

ACCREDITATION SCOPE

Federal Budgetary Institution “State Regional Centre for Standardization,
Metrology and Testing in Sverdlovsk region”
(FBI “URALTEST”)

name of the legal entity or family name, first name and patronymic of an individual entrepreneur (if any)

RUSSIAN FEDERATION, Sverdlovsk region, Ekaterinburg,
Krasnoarmeyskaya str., 2a;

624070, RUSSIAN FEDERATION, Sverdlovsk region, Sredneuralsk, Gashev str., 2a;

RUSSIAN FEDERATION, Sverdlovsk region, Verkhnyaya Pyshma, automobile road Ekaterinburg –
Nizhny Tagil – Serov from 17 to 23 km. (geodesic test site / calibration linear base line – “Sverdlovsk base line”)

address of the place of activity

For compliance with the requirements of

GOST ISO/IEC 17025-2019 “General requirements for the competence of testing and calibration laboratories”

Calibration of measurement instruments

Item No. 2	Measurements	Measurement value	Calibration item	Measurement range	Complementary parameters	Expanded uncertainty ¹	Calibration method/methodology ³	Note
1	2	3	4	5	6	7	8	9
Address of the place of activity: RUSSIAN FEDERATION, Sverdlovsk region, Ekaterinburg, Krasnoarmeyskaya str., 2a								
1	Measurements of physico-chemical composition and properties of substances	Concentration of substance	Gas and liquid chromatographs, chromatomass spectrometers	from 0 to 0,2 mg/cm ³		U _{0,95} = 0,004 mg/cm ³ U _{0,95} o = 2 %	MK 070-4501-029 “Gas and liquid chromatographs, chromatomass spectrometers. Calibration methodology”	

Item No. ₂	Measurements	Measurement value	Calibration item	Measurement range	Complementary parameters	Expanded uncertainty ¹	Calibration method/methodology ³	Note
1	2	3	4	5	6	7	8	9
2	Measurements of physico-chemical composition and properties of substances	Directional transmission coefficient (optical density)	Emission analyzers (spectrometers), X-ray fluorescence analyzers	from 0,00004 % to 100 %	at wavelength from 119 to 1100 nm	$U_{0,95} = 0,00001 \%$ $U_{0,95 \circ} = 0,03 \%$	MK 070-4501-030 “Optical emission spectrometers. Calibration methodology” MK 070-4501-023 “X-ray fluorescence analyzers. Calibration methodology”	
3	Optico-physical measurements	Concentration of substance	Atomic absorption spectrophotometers, emission spectrometers with inductively coupled plasma	from 0 to 10 mg/dm ³	from 130 to 900 nm	$U_{0,95 \circ} = 1,3 \%$	MK 070-4501-031 “Calibration methodology. Atomic absorption spectrophotometers, emission spectrometers with inductively coupled plasma”	
Address of the place of activity: 624070, RUSSIAN FEDERATION, Sverdlovsk region, Sredneuralsk, Gashev str., 2a								
4	Measurements of mechanical quantities	Weight	Weights (measures of mass, including weights)	500 kg – 2,0 t	Accuracy class F ₂	$U_{0,95} = 2 \cdot 10^{-2} \text{ mg}$	GOST OIML R 111-1 Interstate System for Standardization.	
				40 kg – 2,0 t	Accuracy class M ₁	$U_{0,95} = 0,7 \cdot 10^{-1} \text{ mg}$		

Item No. ₂	Measurements	Measurement value	Calibration item	Measurement range	Complementary parameters	Expanded uncertainty ¹	Calibration method/methodology ³	Note
1	2	3	4	5	6	7	8	9
				40 kg – 2,0 t	Accuracy class M ₁₋₂	$U_{0,95} = 1,7 \cdot 10^3 \text{ mg}$	Weights of classes E1, E2, F1, F2, M1, M1-2, M2, M2-3 and M3 E1, E2, F1, F2, M1, M1-2, M2, M2-3 и M3 Annex C	
				40 kg – 2,0 t	Accuracy class M ₂	$U_{0,95} = 0,5 \text{ mg}$		
				40 kg – 2,0 t	Accuracy class M ₂₋₃	$U_{0,95} = 0,5 \cdot 10^4 \text{ mg}$		
				40 kg – 2,0 t	Accuracy class M ₃	$U_{0,95} = 3,3 \text{ mg}$		
5	Measurements of parameters of flow, consumption, level, volume of substances	Liquid flow volume (mass)	Flow meters, flow converters, rotameters, flow rate meter, liquid meters, measuring systems (including their channels and components)	(0,005 – 1000) m ³ /h (t/h)		$U_{0,95} = 0,05 \%$	MK 070-4101-2-001 “Volume-mass calibration installations, reference flow meters, operational fluid flow measuring instruments. Calibration methodology”	

Item No. ₂	Measurements	Measurement value	Calibration item	Measurement range	Complementary parameters	Expanded uncertainty ¹	Calibration method/methodology ³	Note
1	2	3	4	5	6	7	8	9
6	Measurements of parameters of flow, consumption, level, volume of substances	Liquid flow volume (mass)	Volumetric and mass fluid flow installations (including their channels and components)	(0,005 – 1000) m ³ /h (t/h)		$U_{0,95} = 0,05 \%$	MK 070-4101-2-001 “Volume-mass calibration installations, reference flow meters, operational fluid flow measuring instruments. Calibration methodology”	

Item No. ₂	Measurements	Measurement value	Calibration item	Measurement range	Complementary parameters	Expanded uncertainty ¹	Calibration method/methodology ³	Note
1	2	3	4	5	6	7	8	9
7	Measurements of parameters of flow, consumption, level, volume of substances	Gas volume flow rate	Flow meters, flow converters, rotameters, flow rate meter, gas meters, aspirators, samplers, measuring systems (включая их каналы и компоненты)	(0,005 –2500) m ³ /h		$U_{0,95} = 0,3 \%$	МК 070-4101-2-002 “Operational means of measuring volume flow of gas. Calibration methodology”	

General director of FBI “URALTEST”

title of authorized position held

signature of authorized person

Yu.M. Sukhanov

initials, surname of authorized person

¹The extended measurement uncertainty expressed in accordance with ILAC-P14 and EA-4/02, is part of the calibration and measurement capabilities of the laboratory (CMC) and represents the smallest extended uncertainty achievable for the best available calibration object (type (group) of measuring instruments). The probability of coverage corresponds to approximately 95 %, and the coverage coefficient is k=2, unless otherwise specified. The uncertainty values without specifying the units of quantities are relative to the measured value of the quantity, unless otherwise specified.