

CERTIFICAT DE ETALONARE nr. 05.107.28.03.25

(Calibration Certificate)

Obiect (Object)	Cronometru electronic, portabil (Cronometru)	<p>Acest certificat de etalonare documenteaza trasabilitatea rezultatelor prezentate la Sistemul International de Unitati(SI). Trasabilitatea masurarilor este realizata si mentinuta prin etalonari periodice, in conformitate cu SR EN ISO/IEC 17025:2018. Incertitudinea standard de masurare a fost determinata in conformitate cu SR Ghid ISO/IEC 98-3. Este recomandat ca utilizatorul sa asigure reetalonarea la intervale de timp rezonabile.</p> <p>(This calibration certificate documents the traceability of the presented results to the International System of Units(SI). The measurement traceability is achieved and maintained by periodically calibrations, according to SR EN ISO/IEC 17025:2018. The standard uncertainty of measurement has been determined according to SR Guide ISO/IEC 98-3. It is recommended to the user to assure the recalibration at reasonable time intervals.)</p>
Fabricant (Manufacturer)	SMTWTFS	
Tip (Type)	PC396	
Serie (Serial number)	246	
Client (Customer)	LABORATORIUM SRL Str. Baia nr.16, sector 1, Bucuresti	
Comanda nr. (Order No.)	560-087/28.03.2025	
Numar de pagini (Number of pages)	2	
Data etalonarii (Date of calibration)	28-03-2025	

Stampila

(Seal)



Data

(Date of issue)

28-03-2025

Sef de laborator

(Head of the laboratory)

Tomescu Manole



Executant etalonare

(Person performing the calibration)

Caldarus Valerica- Valentin



SC METROCERT UMITEMP SRL CUI: RO 19163769
Str. Munteniei, Nr. 53, Otopeni, Ilfov, 075100 Reg.Com.: J40 / 17665 / 2006
Tel: 021 255 07 27, mobil: 0723 662 552, fax: 0371 605 973 Cont: RO64RNCB0078065501010001
E-mail: office@metrocert.ro, Web: www.metrocert.ro Banca Comerciala Romana

Nota: Acest certificat de etalonare nu poate fi reprodus decat in totalitate. Certificatul de etalonare fara semnaturi si stampila nu este valabil.

Etalonare efectuata sub certificare ISO 17025:2018. La etalonare au fost utilizate proceduri validate si etaloane cu trasabilitate la SI

(Note: This calibration certificate may not be reproduced other than in full. Calibration certificate without signature and seal is not valid.

CERTIFICAT DE ETALONARE nr. 05.107.28.03.25

(Calibration Certificate)

Descriere obiect (Object description)	Cronometru - interval nominal: 1 .. 3600 secunde - diviziune/rez.: 0.01 secunde - toleranta: ± 0.01 secunde																
Metoda de etalonare (Calibration method)	Masurare directa conform procedurii de etalonare: PE-21.15, Ed 2, Rev 0, Ex 1																
Etalonul utilizat/nr. (Measurement standards)	Frecventmetru electronic , Model:E 0204, Seria: 56670, CE: E-001-12.04.24, exp la: 11-04-2027, emis de: SIMAR, Cronometru electronic , Model:HITRAX GO, Seria: 02/2021, CE: 05.101.14.02.25, exp la: 13-02-2027, emis de: SC METROCERT UMITEMP SRL																
Locul etalonarii (Place used for calibration)	Laborator Metrocert Umitemp SRL - Otopeni, jud. Ilfov, str. Munteniei 53																
Conditii de masurare (Measurement conditions)	-																
Conditii de referinta (Order No.)	Temperatura mediului ambiant: (23 ± 2) C Umiditatea relativa a aerului: 75 % Presiune atmosferica: (960 ± 100) hPa																
Conditii de mediu (Environmental conditions)	Temperatura mediului ambiant: 21.2°C; Umiditatea relativa: 43.4 %; Presiune atmosferica: 1008.4 hPa																
Reglarea obiectului (Instrument adjustment)	-																
Rezultatele etalonarii (Calibration results)	Nota: Rezultatele etalonarii se refera numai la obiectul etalonat. (Note : The calibration results refer only to the object to be calibrated)																
Timp																	
<table border="1"><thead><tr><th>Valoarea de referinta secunde</th><th>Valoarea medie indicata secunde</th><th>Corectia secunde</th><th>Incertitudinea de masurare secunde</th></tr></thead><tbody><tr><td>1200.667</td><td>1200.666</td><td>0.00</td><td>0.15</td></tr><tr><td>2400.333</td><td>2400.331</td><td>0.00</td><td>0.27</td></tr><tr><td>3600</td><td>3599.998</td><td>0.00</td><td>0.39</td></tr></tbody></table>	Valoarea de referinta secunde	Valoarea medie indicata secunde	Corectia secunde	Incertitudinea de masurare secunde	1200.667	1200.666	0.00	0.15	2400.333	2400.331	0.00	0.27	3600	3599.998	0.00	0.39	
Valoarea de referinta secunde	Valoarea medie indicata secunde	Corectia secunde	Incertitudinea de masurare secunde														
1200.667	1200.666	0.00	0.15														
2400.333	2400.331	0.00	0.27														
3600	3599.998	0.00	0.39														
Incertitudinea de masurare (Calibration results)	- conform tabel Incertitudinea declarata este incertitudinea extinsa, obtinuta prin multiplicarea incertitudinii standard a masurarii cu factorul de extindere $k=2$ care, pentru o distributie normala, corespunde la un nivel de incredere de aproximativ 95 %. (The uncertainty stated is the expanded uncertainty, obtained by multiplying the standard uncertainty by the coverage factor $k=2$, which for a normal distribution corresponds to a confidence level of approximately 95%)																
Conformitatea cu o specificatie (Compliance with a specification)	-																
Informatii (Additional information)	- Se recomanda reetalonarea inainte de 27.03.2026																

Executant etalonare
(Person performing the calibration)
Caldarus Valerica- Valentin

Incheierea certificatului de etalonare
(End of calibration certificate)

Nota: Acest certificat de etalonare nu poate fi reprodus decat in totalitate. Certificatul de etalonare fara semnaturi si stampila nu este valabil.

Etalonare efectuata sub certificare ISO 17025:2018. La etalonare au fost utilizate proceduri validate si etaloane cu trasabilitate la SI

(Note: This calibration certificate may not be reproduced other than in full. Calibration certificate without signature and seal is not valid.

CERTIFICAT DE ETALONARE nr. 01.223.08.04.25

(Calibration Certificate)

Obiect (Object)	Termometru (Termometru)	<p>Acest certificat de etalonare documenteaza trasabilitatea rezultatelor prezentate la Sistemul International de Unitati(SI). Trasabilitatea masurarilor este realizata si mentinuta prin etalonari periodice, in conformitate cu SR EN ISO/IEC 17025:2018. Incertitudinea standard de masurare a fost determinata in conformitate cu SR Ghid ISO/IEC 98-3. Este recomandat ca utilizatorul sa asigure reetalonarea la intervale de timp rezonabile.</p> <p>(This calibration certificate documents the traceability of the presented results to the International System of Units(SI). The measurement traceability is achieved and maintained by periodically calibrations, according to SR EN ISO/IEC 17025:2018. The standard uncertainty of measurement has been determined according to SR Guide ISO/IEC 98-3. It is recommended to the user to assure the recalibration at reasonable time intervals.)</p>
Fabricant (Manufacturer)	TESTO SE & Co. KGaa - Germania	
Tip (Type)	TESTO 922	
Serie (Serial number)	33648905/003	
Client (Customer)	LABORATORIUM SRL Str.Gheorghe Buzoianu nr.17,Loc.Targu Bujor,Jud.Galati	
Comanda nr. (Order No.)	522-098/08.04.2025	
Numar de pagini (Number of pages)	2	
Data etalonarii (Date of calibration)	08-04-2025	

Stampila

(Seal)



Data

(Date of issue)

08-04-2025

Sef de laborator

(Head of the laboratory)

Tomescu Manole



Executant etalonare

(Person performing the calibration)

Stefan Artemiza-Adriana



SC METROCERT UMITEMP SRL CUI: RO 19163769
Str. Munteniei, Nr. 53, Otopeni, Ilfov, 075100 Reg.Com.: J40 / 17665 / 2006
Tel: 021 255 07 27, mobil: 0723 662 552, fax: 0371 605 973 Cont: RO64RNCB0078065501010001
E-mail: office@metrocert.ro, Web: www.metrocert.ro Banca Comerciala Romana

Nota: Acest certificat de etalonare nu poate fi reprodus decat în totalitate. Certificatul de etalonare fara semnături și stampila nu este valabil.
Etalonare efectuata sub certificare ISO 17025:2018. La etalonare au fost utilizate proceduri validate și etaloane cu trasabilitate la SI
(Note: This calibration certificate may not be reproduced other than in full. Calibration certificate without signature and seal is not valid.
Calibration under ISO 17025:2018. The calibration methods used have been validated and the measurements standards have traceability to SI)

CERTIFICAT DE ETALONARE nr. 01.223.08.04.25

(Calibration Certificate)

Descriere obiect (Object description)	Termometru - interval nominal: -200 .. 1000 °C / -200 .. 1000 °C - diviziune/rez.: 0.1 °C / 0.1 °C - toleranta: ±1 °C / ±1 °C																								
Metoda de etalonare (Calibration method)	Masurare directa conform procedurii de etalonare: PE-02.12 Ed3,Rev 0																								
Etalonul utilizat/nr. (Measurement standards)	Termometru digital , Model:735-2, Seria: 01878117/007//01861185/007, CE: 05-00046-01.2025, exp la: 14-01-2027, emis de: SC METRON SERV SRL, Higrometru electronic , Model:HMI 41/HMP 46, Seria: C0230024/C0730007, CE: 01.506.14.12.23, exp la: 13-12-2025, emis de: SC METROCERT UMITEMP SRL, Incinta termostata/higrostat , Model:TKG WCL 3M, Seria: 1693-2012, CE: 01.112.01.11.24, exp la: 31-10-2026, emis de: SC METROCERT UMITEMP SRL																								
Locul etalonarii (Place used for calibration)	Laborator Metrocert Umitemp SRL - Otopeni, jud. Ilfov, str. Munteniei 53																								
Conditii de masurare (Measurement conditions)	-																								
Conditii de referinta (Order No.)	Temperatura mediului ambiant: (23 ± 2) C Umiditatea relativa a aerului: 75 % Presiune atmosferica: (960 ± 100) hPa																								
Conditii de mediu (Environmental conditions)	Temperatura mediului ambiant: 22.6°C; Umiditatea relativa: 43 %; Presiune atmosferica: 1020.1 hPa																								
Reglarea obiectului (Instrument adjustment)	-																								
Rezultatele etalonarii (Calibration results)	Nota: Rezultatele etalonarii se refera numai la obiectul etalonat. (Note : The calibration results refer only to the object to be calibrated)																								
Temperatura																									
<table border="1"><thead><tr><th>Valoarea de referinta °C</th><th>Valoarea medie indicata °C</th><th>Corectia °C</th><th>Incertitudinea de masurare °C</th></tr></thead><tbody><tr><td>-29.8</td><td>-29.77</td><td>0.0</td><td>0.8</td></tr><tr><td>0.2</td><td>0.21</td><td>0.0</td><td>0.8</td></tr><tr><td>100.2</td><td>100.23</td><td>-0.03</td><td>1.30</td></tr><tr><td>150.2</td><td>150.24</td><td>0.0</td><td>1.6</td></tr><tr><td>200.2</td><td>200.25</td><td>-0.1</td><td>1.8</td></tr></tbody></table>	Valoarea de referinta °C	Valoarea medie indicata °C	Corectia °C	Incertitudinea de masurare °C	-29.8	-29.77	0.0	0.8	0.2	0.21	0.0	0.8	100.2	100.23	-0.03	1.30	150.2	150.24	0.0	1.6	200.2	200.25	-0.1	1.8	
Valoarea de referinta °C	Valoarea medie indicata °C	Corectia °C	Incertitudinea de masurare °C																						
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Valoarea de referinta °C	Valoarea medie indicata °C	Corectia °C	Incertitudinea de masurare °C																						
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Conformitatea cu o specificatie (Compliance with a specification)	-																								
Informatii (Additional information)	- Se recomanda reetalonarea inainte de 07.04.2026																								

Executant etalonare
(Person performing the calibration)
Stefan Artemiza-Adriana

Incheierea certificatului de etalonare
(End of calibration certificate)

Nota: Acest certificat de etalonare nu poate fi reprodus decat in totalitate. Certificatul de etalonare fara semnaturi si stampila nu este valabil.
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Calibration under ISO 17025:2018. The calibration methods used have been validated and the measurements standards have traceability to SI)