

Annex to declaration of accreditation (scope of accreditation)
 Normative document: ISO/IEC 17025:2005
 Registration number: **K 064**

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

This annex is valid from: **14-03-2018** to **01-05-2021**

Replaces annex dated: **26-04-2017**

Location where activities are performed under accreditation

Head Office

Takkebijsters 46 -48
 4817 BL Breda
 The Netherlands

HCS code	Measured quantity, Instrument, Measure	Range Amount fractions (mol/mol) ²⁾	CMC ¹⁾ Relative uncertainties	Internal instructions
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RM 20

Gas Mixtures

Binary mixtures

conforming to 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 %	
	CH ₄ in N ₂	(1·10 ⁻⁶ - 10·10 ⁻⁶) (10·10 ⁻⁶ - 100·10 ⁻⁶)	2.0 % 1.0 %	
	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 %	
	NO _x in N ₂	(3·10 ⁻⁶ - 5·10 ⁻⁶) (5·10 ⁻⁶ - 100·10 ⁻⁶)	2.0 % 1.0 %	(measured as NO)
	NO _x in Air	(3·10 ⁻⁶ - 100·10 ⁻⁶)	3.0 %	(measured as NO ₂)
	O ₂ in N ₂	(1.0·10 ⁻² - 25·10 ⁻²)	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 %	

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

J.A.W.M. de Haas
 Director of Operations

of **Scott Specialty Gases Netherlands B.V.**
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Natural Gas mixtures

conforming to ISO 6143 and ISO Guide 35

	N ₂	(0.1·10 ⁻² - 20·10 ⁻²)	1.0 %	
	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 %	
	neo-C ₅ H ₁₂	(0.005·10 ⁻² - 0.5·10 ⁻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 %	

Calculated values for Physical Properties

conforming to ISO 6976 ³⁾

	Molar mass	N ₂ < 20·10 ⁻²	0.1%	
	Compression factor	CO ₂ < 9·10 ⁻²	0.1%	
	Gross Calorific value	C ₂ H ₆ < 11·10 ⁻²	0.1%	
	Relative Density	other components < 5·10 ⁻²	0.1%	
	Density	CH ₄ < 92.5·10 ⁻²	0.1%	
	Gross Wobbe Index		0.1%	

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Calibration Gas for Motor Vehicle Exhaust Emission Measurements ⁴⁾

conforming to ISO 6143 and ISO Guide 35

	C ₃ H ₈	(100·10 ⁻⁶ - 2000·10 ⁻⁶)	1.0 %	
	CO	(0.40·10 ⁻² - 3.5·10 ⁻²)	1.0 %	
	CO ₂	(3.00·10 ⁻² - 14·10 ⁻²)	1.0 %	
	N ₂	Balance gas		

Remarks:

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 ISO14912:2003(E).

³⁾ The reference under ¹⁾ is not applicable.

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.