

Amount of substance, Biological fluids and materials, Germany, PTB (Physikalisch-Technische Bundesanstalt)

No range of certified values in reference materials declared by Germany.

In the case where an uncertainty range is given, 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.

NMI Service Identifier	Measurement Service Sub-Category	Matrix	Measurand		Dissemination Range of Measurement Capability			Range of Expanded Uncertainties as Disseminated					Mechanism(s) for Measurement Service Delivery	Comments	
			Analyte or Component	Quantity	From	To	Unit	From	To	Unit	Coverage factor	Level of confidence			Is the expanded uncertainty a relative one?
3.21-metab 1	Blood serum	blood serum	cholesterol	Amount-of-substance concentration	3.0	9.0	mmol/l	1.5	1.1	%	2	95%	Yes	Calibration	
3.21-metab 2	Blood serum	blood serum	glucose	Amount-of-substance concentration	5.0	16.0	mmol/l	1.5	1.2	%	2	95%	Yes	Calibration	
3.21-metab 3	Blood serum	blood serum	creatinine	Amount-of-substance concentration	0.045	0.55	mmol/l	1.5	1.5	%	2	95%	Yes	Calibration	
3.21-metab 4	Renal fluids	renal fluids	creatinine	Amount-of-substance concentration	2.5	7.0	mmol/l	1.5	1.5	%	2	95%	Yes	Calibration	
3.21-metab 5	Blood serum	blood serum	uric acid	Amount-of-substance concentration	0.2	0.7	mmol/l	2.0	1	%	2	95%	Yes	Calibration	
3.21-metab 6	Blood serum	blood serum	urea	Amount-of-substance concentration	5.0	30.0	mmol/l	2.5	1	%	2	95%	Yes	Calibration	
3.21-horm 1	Blood serum	blood serum	cortisol	Amount-of-substance concentration	0.11	0.5	µmol/l	3.0	2.5	%	2	95%	Yes	Calibration	
3.22-6	Blood serum	blood serum	sodium	Mass fraction	2.7	3.2	g/kg	0.6	0.4	%	2	95%	Yes	Calibration	
3.22-7	Blood serum	blood serum	potassium	Mass fraction	130	240	mg/kg	0.9	0.7	%	2	95%	Yes	Calibration	
3.22-8	Blood serum	blood serum	lithium	Mass fraction	4	18	mg/kg	1.1	0.9	%	2	95%	Yes	Calibration	
3.22-9	Blood serum	blood serum	calcium	Mass fraction	87	136	mg/kg	0.9	0.7	%	2	95%	Yes	Calibration	
3.22-10	Blood serum	blood serum	magnesium	Mass fraction	18	45	mg/kg	1.0	0.8	%	2	95%	Yes	Calibration	
3.22-11	Blood serum	blood serum	chlorine (as chloride)	Mass fraction	3.1	4.1	g/kg	0.6	0.4	%	2	95%	Yes	Calibration	
horm2	Blood serum	blood serum	progesterone	Amount of substance concentration	3	100	nmol/l	3	3	%	2	95%	Yes	Calibration	Approved on 01 March 2005
3.12-hGH	Blood serum	blood serum	human Growth Hormone (hGH, somatotropin)	Amount-of-substance concentration	200	1300	fmol/mL	5	5	%	2	95%	Yes	Calibration	Approved on 30 July 2009
3.12-THC	Blood serum	blood serum	Δ9-tetrahydrocannabinol (THC)	Mass concentration	1	2.4	ng/mL	2	2	%	2	95%	Yes	Calibration	Approved on 30 July 2009
AC-Bio-001	Tissues	bovine liver	iron	Mass fraction	150	250	mg/kg	1.1	1.1	%	2	95%	Yes	Calibration	Approved on 30 July 2009
AC-Bio-002	Tissues	bovine liver	lead	Mass fraction	40	80	µg/kg	3.4	3.4	%	2.2	95%	Yes	Calibration	Approved on 30 July 2009
AC-Bio-003	Tissues	bovine liver	chromium	Mass fraction	30	70	µg/kg	7.5	7.5	%	2.3	95%	Yes	Calibration	Approved on 30 July 2009

Amount of substance, Biological fluids and materials, Germany, BAM (Bundesanstalt für Materialforschung und -prüfung)



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			Analyte or Component	Quantity	From	To	Unit	From	To	Unit	Coverage factor	Level of confidence			Is the expanded uncertainty a relative one?
I.4-02-17-1	Blood serum	serum	zinc	Mass fraction	1	3	µg/g	5	1.5	%	2	95%	Yes	Reference measurement	
I.4-02-17-2	Blood serum	serum	copper	Mass fraction	1	3	µg/g	5	1.5	%	2	95%	Yes	Reference measurement	
I.4-02-17-3	Blood serum	serum	iron	Mass fraction	1	3	µg/g	5	1.5	%	2	95%	Yes	Reference measurement	
BioMa-1	Tissues	mussel tissue	PCB 28	Mass fraction	5	1000	ng/g	20	5	%	2	95%	Yes	Reference measurement	Approved on 02 November 2006
BioMa-2	Tissues	mussel tissue	PCB 101	Mass fraction	5	1000	ng/g	20	5	%	2	95%	Yes	Reference measurement	Approved on 02 November 2006
BioMa-3	Tissues	mussel tissue	PCB 105	Mass fraction	5	1000	ng/g	20	5	%	2	95%	Yes	Reference measurement	Approved on 02 November 2006
BioMa-4	Tissues	mussel tissue	PCB 153	Mass fraction	5	1000	ng/g	20	5	%	2	95%	Yes	Reference measurement	Approved on 02 November 2006
BioMa-5	Tissues	mussel tissue	PCB 170	Mass fraction	5	1000	ng/g	20	5	%	2	95%	Yes	Reference measurement	Approved on 02 November 2006