

Annex to declaration of accreditation (scope of accreditation)
 Normative document: EN ISO/IEC 17025:2017
 Registration number: **K 064**

of **Scott Speciality Gases Netherlands B.V.**
Calibration Laboratory

This annex is valid from: **27-01-2021 to 01-05-2021** Replaces annex dated: **16-09-2020**
Prolonged until 01-05-2022

Location(s) where activities are performed under accreditation

Head Office

Takkebijsters 46- 48
 4817 BL
 Breda
 The Netherlands

Location	Abbreviation/ location code
Takkebijsters 46 – 48 4817 BL Breda The Netherlands	Br

HCS code	Measured quantity, Instrument, Measure	Range Amount fractions (mol/mol) ²⁾	CMC ¹⁾ Relative uncertainties	Remarks / Internal Instructions	Location
RM 2 0	Gas mixtures				
	Binary mixtures ISO 6143 and ISO Guide 35				
	CH ₄ in Air	(1·10 ⁻⁶ - 10·10 ⁻⁶) (10·10 ⁻⁶ - 100·10 ⁻⁶)	2.0 % 1.0 %		Br
	C ₃ H ₈ in Air	(10·10 ⁻⁶ - 0.33·10 ⁻²)	1.0 %	(measured as THC)	
	NO in N ₂	(1·10 ⁻⁶ - 5·10 ⁻⁶) (5·10 ⁻⁶ - 0.1·10 ⁻²)	2.0 % 1.0 %		
	NO ₂ in Air	(3·10 ⁻⁶ - 100·10 ⁻⁶) (100·10 ⁻⁶ - 0.1·10 ⁻²)	2.0 % 1.0 %		

¹ Calibration and Measurement Capability (CMC): Demonstrated measurement uncertainty, with coverage probability of 95%, in a given measurement point or measurement range. Measurement uncertainty, *U*, is calculated according to EA-4/02 "Evaluation of the Uncertainty of Measurement in Calibration".

This annex has been approved by the Board of the Dutch Accreditation Council, on its behalf,

J.A.W.M. de Haas

of **Scott Speciality Gases Netherlands B.V.**
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	NO _x in N ₂	(3·10 ⁻⁶ - 5·10 ⁻⁶) (5·10 ⁻⁶ - 100·10 ⁻⁶)	2.0 % 1.0 %	(measured as NO)	Br
	NO _x in Air	(3·10 ⁻⁶ - 100·10 ⁻⁶)	3.0 %	(measured as NO ₂)	
	O ₂ in N ₂	(0.4·10 ⁻² – 1.0·10 ⁻²) (1.0·10 ⁻² – 25·10 ⁻²)	2.0 % 1.0 %		
	CO in N ₂	(150·10 ⁻⁶ - 15·10 ⁻²)	1.0 %		
	CO ₂ in N ₂	(200·10 ⁻⁶ - 20·10 ⁻²)	1.0 %		
	SO ₂ in N ₂	(50·10 ⁻⁶ - 0.5·10 ⁻²)	1.0 %		

Natural Gas Mixtures
 ISO 6143 and ISO Guide 35

	N ₂	(0.1·10 ⁻² - 20·10 ⁻²)	1.0 %		Br
	CO ₂	(0.05·10 ⁻² - 9.0·10 ⁻²)	1.0 %		
	CH ₄	(70·10 ⁻² - 92.5·10 ⁻²)	0.1 %		
	C ₂ H ₆	(0.3·10 ⁻² - 11·10 ⁻²)	1.0 %		
	C ₃ H ₈	(0.1·10 ⁻² - 5·10 ⁻²)	1.0 %		
	iso-C ₄ H ₁₀	(0.05·10 ⁻² - 1·10 ⁻²)	1.0 %		
	n-C ₄ H ₁₀	(0.03·10 ⁻² - 1·10 ⁻²)	1.0 %		
	iso-C ₅ H ₁₂	(0.005·10 ⁻² - 0.5·10 ⁻²)	1.0 %		
	n-C ₅ H ₁₂	(0.005·10 ⁻² - 0.6·10 ⁻²)	1.0 %		
	n-C ₆ H ₁₄	(0.005·10 ⁻² - 0.4·10 ⁻²)	1.0 %		

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Calculated values for Physical Properties
 ISO 6976³⁾

	Molar mass	$N_2 < 20 \cdot 10^{-2}$	0.1%		Br
	Compression factor	$CO_2 < 9 \cdot 10^{-2}$	0.1%		
	Gross Calorific value	$C_2H_6 < 11 \cdot 10^{-2}$	0.1%		
	Relative Density	other components $< 5 \cdot 10^{-2}$	0.1%		
	Density	$CH_4 < 92.5 \cdot 10^{-2}$	0.1%		
	Gross Wobbe Index		0.1%		

Calibration Gas for Motor Vehicle Exhaust Emission Measurements ⁴⁾
 ISO 6143 and ISO Guide 35

	C_3H_8	$(72 \cdot 10^{-6} - 1000 \cdot 10^{-6})$ $(1000 \cdot 10^{-6} - 2200 \cdot 10^{-6})$	2.0 % 1.0 %		Br
	CO	$(0.225 \cdot 10^{-2} - 5.5 \cdot 10^{-2})$	1.0 %		
	CO ₂	$(2.7 \cdot 10^{-2} - 15.4 \cdot 10^{-2})$	1.0 %		
	O ₂	$(0.45 \cdot 10^{-2} - 2.0 \cdot 10^{-2})$ $(2.0 \cdot 10^{-2} - 22.99 \cdot 10^{-2})$	2.0 % 1.0 %		
	N ₂	Balance gas			

¹⁾ Calibration and Measurement Capability (CMC): Demonstrated measurement uncertainty, with coverage probability of 95%, in a given measurement point or measurement range. Measurement uncertainty, *U*, is calculated according to EA-4/02 "Expression of the Uncertainty of Measurement in Calibration".

²⁾ The composition of the mixtures is being certified, prepared and analysed as mole fraction. Conversion calculations are performed in conformance with ISO14912.

³⁾ Calibration and Measurement Capability (CMC): Demonstrated measurement uncertainty, with coverage probability of 95%, in a given measurement point or measurement range. Measurement uncertainty, *U*, is calculated according to ISO 6976.

⁴⁾ During conversion into volume fractions the following reference conditions are presumed: Temperature: 15°C and pressure: 100,0 kPa.

Calibrations are performed on permanent laboratory premises.