Rheinland Energie und Umwelt GmbH dated 16 March 2015
Publication: BAnz AT 26.08.2015 B4, chapter V notification 45
UBA announcement dated 22 July 2015
(New software version, replacement of sample gas pump and cooling pump for separating column)

Renewal of the certificate

Certificate no. 0000032300_01: 05 March 2018
Expiry date of the certificate: 04 March 2023

Standard uncertainty for the laboratory test		Device 1 SN 005	Device 2 SN 006		related concentration SN 005	related concentration SN 006
Uncertainty of test gas	u_{span} [µg/m³]	0,1230	0,1230	c_{Benz} [µg/m³]	5,00	5,00
Lack of fit	u_{fit} [µg/m³]	0,0280	0,0200	c_{Benz} [µg/m³]	5,00	5,00
Repeatability standard deviation	u_r [µg/m³]	0,0200	0,0100	c_{Benz} [µg/m³]	5,00	5,00
Interference of H2O	u_{rh} [µg/m³]	0,0060	0,0140	c_{Benz} [µg/m³]	35,00	35,00
Coefficient of sample pressure	u_p [µg/m³]	0,0380	0,0080	c_{Benz} [µg/m³]	35,00	35,00
Coefficient of surrounding temperature	u_{Ts} [µg/m³]	0,0087	0,0135	c_{Benz} [µg/m³]	35,00	35,00
Coefficient of electrical voltage	u_v [µg/m³]	0,0172	0,0058	c_{Benz} [µg/m³]	35,00	35,00
Standard uncertainty uc/c		**2,56%**	**2,50%**			
Expanded uncertainty $U_{c, rel}$		**5,11%**	**5,00%**			

Standard uncertainty for the field test		Device 1 SN 005	Device 2 SN 006		related concentration SN 005	related concentration SN 006
Uncertainty of test gas	u_{span} [µg/m³]	0,1230	0,1230	c_{Benz} [µg/m³]	5,00	5,00
Lack of fit	u_{fit} [µg/m³]	0,0280	0,0200	c_{Benz} [µg/m³]	5,00	5,00
Reproducibility in field	u_{rf} [µg/m³]	0,0250	0,0250	c_{Benz} [µg/m³]	1,43	1,40
Interference of H2O	u_{rh} [µg/m³]	0,0060	0,0140	c_{Benz} [µg/m³]	35,00	35,00
Coefficient of sample pressure	u_p [µg/m³]	0,0380	0,0080	c_{Benz} [µg/m³]	35,00	35,00
Coefficient of surrounding temperature	u_{Ts} [µg/m³]	0,0087	0,0135	c_{Benz} [µg/m³]	35,00	35,00
Coefficient of electrical voltage	u_v [µg/m³]	0,0172	0,0058	c_{Benz} [µg/m³]	35,00	35,00
Long term drift	u_d [µg/m³]	0,2300	0,2500	c_{Benz} [µg/m³]	35,00	35,00
Standard uncertainty uc/c		**3,14%**	**3,15%**			
Expanded uncertainty Uc, rel		**6,28%**	**6,30%**			