

QAL1 Evaluation acc. to DIN EN 14956

Tested AMS:

D-R 300-40

Component

Dust

Suitability test report:

Report-#. 936/ 801004 dated 31.07.1992, TÜV Collogne

QAL1 test report in

English

Measuring range (MBE Mess)	50	mg/m3
Measuring range during suitability test (MBE EP)	2.8	mg/m3
Limit value ctest acc. to EN ISO 14956	30	mg/m3
95% Confidence interval	30	%
95% Confidence interval	9	mg/m3
95% Confidence interval calculated result	1.64	mg/m3
95% Requirement of confidence range met	yes	

Range of influencing parameters	Min	Max	Delta	Unit
Pressure range	950	1030	80	hPa
Temperature range	-10	40	50	°C
Flow influence	0	0	0	l/ h
Mains range	190	250	60	V

Unit data acc. to suitability test		Value	Unit	Reference	Deviation at ctest	Unit
Lack of fit		1.60	%	of MBE EP	0.48	mg/m3
Flow influence	per 10 l/h	0.00	%	of MBE EP	0.00	mg/m3
Detection limit		1.00	%	of MBE EP	0.30	mg/m3
Drift at Zero		0.30	%	of MBE EP	0.09	mg/m3
Drift at ctest		1.00	%	of MBE EP	0.30	mg/m3
Pressure influence	per hPa	0.00	%	of MBE EP	0.00	mg/m3
Temperature influence at Zero	per 10 K	0.00	%	of MBE EP	0.00	mg/m3
Temperature influence at ctest	per 10 K	1.60	%	of MBE EP	0.48	mg/m3
Mains influence	per 10 V	0.00	%	of MBE EP	0.00	mg/m3
Test gas uncertainty		0.00	%	of MBE EP	0.00	mg/m3
Soiling uncertainty		0.40	%	of MBE EP	0.12	mg/m3
Deviation uncertainty		0.00	%	of MBE EP	0.00	mg/m3
Sample line loss		0.00	%	of MBE EP	0.00	mg/m3
Repeated precision at ctest		0.88	%	of MBE EP	0.27	mg/m3
Long term stability of calibration standards		0.00	%	of MBE EP	0.00	mg/m3

Cross sensitivities

Component	Unit	lower concentration	upper concentration	Test concentration	Influence suitability test % of MBE EP	Uncertainty acc. 14956 mg/m3
CO	mg/m3	0	300	420	0	0.000
CO2	%	0	15	21	0	0.000
CH4	mg/m3	0	50	420	0	0.000
N2O	mg/m3	0	20	20.6	0	0.000
NO	mg/m3	0	300	39	0	0.000
NO2	mg/m3	0	30	39	0	0.000
NH3	mg/m3	0	20	505	0	0.000
SO2	mg/m3	0	200	218	0	0.000
HCl	mg/m3	0	50	36	0	0.000
H2O	g/m3	0	150	150	0	0.000
Positive sum						0.000
Negative sum						0.000

Uncertainties at ctest		
Detection limit	mg/m3	0.173
Linearity	mg/m3	0.277
Drift at Zero	mg/m3	0.052
Drift at ctest	mg/m3	0.173
Repeated precision at ctest	mg/m3	0.133
Pressure	mg/m3	0.000
Temperature	mg/m3	0.733
Flow	mg/m3	0.000
Mains	mg/m3	0.000
Test gas	mg/m3	0.000
Soiling	mg/m3	0.069
Deviation	mg/m3	0.000
Sample line loss	mg/m3	0.000
CO	mg/m3	0.000
CO2	mg/m3	0.000
CH4	mg/m3	0.000
N2O	mg/m3	0.000
NO	mg/m3	0.000
NO2	mg/m3	0.000
NH3	mg/m3	0.000
SO2	mg/m3	0.000
HCl	mg/m3	0.000
H2O	mg/m3	0.000
Combined uncertainty	mg/m3	0.818
Extended uncertainty	mg/m3	1.636

Calculated sAMS at Zero	mg/m3	0.181
Calculated sAMS at ctest	mg/m3	0.773
sAMS at Zero, corrected	mg/m3	1.500
sAMS at ctest, corrected	mg/m3	1.500

This report confirms that the product
D-R 300-40
 complies with the requirements of EN 14181:2004 QAL1
 according to the International Standard ISO 14956:2002
 for the above specified operating conditions.