



Potvrda o akreditaciji Accreditation Certificate

Ovime se utvrđuje da je

This is to recognize that

Sartorius Croatia - Libra elektronik d.o.o.

Laboratorij za umjeravanje vaga, utega i pipeta

Savska 45A, HR-10290 Zaprešić

osposobljen prema zahtjevima norme

is competent according to

HRN EN ISO/IEC 17025:2017

(ISO/IEC 17025:2017;

EN ISO/IEC 17025:2017)

za/to carry out

Umjeravanje neautomatskih vaga, utega i pipeta

Calibration of non-automatic weighing instruments, weights and pipettes

u području opisanom u prilogu koji je sastavni dio ove potvrde o akreditaciji.

for the scope described in the annex which is the constituent part of this accreditation certificate.

Br./No.: 2287

Klasa/Ref.No.: 383-02/15-80/009

Urbroj/Id.No.: 569-02/4-20-26

Zagreb, 2020-08-24

Akreditacija istječe•Accreditation expiry: 2021-01-25

Prva akreditacija•Initial accreditation: 2010-12-27

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HAA is a signatory of the European co-operation for Accreditation (EA) Multilateral Agreement

v. d. ravnateljica:

Acting Director General:

Ankica Barišić, dipl. ing.



Hrvatska akreditacijska agencija
Croatian Accreditation Agency

PRILOG POTVRDI O AKREDITACIJI br.: 2287

Annex to the Accreditation Certificate No.:

Klasa/Ref. No.: 383-02/15-80/009

Urbroj/Id. No.: 569-02/1-20-25

Datum izdanja priloga /Annex Issued on: 2020-08-24

Zamjenjuje prilog/Replaces Annex:

Klasa/Ref. No.: 383-02/15-80/009

Urbroj/Id. No.: 569-02/4-18-5

Datum/Date: 2018-04-05

Norma: HRN EN ISO/IEC 17025:2017

Standard:(ISO/IEC 17025:2017; EN ISO/IEC 17025:2017)

Akreditacija istječe: 2021-01-25

Accreditation expiry:

Prva akreditacija: 2010-12-27

Initial accreditation:

Akreditirani laboratorij

Accredited laboratory

SARTORIUS CROATIA - LIBRA ELEKTRONIK d.o.o.

Laboratorij za umjeravanje vaga, utega i pipeta

Savska 45A, HR-10290 Zaprešić

Područje akreditacije:

Scope of Accreditation:

Umjeravanje neautomatskih vaga, utega i pipeta

Calibration of non-automatic weighing instruments, weights and pipettes

Važeće izdanje Priloga dostupno je na web adresi: www.akreditacija.hr
Valid issue of the Annex is available at the web address: www.akreditacija.hr

v. d. ravnateljica:

Acting Director General:

Ankica Barišić, dipl. ing..

PODRUČJE AKREDITACIJE / SCOPE OF ACCREDITATION

Umjeravanje u laboratoriju / Calibration in the laboratory					
Br. No.	Mjerna veličina/ Mjerilo <i>Measurand / Calibration item</i>	Mjerno područje <i>Measurement range</i>	Mjerna sposobnost* <i>Calibration and measurement capability* (CMC)</i>	Metode umjeravanja <i>Calibration methods</i>	Napomene <i>Remarks</i>
1.	Masa/ Elektroničke neautomatske vage <i>Mass/ Non-automatic weighing instruments</i>	$m \leq 10 \text{ g}$	0,013 mg	Vlastiti postupak <i>In-house procedure</i> 17025_V7_19_31, Izdanje/Issue 07, 2019-11-08 EURAMET cg-18 v. 4.0, 2015-11	
		$10 \text{ g} < m \leq 100 \text{ g}$	0,10 mg		
		$100 \text{ g} < m \leq 200 \text{ g}$	0,17 mg		
		$200 \text{ g} < m \leq 500 \text{ g}$	0,39 mg		
		$500 \text{ g} < m \leq 1 \text{ kg}$	0,88 mg		
		$1 \text{ kg} < m \leq 2 \text{ kg}$	1,6 mg		
		$2 \text{ kg} < m \leq 5 \text{ kg}$	6,1 mg		
		$5 \text{ kg} < m \leq 10 \text{ kg}$	7,2 mg		
		$10 \text{ kg} < m \leq 20 \text{ kg}$	19 mg		
		$20 \text{ kg} < m \leq 40 \text{ kg}$	81 mg		
		$40 \text{ kg} < m \leq 220 \text{ kg}$	350 mg		
2.	Masa/Utezi <i>Mass/Weights</i> E ₂ , F ₁ , F ₂ , M ₁ , M ₂ , M ₃	1 mg	0,002 mg	Vlastiti postupak <i>In-house procedure</i> 17025_V10_19_30, Izdanje/Issue 10, 2019-11-08 OIML R111-1:2004	
		2 mg	0,002 mg		
		5 mg	0,002 mg		
		10 mg	0,003 mg		
		20 mg	0,003 mg		
		50 mg	0,004 mg		
		100 mg	0,005 mg		
		200 mg	0,006 mg		
		500 mg	0,008 mg		
		1 g	0,010 mg		
		2 g	0,012 mg		
		5 g	0,016 mg		
		10 g	0,020 mg		
		20 g	0,025 mg		
		50 g	0,03 mg		
		100 g	0,05 mg		
		200 g	0,10 mg		
		500 g	0,25 mg		
3.	Masa/Utezi <i>Mass/Weights</i> F ₁ , F ₂ , M ₁ , M ₂ , M ₃	2 kg	3,0 mg		
		5 kg	8,0 mg		
		10 kg	16 mg		
		20 kg	30 mg		

Umjeravanje u laboratoriju / Calibration in the laboratory					
Br. No.	Mjerna veličina/ Mjerilo <i>Measurand / Calibration item</i>	Mjerno područje <i>Measurement range</i>	Mjerna sposobnost* <i>Calibration and measurement capability* (CMC)</i>	Metode umjeravanja <i>Calibration methods</i>	Napomene <i>Remarks</i>
4.	Obujam/Klipne pipete <i>Volume/Piston pipettes</i>	1 µl do/to 10 µl	0,08 µl	Vlastiti postupak <i>In-house procedure</i> 17025_V3_19_92 Izdanje/Issue 03 2019-11-11 HRN EN ISO 8655-6:2008 <i>(ISO 8655-6:2002; EN ISO 8655-6:2002)</i> HRN EN ISO 8655-6:2008/ Ispr. 1:2013 <i>(ISO 8655-6:2002/ Cor 1:2008; EN ISO 8655-6:2002/ AC:2009)</i>	
		11 µl do/to 50 µl	0,12 µl		
		51 µl do/to 100 µl	0,22 µl		
		101 µl do/to 200 µl	0,42 µl		
		201 µl do/to 500 µl	1,0 µl		
		501 µl do/to 1000 µl	2,0 µl		
		1,01 ml do/to 2 ml	4,2 µl		
		2,01 ml do/to 5 ml	10 µl		
		5,01 ml do/to 10 ml	20 µl		
	10,01 ml do/to 20 ml	40 µl			

Umjeravanje na terenu / On-site calibration					
Br. No.	Mjerna veličina/ Mjerilo Measurand / Calibration item	Mjerno područje Measurement range	Mjerna sposobnost* Calibration and measurement capability* (CMC)	Metode umjeravanja Calibration methods	Napomene Remarks
1.	Masa/ Elektroničke neautomatske vage Mass/ Non-automatic weighing instruments	$m \leq 10 \text{ g}$	0,013 mg	Vlastiti postupak In-house procedure 17025_V7_19_31, Izdanje/Issue 07, 2019-11-08 EURAMET cg-18 v. 4.0, 2015-11	
		$10 \text{ g} < m \leq 100 \text{ g}$	0,10 mg		
		$100 \text{ g} < m \leq 200 \text{ g}$	0,17 mg		
		$200 \text{ g} < m \leq 500 \text{ g}$	0,39 mg		
		$500 \text{ g} < m \leq 1 \text{ kg}$	0,88 mg		
		$1 \text{ kg} < m \leq 2 \text{ kg}$	1,6 mg		
		$2 \text{ kg} < m \leq 5 \text{ kg}$	6,1 mg		
		$5 \text{ kg} < m \leq 10 \text{ kg}$	7,2 mg		
		$10 \text{ kg} < m \leq 20 \text{ kg}$	19 mg		
		$20 \text{ kg} < m \leq 40 \text{ kg}$	81 mg		
		$40 \text{ kg} < m \leq 220 \text{ kg}$	350 mg		
		$220 \text{ kg} < m \leq 3000 \text{ kg}$	45 g		

* Mjerna sposobnost je procijenjena kao proširena mjerna nesigurnost dobivena množenjem standardne nesigurnosti s faktorom pokrivanja k , koji odgovara razini povjerenja od oko 95 %. Uobičajeno i ako nije drukčije navedeno, faktor k iznosi 2.

Mjerna sposobnost je izračunata u skladu s EA 4/02 M:2013 *Evaluation of the Uncertainty of measurement in Calibration*.

* *Calibration and measurement capability (CMC) has been estimated as an expanded uncertainty obtained by multiplying the standard uncertainty by the coverage factor k corresponding to confidence level of about 95 %. Normally and unless stated otherwise, this factor k is 2.*

The CMC has been determined according to the EA 4/02 M:2013 Evaluation of the Uncertainty of measurement in Calibration.