



Calibration Certificate of Gas Detection Device

Device Under Calibration Details.

Customer Al-Nubalaa Co.	Certificate No. 40305CL006YM02
Eq. No./Asset No. N/A	WO No./PO No. WO-00044
Description Transportable Multi Gas Area Monitor	Max. Range 50 PPM H2S, 500 PPM Co, 25% O2, 100%LEL
MFG (OEM) CROWCON	Accuracy ± 5% Of the applied gas concentration
Type Rugged Tripod Design	Resolution 0.1 PPM H2S, 1 PPM Co, 0.1% O2, 1% LEL
Model Detective +	Issue Date 5-Mar-2024
Serial No. 48892	Cal. Due Date 1-Sep-2024

Used Reference Mean Details.

Description Standard Calibration Gas Cylinder	Cylinder Gases
MFG (OEM) Bristol	Concentrations
Order No. 2023/655	Accuracy ± 5% H2S, ± 5% Co, ± 2% O2, ± 2% LEL of Rd.
Cylinder No. C846193	Valid. Due Date 9-Nov-2025

25	PPM H2S in Air	100	PPM CO in Air
18.00	% VOL O2 in Air	50	% LEL @ 2.52%

Calibration Results:

- The device under calibration was calibrated up to the Original Equipment Manufacture (OEM) recommended span of gases concentrations according to used standard calibration method with a calibration gas system which meets the OEM calibration requirements.
- the following gives the under test readings while applying the reference mean output:

No.	Type of Gas	Cyl. App. Value	Sensors Detection Range		Average Readings		Alarms Settings			Error			Error (%)			Uncertainty	
			Range	Unit	Before Cal.	After Cal.	Alarm 1	Alarm 2	Alarm 3	1st	2nd	3rd	1st	2nd	3rd	Value	Unit
1	H2S	25	0 - 100	PPM	N/A	25.2	5	10	20	-0.6	-0.5	-0.4	2.4%	2.0%	1.6%	1.02	PPM
2	CO	100	0 - 500	PPM	N/A	100.1	30	60	100	0.0	-2.0	-1.0	0.0%	2.0%	1.0%	2.24	PPM
3	O2	18	0 - 30	%VOL	N/A	18.1	23.5	19.5	19.0	0.12	0.02	-0.08	0.7%	0.1%	0.4%	1.02	%VOL
4	CH4	50	0 - 100	%LEL	N/A	50.2	5	10	20	1.0	0.0	-1.0	2.0%	0.0%	2.0%	2.24	%LEL

Calibration Conditions:

Calibration SOP : VPS-IMS-WI04	Ambient Temp. : (22.5) ± 0.1 °C	Ambient Humidity : (32.4) ± 0.1 % RH
As Received Condition : Working & out of calibration due	As Left Condition : Working, in allowable tolerance & in Cal. Due.	

Test Results:

Alarm Test : OK	Back Light Test : OK	Keypad Test : OK
Sensor Life Test : OK	Battery Charging : OK	Pump Blockage Test : N/A

Final Results:

- The calibrated device error span was found in the allowable tolerance of the maximum permissible error at the time it had been calibrated.
- The calibrated device has been inspected and found in specifications at the time it had been calibrated.

- Employing Calibration Method: ISA 51.1.
- This calibration has been performed through comparison of reference values against the corresponding readings of unit under test.
- This calibration has been performed through a standard operation procedure created under recommendations of the following STDs: ISA-RP 12.13.02 & ISA-RP92.0.02.
- This calibration was carried out in compliance with ISO / IEC 17025 2nd Ed.2005 "General requirements for the competence of testing & calibration laboratories".
- This calibration has been performed in environment operating at recommended nominal conditions.
- The standard (s) used in this test is / are traced to SI units through traceability to primary standard (s) maintained in National Institute of Standards and Technology (NIST).
- The expanded uncertainty evaluation includes the used reference standard and the unit under test, and is calculated in accordance with JCGM 100:2008.
- The expanded uncertainty was calculated by using a coverage factor K = 2, providing a level of confidence of approximately 95 %.
- This certificate may not be reproduced other than in full by photographic process.
- This certificate refers only to the particular item submitted for calibration.
- This certificate is valid only with signature and Co. Stamp.

Calibrated By:

Name: **Youssef Mohamed**

Signature: _____

Reviewed By:

Name: **Abdelrahman Nasr**

Signature: _____



The email of the employer of persons authorized to issue this certificate: info@vision-p-s.com
 For more information about other services: Mobile : + 964 (0)7807776662 / + 964 (0)7807776664 | E-Mail : services@vision-p-s.com | Web site : www.vision-p-s.com

