

## Amount of substance, Gases, Slovakia, SMU (Slovensky Metrologicky Ustav)



The expanded uncertainty range is expressed as the uncertainty of the smallest value of the quantity to the uncertainty of the largest value of the quantity.

The expanded uncertainties correspond to  $k = 2$  (level of confidence 95%)

NMI Service Identifier	Measurement Service Sub-Category	Matrix	Measurand		Dissemination Range of Measurement Capability			Range of Expanded Uncertainties as Disseminated				Range of Certified Values in Reference Materials			Range of Expanded Uncertainties for Certified Value				Mechanism(s) for Measurement Service Delivery	Comments
			Analyte or Component	Quantity	From	To	Unit	From	To	Unit	Is the expanded uncertainty a relative one?	From	To	Unit	From	To	Unit	Is the expanded uncertainty a relative one?		
D02	Environmental	nitrogen	carbon dioxide	Amount-of-substance fraction	0.1	100	mmol/mol	0.5	0.3	%	Yes	0.1	100	mmol/mol	0.5	0.3	%	Yes	PRMs, CRMs, instrument calibration	Approved on 19 July 2010
D12	Environmental	nitrogen	carbon dioxide	Amount-of-substance fraction	10	200	mmol/mol	0.3	0.2	%	Yes	10	200	mmol/mol	0.3	0.2	%	Yes	PRM instrument calibration	Approved on 19 July 2010
D03	Environmental	nitrogen	carbon monoxide	Amount-of-substance fraction	3	1000	µmol/mol	1.0	0.4	%	Yes	3	1000	µmol/mol	1.0	0.4	%	Yes	PRMs, CRMs, instrument calibration	Approved on 19 July 2010
D13	Environmental	nitrogen	carbon monoxide	Amount-of-substance fraction	1	200	mmol/mol	0.4	0.2	%	Yes	1	200	mmol/mol	0.4	0.2	%	Yes	PRMs, CRMs, instrument calibration	Approved on 19 July 2010
D04	Environmental	nitrogen	propane	Amount-of-substance fraction	0.1	10	mmol/mol	0.60	0.50	%	Yes	0.1	10	mmol/mol	0.30	0.20	%	Yes	PRM, calibration	
D01	Environmental	nitrogen	carbon dioxide	Amount-of-substance fraction	60	140	mmol/mol	0.35	0.30	%	Yes	60	140	mmol/mol	0.20	0.20	%	Yes	PRM, calibration	
			carbon monoxide		5	35	mmol/mol	0.9	0.35	%	Yes	5	35	mmol/mol	0.30	0.25	%	Yes		
			propane		0.1	2	mmol/mol	1	0.60	%	Yes	0.1	2	mmol/mol	0.40	0.40	%	Yes		
D05	Forensic	nitrogen	ethanol	Amount-of-substance fraction	50	800	µmol/mol	1.2	0.8	%	Yes	50	800	µmol/mol	0.70	0.50	%	Yes	PRM, calibration	Approved on 01 March 2005

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90106 37	fuel	synthetic natural gas	methane	Amount-of-substance fraction	700	990	mmol/mol	0.25	0.25	%	Yes	700	990	mmol/mol	0.2	0.2	%	Yes	PRM D16, CRM D06, instrument calibration RM-s	Approved on 02 July 2007
			ethane		5	100	mmol/mol	0.8	0.3	%	Yes	5	100	mmol/mol	0.25	0.2	%	Yes		
			propane		1	50	mmol/mol	0.8	0.4	%	Yes	1	50	mmol/mol	0.35	0.25	%	Yes		
			n-butane		0.5	10	mmol/mol	0.9	0.5	%	Yes	0.5	10	mmol/mol	0.5	0.3	%	Yes		
			i-butane		0.5	10	mmol/mol	0.9	0.5	%	Yes	0.5	10	mmol/mol	0.5	0.3	%	Yes		
			carbon dioxide		1	30	mmol/mol	0.8	0.4	%	Yes	1	30	mmol/mol	0.35	0.2	%	Yes		
			nitrogen		10	150	mmol/mol	0.5	0.3	%	Yes	10	150	mmol/mol	0.3	0.2	%	Yes		
			n-pentane		0.2	1	mmol/mol	1.1	0.6	%	Yes	0.2	1	mmol/mol	0.5	0.4	%	Yes		
			i-pentane		0.2	1	mmol/mol	0.8	0.5	%	Yes	0.2	1	mmol/mol	0.5	0.4	%	Yes		
			neo-pentane		0.2	1	mmol/mol	3	3	%	Yes	0.2	1	mmol/mol	1.5	1.0	%	Yes		
			n-hexane		0.1	1	mmol/mol	1	0.7	%	Yes	0.1	1	mmol/mol	0.8	0.5	%	Yes		
D20	Environmental	nitrogen	carbon dioxide	Amount-of-substance fraction	50	200	mmol/mol	0.2	0.2	%	Yes	50	200	mmol/mol	0.2	0.2	%	Yes	PRMs-D20, instrument calibration	Approved on 06 December 2011
			carbon monoxide		10	1000	µmol/mol	0.7	0.4	%	Yes	10	1000	µmol/mol	0.7	0.4	%	Yes		
			propane		1	100	µmol/mol	1.0	1.0	%	Yes	1	100	µmol/mol	1.0	1.0	%	Yes		
			nitrogen monoxide		10	100	µmol/mol	1.5	1.0	%	Yes	10	100	µmol/mol	1.5	1.0	%	Yes		
			sulphur dioxide		10	100	µmol/mol	1.5	1.0	%	Yes	10	100	µmol/mol	1.5	1.0	%	Yes		
D21	Environmental	nitrogen	sulphur dioxide	Amount-of-substance fraction	10	100	µmol/mol	1.5	1.0	%	Yes	10	100	µmol/mol	1.5	1.0	%	Yes	PRMs-D21, instrument calibration	Approved on 06 December 2011

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D22	Environmental	nitrogen	nitrogen monoxide	Amount-of-substance fraction	10	100	µmol/mol	1.5	1.0	%	Yes	10	100	µmol/mol	1.5	1.0	%	Yes	PRMs-D22, instrument calibration	Approved on 06 December 2011