



VOL-01

STEAM QUALITY TEST REPORT

Annex-01.01

Turn Over Package

FOR
50-LITER PORTABLE TANK
B1.PS.005
OF
MIDDLE EAST FOR VACCINES (MEVAC)
EL-SALHYA

CLIENT:



QUALIFICATION PROVIDER:



Package Content:

VOL-01 Steam Quality Test Report

Annex-01.01 Turn Over Package (Attachments)



VOL-01) STEAM QUALITY TEST REPORT

ANNEX 01.01.01 ATTACHMENTS

Content:

01.01.01.01	Site Sheet Reports
01.01.01.02	Devices References
01.01.01.03	Inspection Certificate



VOL-01) STEAM QUALITY TEST REPORT

ANNEX 01.01.01
ATTACHMENTS

ATTACHMENTS 01.01.01.01
Site Sheet Reports





SQ1 - DRYNESS VALUE TEST



Name Techno Air Gate (TAG)
Address 2311 Abdulsalam Amin St, 2nd District, 6th October, Giza, Egypt.
Email/Tel info@technoairgate.com
MIDDLE EAST FOR VACCINES (MEVAC)

Site

Date Tuesday, June 17, 2025

Location / Sterilizer

Washing (B1.2.240)

Code

B1.PS.005

TEST

Cycle No	1	2	3	Average
(M1) Total weight of flask pipes etc (kg)	0.598	0.598	0.598	
(M2) Total weight of flask and 650ml of water (kg)	1.231	1.231	1.231	
(M3) Total weight of flask + condensate (kg)	1.297	1.297	1.297	
(T0) Initial temperature of water in flask (oC)	24.40	24.4	24.4	
(T1) Final temperature of water and condensate (oC)	78.10	78.1	78.1	
(Ts) Average temperature of steam delivered to sterilizer (°C)	144.50	144.5	144.5	
(L) Latent heat of steam at average temperature, delivered to sterilizer (kJ/	2131.24	2131.24	2131.24	
Calculated Dryness Value	0.97	0.97	0.97	0.97

Requirements of EN 285

≥ 0.95

Notes:

1. The dryness value is not less than 0.90 (if metal loads are processed, the dryness value should not be below 0.95).
2. Throughout the operating cycle, the temperature measured in the steam service pipe is within 3 °C of that measured during the superheat test.





MEVAC

SQ1 - SUPERHEAT TEST



Name Techno Air Gate (TAG)
Address 2311 Abdulsalam Amin St., 2nd District, 6th October, Giza, Egypt.
Email/Tel info@technoairgate.com
MIDDLE EAST FOR VACCINES (MEVAC)

Date Tuesday, June 17, 2025

Site

Location / Sterilizer

Washing (B1.2.240)

Code B1.PS.005

TEST

Cycle No	1	2	3	Average
Temperature of Steam (°C)	144.50	144.50	144.50	
Temperature in Expansion Tube (°C)	102.90	102.90	102.90	
Boiling point at local condition (°C)	99.50	99.50	99.50	
Superheat °C	3.4	3.4	3.4	3.4

Requirements of EN 285

≤ 25°C



SQ1 - NON-CONDENSABLE GAS TEST



Name Techno Air Gate (TAG)
Address 2311 Abdulsalam Amin St., 2nd District, 6th October, Giza, Egypt.
Email/Tel info@technoairgate.com

Date Tuesday, June 17, 2025

MIDDLE EAST FOR VACCINES (MEVAC)

Location / Sterilizer

Washing (B1.2.240)

Code B1.PS.005

TEST

Cycle No	1	2	3	Average
Volume of gas at start of test (ml)	0.0	0.0	0.0	0.0
Volume of gas at end of test (ml)	0.4	0.4	0.4	0.4
Volume of condensate at start of test (ml)	0.0	0.0	0.0	0.0
Volume of condensate at end of test (ml)	100.0	100.0	100.0	100.0
Non-condensable gas level (%)	0.4%	0.4%	0.4%	0.4%

Requirements of EN 285

NMT 3.5%



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ATTACHMENTS 01.01.01.02
Devices References



CALIBRATION CERTIFICATE

TAG LAB ☒On Site ☐

Certificate No.:

001 - 001 - 001 - 2025

Customer Information

Customer: TAG LAB
Address: 6th of October City
Email/Tel: info@technoairgate.com

Instrument Under Calibration Information

Instrument Name:	Thermocouple Type-T with digital indicator		
Manufacture:	BENTECH	Resolution:	0.1 °C
Model:	GM1312	Accuracy:	NA
Code:	2835217/N.TC-31/3	Serial Number:	2835217/N.TC-31/3
Location:	TAG LAB	Range:	(-20 to 350) °C

Reference Instrument Information

Instrument Name:	Pt-100 with digital indicator	Resolution:	0.01 °C
Manufacture:	GMH	Range:	((-40) to 350) °C
Model:	GMH 3710	Serial Number:	32403245/117

Remarks

Calibration Method: Comparison method using Digital thermometer of accuracy $\pm 0.03^{\circ}\text{C}$ Full Range based on Calibration Method for Temperature sensor with indicator CM-T-001 based on EURMET Version 2.1 (10/2011), Version 3.0 (02/2019), Version 3.1 (02/2020).

Uncertainty: The reported expanded uncertainty is based on GUM Standard and the standard Uncertainty multiplied by coverage factor k_p value to give confidence level of 95%.

Traceability: The traceability of measurement results to the SI units calibrated by the National Standard maintained at NIS with Certificate No. (1459/32C002/161/1774/2024).

Notes:

-This document cannot be reproduced or duplicated by any mean without written permission from TAG.

Disclaimer:

- This Certificate is only related to the unit under Calibration during the Calibration period.

-**Decision Rule:** statement of conformity is based on that the deviation is within acceptance criteria.

F-7.8/06

This Certificate may be presented or copied as a whole document only

Head Quarter: 16 Al Israa St., Lebanon Sq., Mohandseen, Giza, Egypt

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Ver. No.: 01

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CALIBRATION CERTIFICATE



TAG
CALIBRATION

Certificate No.: 001 - 001 - 001 - 2025

Reading Information

Reference Reading ts °C	Reading tm °C	Correction $\Delta t = t_s - t_m$ °C	Uncertainty ($\pm$ °C)	Pass/Fail
-20.00	-19.7	-0.3	0.16	Pass
25.00	24.7	0.3	0.16	Pass
100.00	99.6	0.4	0.16	Pass
150.00	149.5	0.5	0.18	Pass
350.00	349.3	0.7	0.28	Pass

Environmental Conditions During Calibration

Temperature: 23 ± 5 °C
Relative Humidity: 45 ± 15 %
Pressure: 1.013 bar

Calibration Results

Max. Reading Error: 0.7 °C
Acceptance Criteria: ± 2 °C
Uncertainty: ± 0.28 °C

Acceptance Criteria is According to Customer Requirement.

Received Date

05 Jan 2025

Issue Date

06 Jan 2025

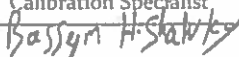
Calibration Date

05 Jan 2025

Calibration Due

04 Jan 2026

Calibrated By

Name: Bassem Hesham
Title: Calibration Specialist
Signature: 
Date: 05 Jan 2025

Prepared by

Noha Essam
Title: Technical Office Senior
Signature: 
Date: 06 Jan 2025

Reviewed & Approved By

Ahmed Tarek
Title: Technical Manager
Signature: 
Date: 06 Jan 2025



F-7.8/06

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Ver. No.: 01

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CALIBRATION CERTIFICATE

TAG LAB ☒On Site ☐

Certificate No.:

001 - 001 - 002 - 2025

Customer Information

Customer: TAG LAB
Address: 6th of October City
Email/Tel: info@technoairgate.com

Instrument Under Calibration Information

Instrument Name:	Thermocouple Type-T with digital indicator	Resolution:	0.1 °C
Manufacture:	BENTECH	Accuracy:	NA
Model:	GM1312	Serial Number:	2835217/N.TC-31/4
Code:	2835217/N.TC-31/4	Range:	(-20 to 350) °C
Location:	TAG LAB		

Reference Instrument Information

Instrument Name:	Pt-100 with digital indicator	Resolution:	0.01 °C
Manufacture:	GMH	Range:	((-40) to 350) °C
Model:	GMH 3710	Serial Number:	32403245/117

Remarks

Calibration Method: Comparison method using Digital thermometer of accuracy $\pm 0.03^{\circ}\text{C}$ Full Range based on Calibration Method for Temperature sensor with indicator CM-T-001 based on EURMET Version 2.1 (10/2011), Version 3.0 (02/2019), Version 3.1 (02/2020).

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CALIBRATION CERTIFICATE



Certificate No.: 001 - 001 - 002 - 2025

Reading Information

Reference Reading ts °C	Reading tm °C	Correction $\Delta t = t_s - t_m$ °C	Uncertainty ($\pm$ °C)	Pass/Fail
-20.00	-20.3	0.3	0.16	Pass
25.00	24.6	0.4	0.16	Pass
100.00	99.5	0.5	0.16	Pass
150.00	150.6	-0.6	0.18	Pass
350.00	350.9	-0.9	0.28	Pass

Environmental Conditions During Calibration

Temperature: 23 ± 5 °C
Relative Humidity: 45 ± 15 %
Pressure: 1.013 bar

Calibration Results

Max. Reading Error: 0.9 °C
Acceptance Criteria: ± 2 °C
Uncertainty: ± 0.28 °C

Acceptance Criteria is According to Customer Requirement.

Received Date

05 Jan 2025

Issue Date

06 Jan 2025

Calibration Date

05 Jan 2025

Calibration Due

04 Jan 2026

Calibrated By

Name: Bassem Hesham

Title: Calibration Specialist

Signature: *Bassem Hesham*

Date: 05 Jan 2025

Prepared by

Noha Essam

Technical Office Senior

Noha Essam

06 Jan 2025

Reviewed & Approved By

Ahmed Tarek

Technical Manager



F-7.8/06

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VOL-01) STEAM QUALITY TEST REPORT

ANNEX 01.01.01 **ATTACHMENTS**

ATTACHMENTS 01.01.01.03

Inspection Certificate





Certificate No.: SQ-004-2025

Certificate
of
Steam Quality Execution
for
50-LITER PORTABLE TANK
B1.PS.005
at MIDDLE EAST FOR VACCINES (MEVAC)
Executed By
Techno Air Gate Company (TAG)
Egypt

The inspection test was performed in compliance with the requirements of ISO/IEC 17020/2012, and this certificate confirms that Steam Quality fulfills the required acceptance criteria.

Inspection Date:
17/06/2025

Certificate Issue Date:
17/06/2025

This certificate relates to report no.:
SQR-V-00425

Prepared By

Salma Salah



Head of Department

At

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F-7.4/02
Issue No.: 01.0
Ver. No.: 01

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Issue Date: 01 Oct., 2024

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