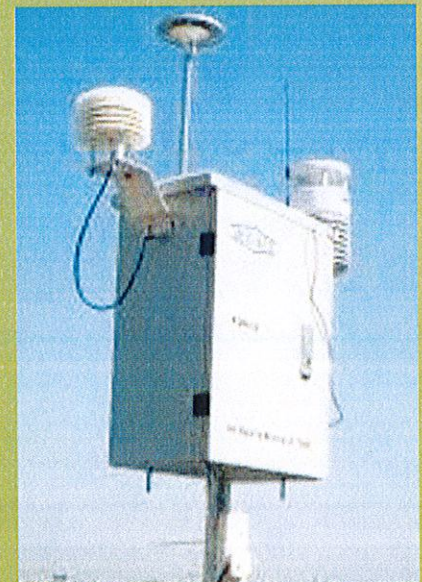
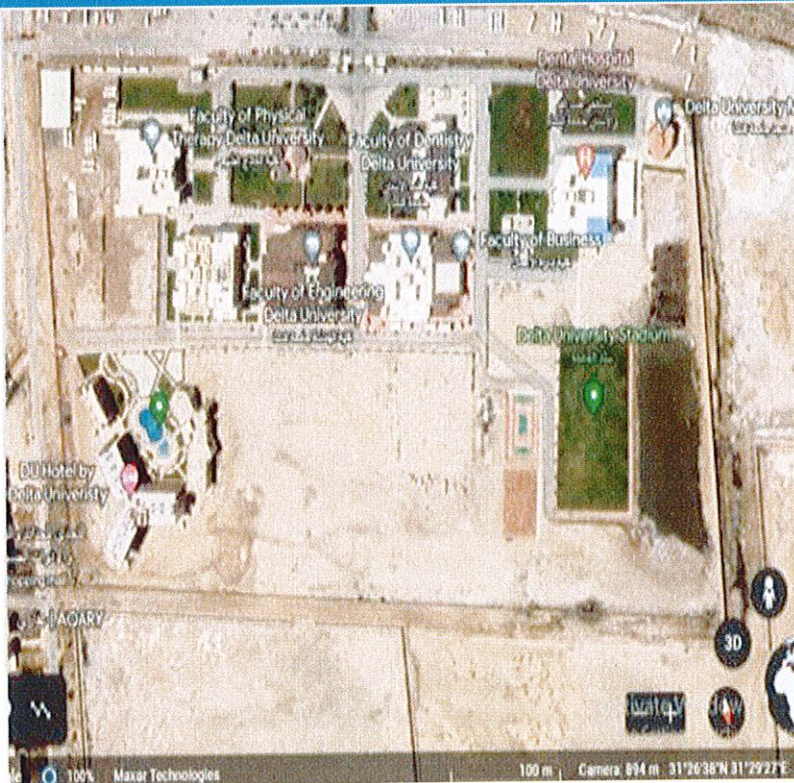


Ambient Air Monitoring Report
For
Delta University For Science And Technology
Gamasa - International Coastal Road - Dakahlia Governorate



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ISO / IEC 17025:2017
Certified from EEA

Team Work

IES Lab Team Work

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Chem. Mohamed Rashed	Deputy for technical manger
Chem. Amin Khaled Amin	Deputy for quality manger
Tech / Mahmoud Imam	IES Sampling team
Tech / Hesham Saad	IES Sampling team

IES is an accredited and registered expertise office from the Environmental Affairs Agency with registration number 20/1/9/2022 where its laboratories are certified in environmental measurements from the Egyptian Accreditation Council (EGAC) ISO / IEC 17025:2017 and the IES Lab applied all ISO/IEC17025:2017 requirements.

Report prepared by : **Dr .Marwa Saad**

Signature :

Report Reviewed by: **Dr. Ragab Abou Bakr**

Signature



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ISO / IEC 17025:2017

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INTRODUCTION

According to the contract between Delta University for Science and Technology and **International Environmental Services (IES Lab.)** to conduct the ambient air quality measurements at Delta University For Science And Technology area which located at Gamasa - International Coastal Road - Dakahlia Governorate. IES Lab is an accredited and registered expertise office from the Environmental Affairs Agency with registration number 20/30/8/2018 where its laboratories are certified in environmental measurements from the Egyptian Accreditation Council (EGAC) ISO / IEC 17025), measurements were conducted on 10th July, 2023.

Objectives

The overall objective of the monitoring program is to assess of environment as a baseline study and actual case study measurements at Delta University for Science and Technology area.

GIA will typically include:

- Areas occupied by internal walls (whether structural or not) and partition.
- Service accommodation such as WCs, showers, changing rooms and the like.
- Columns, piers, whether free standing or projecting and inwards from an external wall chimney breasts, lift wells, stairwells etc.
- Lift rooms, plant rooms, tank room, foul stores, whether or not above roof level
- Open-sided covered areas (should be stated separately).

Scope of Work

The scope of work of the present monitoring rounds includes the sampling and analysis of active Areas in the surrounding area at Delta University for Science and Technology area.

The following ambient air pollutants where the target parameters to be measured during the monitoring program:

- Total Suspended Particulate (TSP)
- Thoracic particulate (PM₁₀)
- Fine particulate (PM_{2.5})
- Noise levels.
- Gaseous Air pollutants.
 - Nitrogen dioxide (NO₂).
 - Sulfur dioxide (SO₂).
 - Carbon monoxide (CO).
 - Carbon Dioxide (CO₂)
 - VOCs & CH₄



Assigned locations

The exact coordinates and timings of the sampling locations are shown in Table 1, shows the locations of measurements.

Table 1 Sampling locations for Delta University for Science and Technology area

- Assigned Locations:**

The following location is assigned by Company at the Delta University for Science and Technology area:

Sampling Location Name		GPS Readings	
		(WGS 84 Coordinates)	
		N coordinates	E coordinates
Air P.1	North side	31°26'37.0"	31°29'39.0"
Air P.2	South side	31°26'31.0"	31°29'35.0"
Air P.3	East side	31°26'33.0"	31°29'36.0"
Air P.4	West side	31°26'31.0"	31°29'40.0"

"Location Map"



Figure (1) Sampling locations for Delta University For Science And Technology area

APPLICABLE NATIONAL LEGISLATION AND REGULATORY FRAMEWORK

The results of ambient air quality measurements were compared to the national limits set in Annex 5 of the Executive Regulation (D964/2015) for the ambient air quality.

Table 2 lists the corresponding applicable national ambient air quality permissible limits.

Table 2: Applicable national permissible limits for ambient air quality levels

Pollutant	Area	Maximum Concentration ($\mu\text{g}/\text{m}^3$)			
		1 hour	8 hours	24 hours	Year
Nitrogen dioxide (NO_2)	Urban Area	300	---	150	60
	Industrial Area	300	---	150	80
Sulphur dioxide (SO_2)	Urban Area	300	---	125	50
	Industrial Area	350	---	150	60
Carbon monoxide (CO)	Urban Area	30	10	---	---
	Industrial Area	(mg/m^3)	(mg/m^3)	---	---
Ozone (O_3)	Urban Area	180	120	---	---
	Industrial Area	180	120	---	---
Total suspended particles (TSP)	Urban Area	---	---	230	125
	Industrial Area	---	---	230	125
Thoracic particles (PM10)	Urban Area	---	---	150	100
	Industrial Area	---	---	150	100
Particulate Matter (PM2.5)	Urban Area	---	---	100	70
	Industrial Area	---	---	100	70
Total suspended particles measured as black smoke	Urban Area	---	---	150	60
	Industrial Area	---	---	150	60
Lead	Urban Area	---	---	---	0.5
	Industrial Area	---	---	---	1
Ammonia	Urban Area	---	---	120	---
	Industrial Area	---	---	120	---

1.1.1 Work place conditions

The facility must operate such that any possible leakage or emission of air pollutants inside the workplace will not affect workers' health and safety (A45 and 47/D1741). Annex 8 of the Executive Regulation provides the maximum limits for air pollutants inside the workplace.

The facility must operate such that humidity and temperature will be maintained within the set limits for workers (A46/D338, Annex 9 of the Executive Regulation). Suitable Personal Protective Equipment (PPE) is to be provided as required for workers in different areas of the facility (A46/D338).



1.1.2 Noise Emissions

The facility must meet noise regulations for within the workplace, outside the facility and for the area as a whole (A44/D1741). Permissible noise levels inside the workplace are also regulated in Annex 7 of the Executive Regulation and are presented in table 3.

Table 3: Maximum Permissible Limits for Noise Intensity inside the Workplace (dB (A)) (Annex 7 of the Executive Regulations of Law 9/2009)

Type of Place and Activity	Noise Limits (dB(A))
Work place with up to 8 hours shifts and aiming to limit noise hazards on sense of hearing.	90
Work place where acoustic signals and good audibility are required.	80
Work rooms for the follow up, measurement and adjustment of high performance operations.	65
Work rooms for computers, typewriters or similar equipment.	70
Work rooms for activities requiring routine mental concentration.	60

Intensity of noise shall not exceed 90 dB(A) during a daily 8-hour work shift. In case of increasing noise level intensity above 90 dB(A), the period of exposure must be reduced according to table (4).

Table 4: Periods of Exposure to Noise Intensities Above 90 dB (A) (Annex 7 of the Executive Regulations of Law 9/2009)

Noise intensity level (dB(A))	93	96	99	102	105
Period of exposure (hours)	4	2	1	½	¼



SAMPLING METHODOLOGY

A field visit was carried out on 10th July, 2023. on which a one-hour average measurement were conducted for SO₂, NO₂, CO, TSP, PM₁₀ and PM_{2.5} using an active air sampling technique for the specific locations.

Ambient Air Quality Monitoring Station used for active air measurements is an integrated system of which include several analyzers with data recording devices. A typical system would include gas analyzers for ambient air analysis, meteorological sensors, data recording, and signal transmission instrumentation enclosed in a shelter (2 x 4 x 2.5 meters) mounted over a suitable vehicle.

IES used an up-to-date ambient air quality monitoring station containing standard ambient air analyzer as well as full parameters weather monitoring station.

Ambient air pollutants

The most common gaseous air pollutants (also known as "criteria pollutants") are ground-level ozone, carbon monoxide, sulfur oxides, and nitrogen oxides. These pollutants can be harmful to health and the environment, and cause property damage. To acquire baseline information on background levels of Thoracic Particulates, IES conducted active sampling using a dust sampler. The sampler measures the respirable fraction of airborne dust (of particle size 0.1 to 10 µm) with a measuring range of 0.001 to 400 mg/m³ and an accuracy of ± 5 % of the reading.

Ambient air quality monitoring station include

- NO₂ analyzer: ISO 7996 equivalent to (U.S.A EPA Reference method – RFNA-1289-74)
- Chemiluminescence SO₂ analyzer: ISO 10498 equivalent to (U.S.A EPA Reference method – EQSA-0486-60)
- UV Fluorescence CO analyzer: ISO 4224 equivalent to (U.S.A EPA Reference method – RFCA-0981-54)
- IR GFC PM₁₀ analyzers: ISO 10473 equivalent to (U.S.A EPA Reference method EQPM-1102-150) –
- Beta Gauge PM_{2.5} analyzers: ISO 12103-1
- A2 T.S.P high volume sampler equivalent to (EPA Compendium method I.O. 2.1)
- A calibration system: Calibration Cylinders for (NO, CO & SO₂)-USA Zero air unit models 111 – USA Span Calibration unit 146i - USA



General Specifications

Nitrogen Monoxide, Nitrogen Dioxide and Nitrogen Oxides NO, NO₂& NO_x Analyzer (Thermo Scientific NO₂ Analyzer - Model 42i- USA)

- Approval and Certification: U.S.EPA (USA), UBA/ TUV (Germany), / Sira Certification Service
- Measuring Method. Chemiluminescence Technology
- Ranges. Auto ranging feature, Multiple Ranges to cover from 0 to 20 ppm (especially from 0 to 1 ppm)
- Zero Noise: ≤ 0.2 ppb
- Lower Detectable Limit: ≤ 0.4 ppb
- Zero drift (daily): < 0.5 ppb
- Span drift (daily): $< 0.5\%$ of full scale
- Response time: fast, ≤ 100 seconds
- Precision: $\leq 0.5\%$ of reading
- Linearity: $\leq \pm 1\%$ of full scale
- Operating temperature: not exceed $40\text{ }^{\circ}\text{C}$

Sulphur Dioxide SO₂ Analyzer (Thermo Scientific SO₂ Analyzer model 43i-USA)

- Approval and Certification: U.S.EPA (USA), UBA/ TUV (Germany), / Sira Certification Service
- Measuring Method: UV Fluorescence Technology
- Ranges.: Auto ranging feature, Multiple Ranges to cover from 0 to 10 ppm (especially from 0 to 1 ppm)
- Zero Noise: ≤ 0.5 ppb
- Lower Detectable Limit: ≤ 1 ppb
- Zero drift (daily): ≤ 1 ppb
- Span drift (daily): $\leq 1\%$ of full scale
- Response time: fast, ≤ 100 seconds
- Precision: $\leq 0.5\%$ of reading
- Linearity: $\leq \pm 1\%$ of full scale
- Operating temperature: not exceed $40\text{ }^{\circ}\text{C}$



Carbon Monoxide CO Analyzer (Thermo Scientific CO Analyzer model 48i-USA)

- Approval and Certification: U.S.EPA (USA), UBA/ TUV (Germany), / Sira Certification Service
- Measuring Method: Non Destructive Infra-Red Gas Filter Correlation (IRGFC) Technology
- Ranges: Auto ranging feature, Multiple Ranges to cover from 0 to 200 ppm (especially from 0 to 50 ppm)
- Zero Noise: ≤ 0.02 ppm
- Lower Detectable Limit: ≤ 0.04 ppm
- Zero drift (daily): ≤ 0.1 ppm
- Span drift (daily): $< 0.5\%$ of reading
- Response time: fast, ≤ 100 seconds
- Precision: $\leq 0.5\%$ of reading
- Linearity: $\leq \pm 1\%$ of full scale
- Operating temperature: not exceed 40°C

Ambient Respirable Particulate Matter Monitor_{PM₁₀} (Particulate Monitor Thermo Scientific FH 62C14)

- Approval and Certification: U.S.EPA (USA), UBA/ TUV (Germany), / Sira Certification Service
- Measuring Method: Sequential Particulate Collection on Individual Filter Membranes coupled with Beta Ray Attenuation
- Sampling at ambient temperature with measurement of both the outside temperature and the temperature near the filter medium.
- Sampling on filter membranes which can be used for further Chemical analyses as required by current regulations and standards.
- Completely automatic management of sampling and measurement quality controls.
- On line monitoring of all parameters characterizing the sampling process with relevant warnings of possible anomalies.
- Eliminates any interference of natural airborne radioactivity.
- User selectable reporting of mass concentration based on standard or actual flow rate.
- Sampling and measurement data storage on internal buffer.



- The analyzer should be equipped with batteries in order to avoid possible data losses due to power failures.
- Source: Beta Ray Source with appropriate activity
- Ranges: 0-500 $\mu\text{g}/\text{m}^3$ (2.3 m^3/h operating flow rate); 0-1,000 $\mu\text{g}/\text{m}^3$ (1 m^3/h operating flow rate)
- Lower Detectable Limit: $\leq 1.5 \mu\text{g}/\text{m}^3$ (24 hour cycle time, 2.3 m^3/h operating flow rate)
- Precision: $\leq 0.4 \mu\text{g}/\text{m}^3$ (24 hour cycle time, 2.3 m^3/h operating flow rate)
- Correlation Coefficient $R > 0.98$

Ambient Total Suspended Particulate Monitor TSP (HIVOL PLUS)

- Particulate Size: Total Suspended Particulates
- EPA Designation: 40 CFR Part 50 Appendix B
- Flow Controller: PLUS Technology
- Motor Style: Brush or Brushless Style Motor Assembly
- Timer: Programmable Digital
- Elapsed Time Indicator: Digital, Hours and Tenths
- Flow Range: 35-60 CFM
- Housing: Anodized Aluminum
- Filter Holder: Stainless Steel
- Barometric Pressure Sensor: 600-800 mmHg
- Temperature Sensor: -40 to 90oC
- Data Logs(4): Timer, Interval, Power, Calibration

Ambient Fine Particulate Matter Monitor $\text{PM}_{2.5}$ (Casella Microdust Pro - Dust Monitor)

- Measuring Range: 0.001 mg/m^3 - 250,000 mg/m^3
- Zero Stability: $<2\mu\text{g}/\text{m}^3$
- Batteries: 3 x AA
- External Power: 12VDC (via -PC18 supply)
- Logging Interval: 1 sec to 60 minutes
- Communication: Mini B USB
- Instrument Size: 172 x 72 x 33 mm (6.8 x 2.8 x 1.3")
- Probe Size: 35 x 205 mm (1.4 x 8.1")




- Tripod Mount: 1/4" Whitworth
- Resolution: 0.001mg/m³
- Operating temp: 0 - 55°C
- Battery run time: Approx 13 hours
- Weight: 600g including batteries (<22oz)
- Analogue output: 0 - 2.5V DC FSD
- Alarm output: Switched open drain <15V & 500mA DC

Noise Monitoring Equipment

The noise measurement will be carried out by using Type I which will be capable of recording the referenced noise level parameters.

The kit we are proposing to use is as follows:

- ✦ Sound Level Meter Casella - 62X- UK, compliant with IEC 1672 Class 1 standard.
- ✦ Sound Level Calibrator, compliant with IEC 942 Class 1 standard.

Device Name	Device's Measured parameter	Method of measurements	Device's photo
Sound Level Meter Casella - 62X- UK	-Measurement and assessment of environmental noise -Determination of occupational noise exposure	ISO -1996 part I ISO -1996 part II ISO 9612	

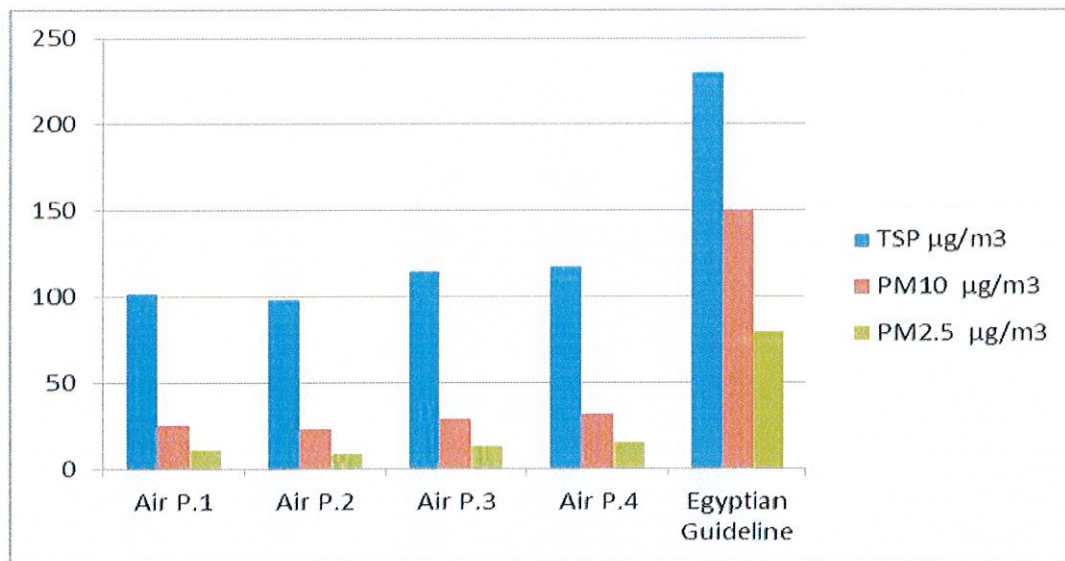


RESULTS

**Average air quality environmental measurements results
at Delta University for Science and Technology area**

Date: 10th July, 2023Table 5: The average results for (TSP, PM₁₀&PM_{2.5}) (μg/m³)

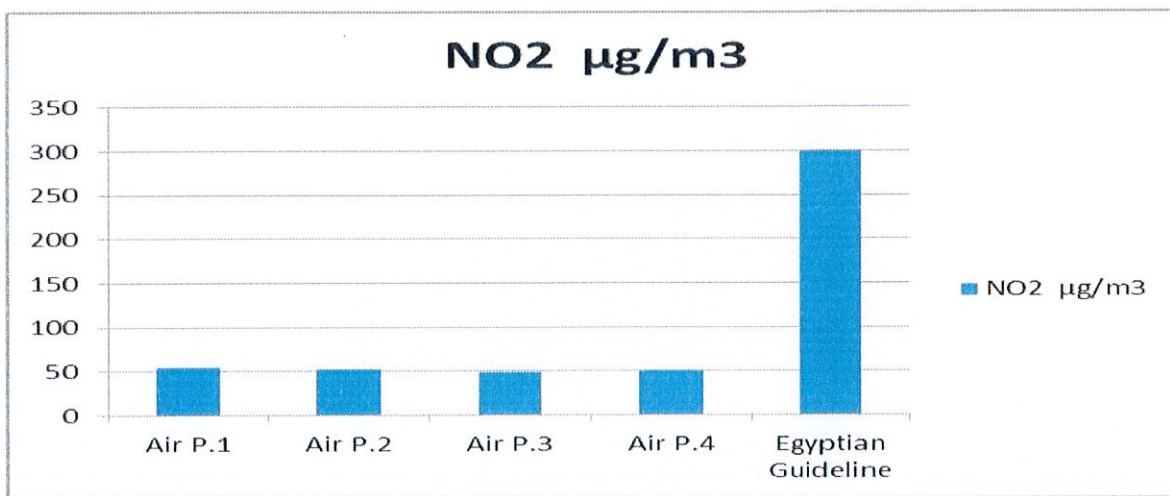
Location	TSP μg/m ³	PM ₁₀ μg/m ³	PM _{2.5} μg/m ³
Air P.1	102	25	11
Air P.2	98	23	9
Air P.3	115	29	13
Air P.4	118	32	15
Egyptian Guideline	230	150	80

Figure 2 :The average results for (TSP , PM₁₀&PM_{2.5}) (μg/m³)

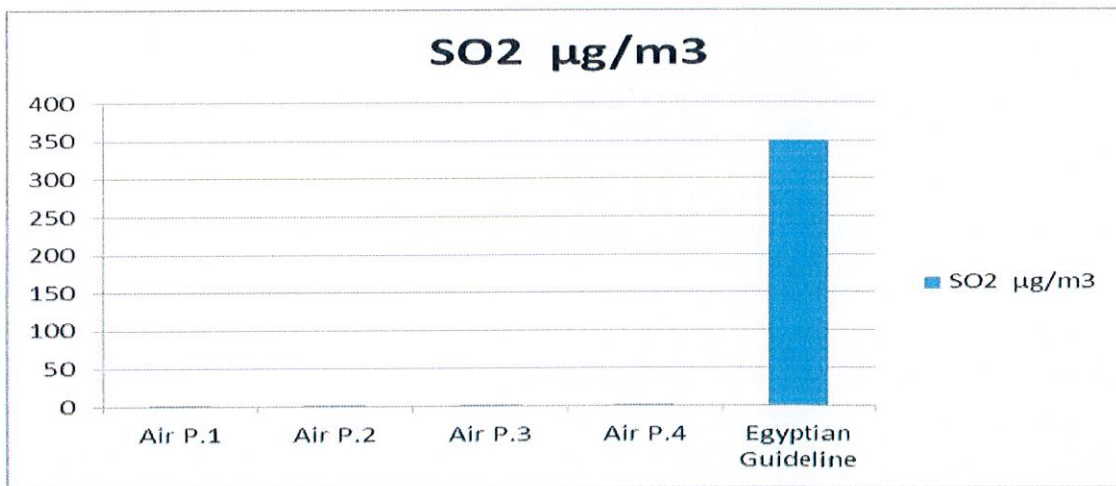
Date: 10th July, 2023

Table 6: The average results for (CO , SO₂ , CO₂, VOCs, CH₄ and NO₂)

Location	NO ₂ µg/m ³	SO ₂ µg/m ³	CO mg/m ³	CO ₂ ppm	VOCs ppm	CH ₄ ppm
Air P.1	55	0.18	0.15	318	Nil	0.09
Air P.2	52	0.24	0.16	325	Nil	0.11
Air P.3	48	0.25	0.18	306	Nil	0.08
Air P.4	50	0.22	0.21	316	Nil	0.15
Egyptian Guideline	300	350	30	----	-----	-----

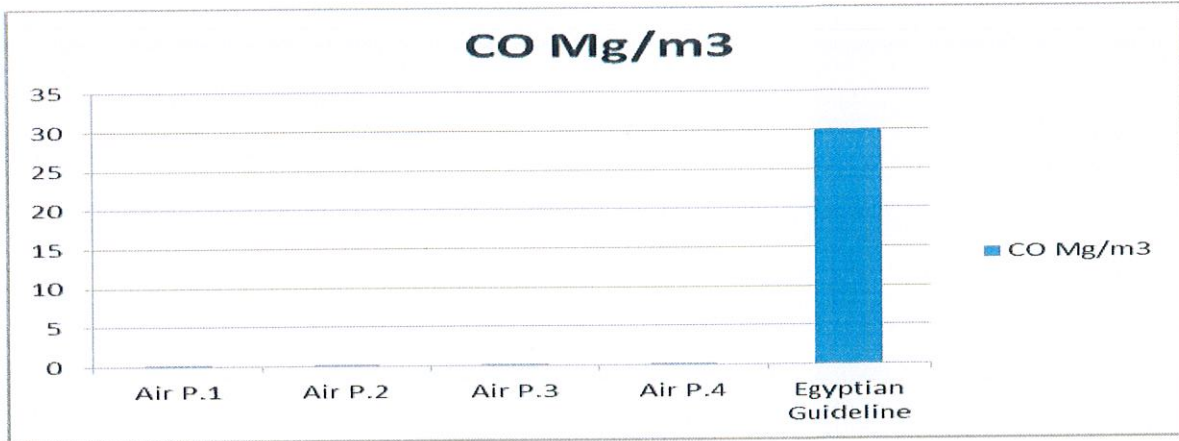


The average results for (NO₂)



The average results for (SO₂)





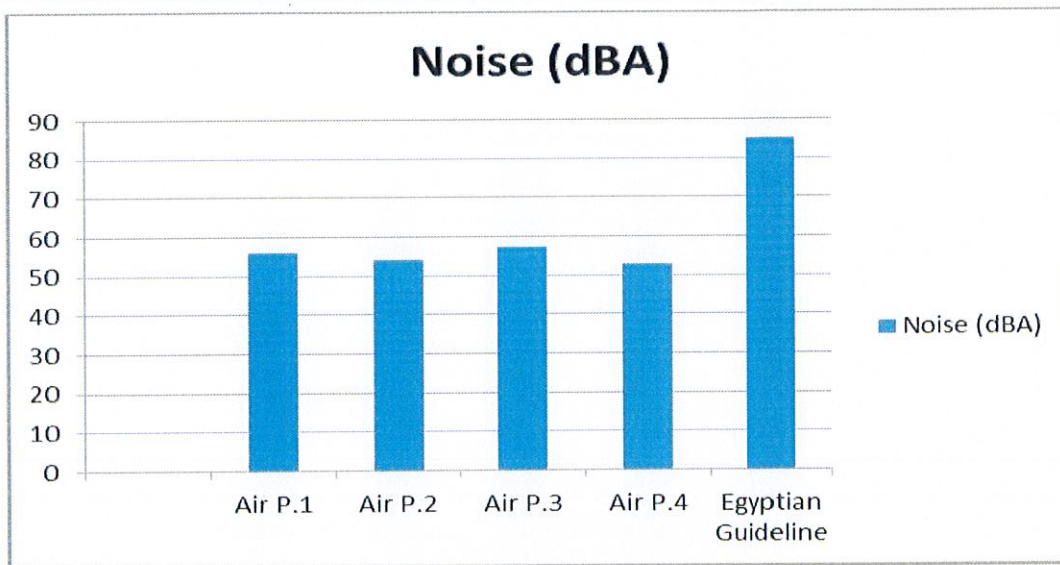
The average results for (CO)



Date: 10th July, 2023

Table 7: The average results for Noise levels (dBA)

Location	Noise (dBA)
Air P.1	56.1
Air P.2	54.2
Air P.3	57.2
Air P.4	52.8
Egyptian Guideline	85



The average results for Noise levels (dBA)



CONCLUSION AND RECOMMENDATIONS

Based on the results of ambient air quality measurements during air quality monitoring measurements during the period of 10th July, 2023

. it is concluded that ambient air quality gaseous and particulates levels at measurement locations are way below the maximum national limits for all the measured parameters,

Particulate measurements (TSP , PM₁₀ and PM_{2.5}):

All measurements for the particulates pollutants (TSP&PM10 and PM2.5) were complying with the maximum allowable limits according to law 4/1994 for Environment protection and its amendments by law No.9/2009 and the executive regulation issued in 1995 and its amendments no. 710 in 2012 and no. 964 in 2015.

Gaseous air pollutants:

All measurements for the gaseous pollutants (NO₂, SO₂, CO₂ , VOCs , CH₄ and CO) were complying with the maximum allowable limits according to law 4/1994 for Environment protection and its amendments by law No.9/2009 and the executive regulation issued in 1995 and its amendments no. 710 in 2012 and no. 964 in 2015.

Noise Levels:

All measurements for the Noise levels were complying with the maximum allowable limits according to law 4/1994 for Environment protection and its amendments by law No.9/2009 and the executive regulation issued in 1995 and its amendments no. 710 in 2012 and no. 964 in 2015.



Indoor air quality measurements

Assigned locations *for the Delta University Buildings*

The exact coordinates and timings of the sampling locations are shown in Table 1, shows the locations of measurements.

Table 7: Sampling locations for Delta University for Science and Technology area

- **Assigned Locations:**

The following location is assigned by GPS

Sampling Location Name	GPS Readings	
	(WGS 84 Coordinates)	
	N coordinates	E coordinates
Faculty of Engineering	31°26'30.0"	31°29'39.0"
the hotel	31°26'33.0"	31°29'35.0"
Faculty of Dentistry	31°26'32.0"	31°29'38.0"
Faculty of Physical Therapy	31°26'26.0"	31°29'45.0"
Business administration building	31°26'31.0"	31°29'42.0"
faculty of Pharmacy	31°26'32.0"	31°29'36.0"





Figure (2) Sampling locations for *Delta University Buildings*



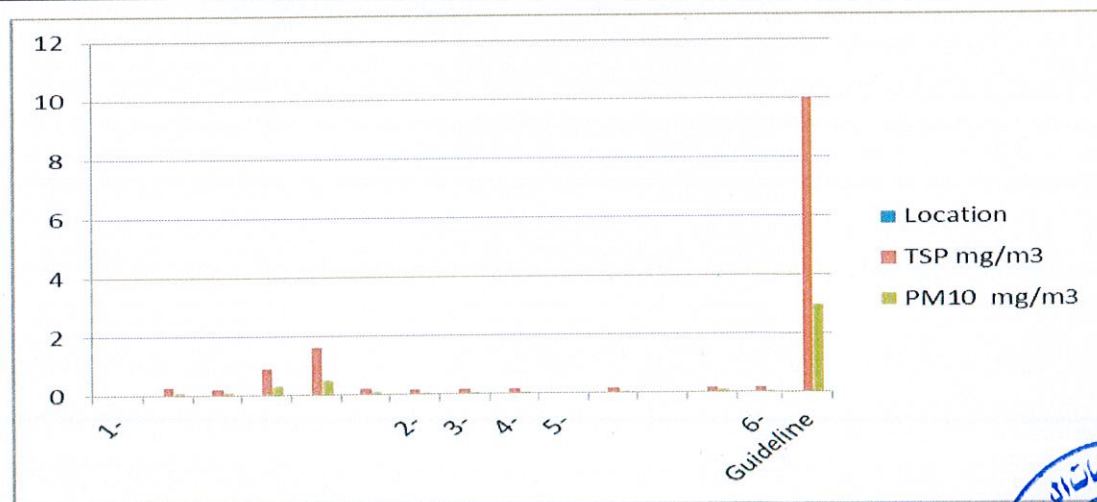
RESULTS

Average air quality environmental measurements results

At Delta University Buildings area

Date: 10th July, 2023Table 8: The average results for (TSP, PM₁₀&PM_{2.5}) (mg/m³)

No	Location	TSP mg/m ³	PM ₁₀ mg/m ³	PM _{2.5} mg/m ³
1-	Faculty of Engineering			
	Ground floor next to the reception	0.295	0.102	0.048
	Teaching room at the College of Engineering	0.202	0.098	0.041
	Carpentry workshop next to the saw	0.915	0.324	0.198
	Welding workshop	1.621	0.520	0.218
	Materials testing lab	0.215	0.101	0.056
2-	Business administration building services area	0.192	0.082	0.038
3-	Plant greenhouse in the garden of the College of Pharmacy	0.182	0.076	0.033
4-	The hotel is next to the pool	0.185	0.079	0.035
5-	Faculty of Dentistry			
	Service center Fourth floor, next to Delta Plus	0.189	0.080	0.036
	Wooden pergola at the Faculty of Dentistry	0.198	0.091	0.042
6-	Faculty of Physiotherapy, second floor	0.181	0.074	0.031
	Guideline	10	3.0	--

Figure 8: The average results for (TSP, PM₁₀) (μg/m³)

Date: 10th July, 2023Table 9: The average results for (CO, SO₂ and NO₂)

No	Location	NO ₂ ppm	SO ₂ ppm	CO ppm	CO ₂ ppm	VOC _s ppm	CH ₄ ppm
1-	Faculty of Engineering						
	Ground floor next to the reception	0.09	0.06	0.65	398	Nil	0.19
	Teaching room at the College of Engineering	0.08	0.07	0.52	382	Nil	0.18
	Carpentry workshop next to the saw	0.9	0.65	1.15	425	0.35	0.35
	Welding workshop	1.4	1.16	3.55	518	0.51	0.42
	Materials testing lab	0.07	0.08	0.72	412	0.11	0.25
2-	Business administration building services area	0.04	0.05	0.48	355	Nil	0.21
3-	Plant greenhouse in the garden of the College of Pharmacy	0.05	0.07	0.69	382	0.15	0.22
4-	The hotel is next to the pool	0.06	0.09	0.61	378	0.11	0.21
5-	Faculty of Dentistry						
	Service center Fourth floor, next to Delta Plus	0.08	0.09	0.47	365	0.18	0.19
	Wooden pergola at the Faculty of Dentistry	0.07	0.05	0.38	370	Nil	0.17
6-	Faculty of Physiotherapy, second floor	0.04	0.03	0.35	374	Nil	0.15
	Guideline	3	2	25	5000	----	---



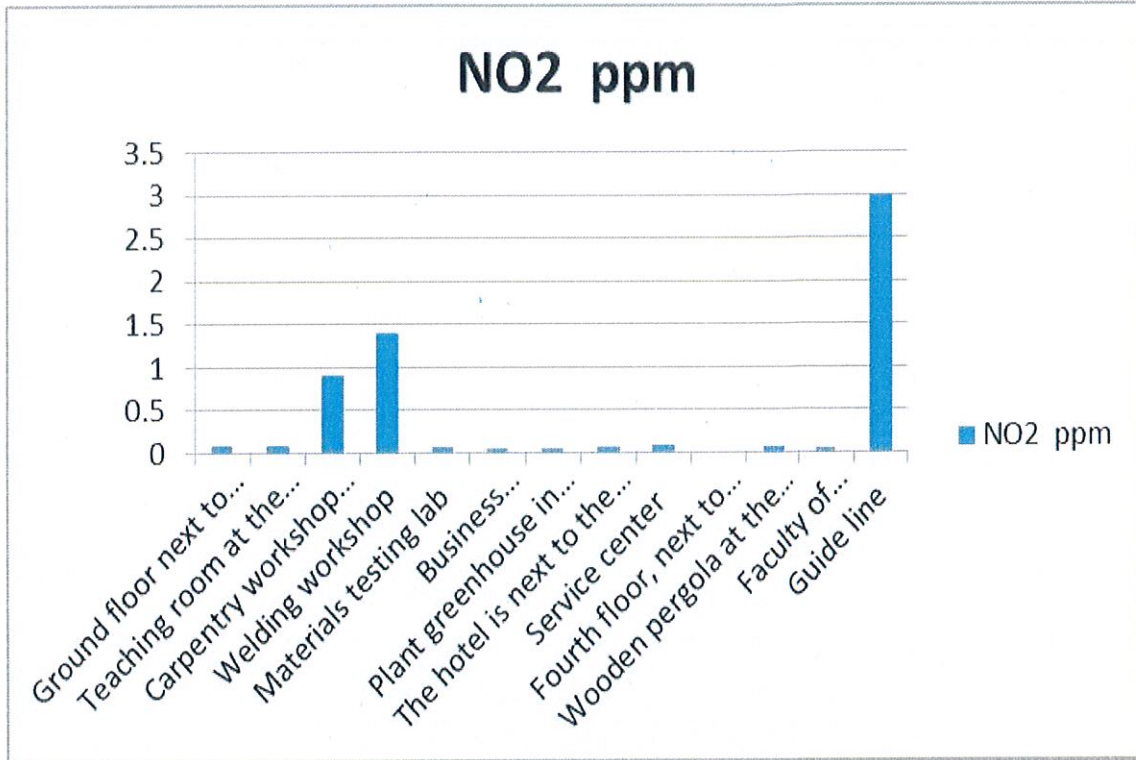
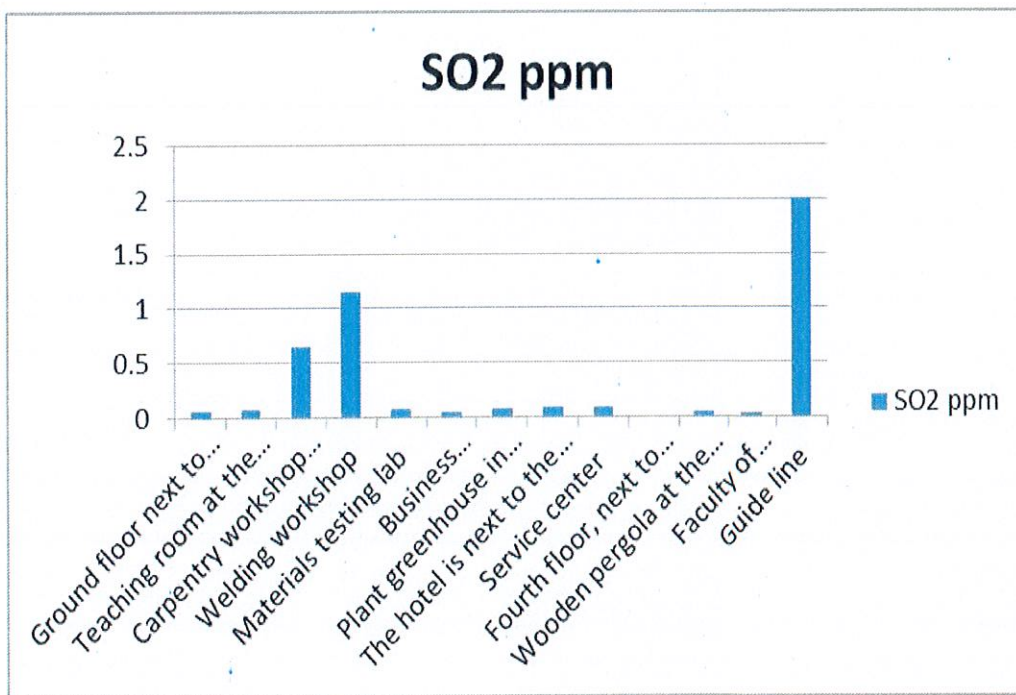
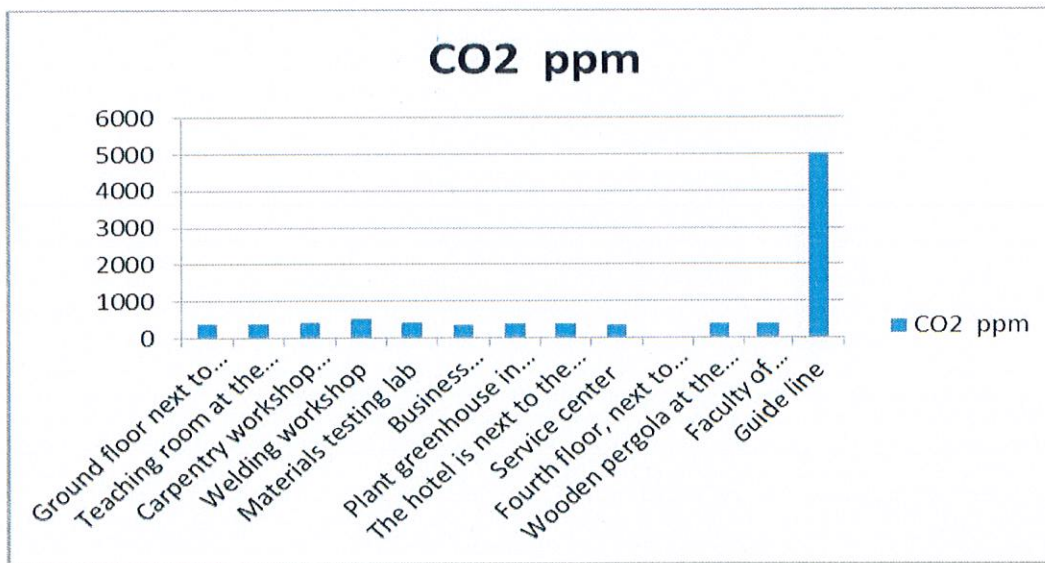
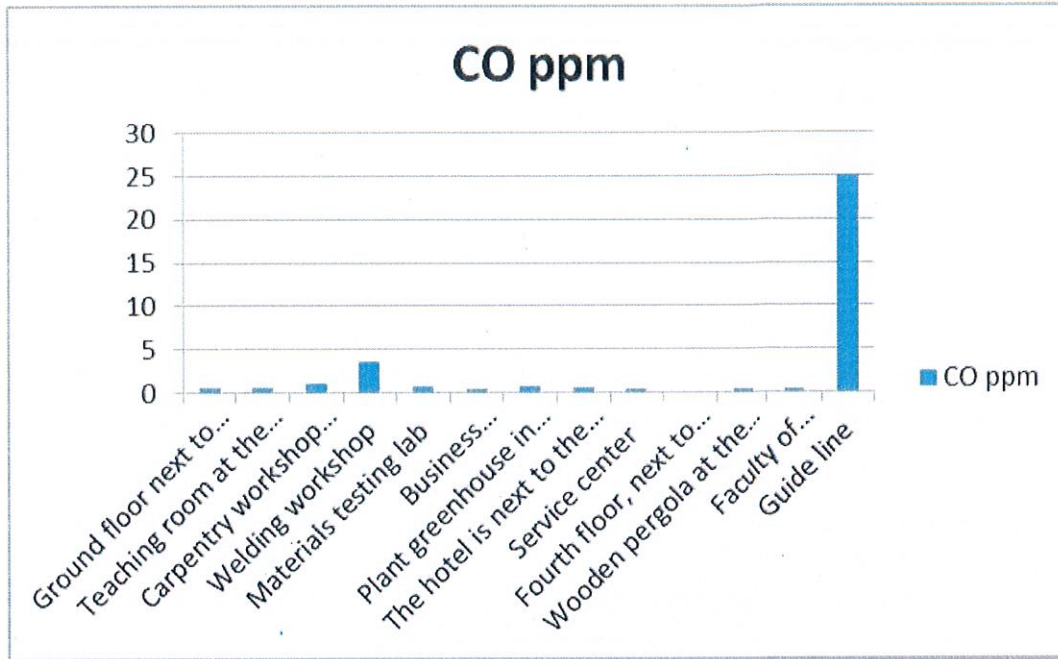


Figure 9: The average results for (NO2)

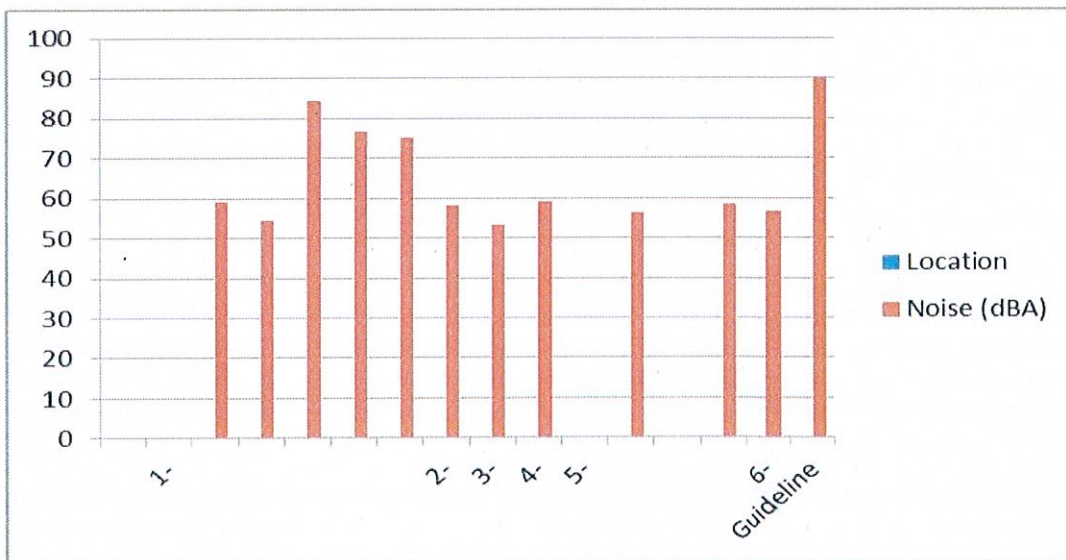




Date: 10th July, 2023

Table 10: The average results for Noise levels (dBA)

No	Location	Noise (dBA)
1-	Faculty of Engineering	
	Ground floor next to the reception	59.2
	Teaching room at the College of Engineering	54.5
	Carpentry workshop next to the saw	84.2
	Welding workshop	76.5
	Materials testing lab	75.1
2-	Business administration building services area	58.2
3-	Plant greenhouse in the garden of the College of Pharmacy	53.1
4-	The hotel is next to the pool	59.1
5-	Faculty of Dentistry	
	Service center	56.2
	Fourth floor, next to Delta Plus	
	Wooden pergola at the Faculty of Dentistry	58.5
6-	Faculty of Physiotherapy, second floor	56.7
Guideline		90



The average results for Noise levels (dBA)



Recommendations

It is recommended that monitoring should continue for all the regulated parameters after location rehabilitation in order to verify/assure compliance

FUTURE RE COMMENDATION

It is recommended that monitoring should continue for all the regulated parameters, in order to verify/assure compliance.

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www.ifc.org/ehsguidelinesupdate

ATTACHMENT

Appendix's

Certification of Consultant from EEAA & ISO/IEC17025:2017

Calibration Certificates for the Used Equipment's

All the measurements were done under the supervision of

Dr.Ragab Abd El-Khaliq Abo Bakr

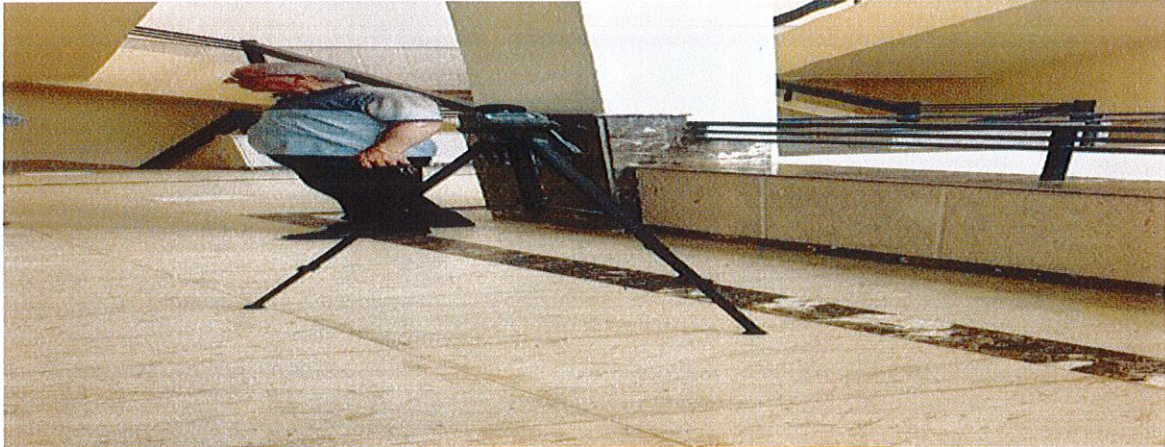
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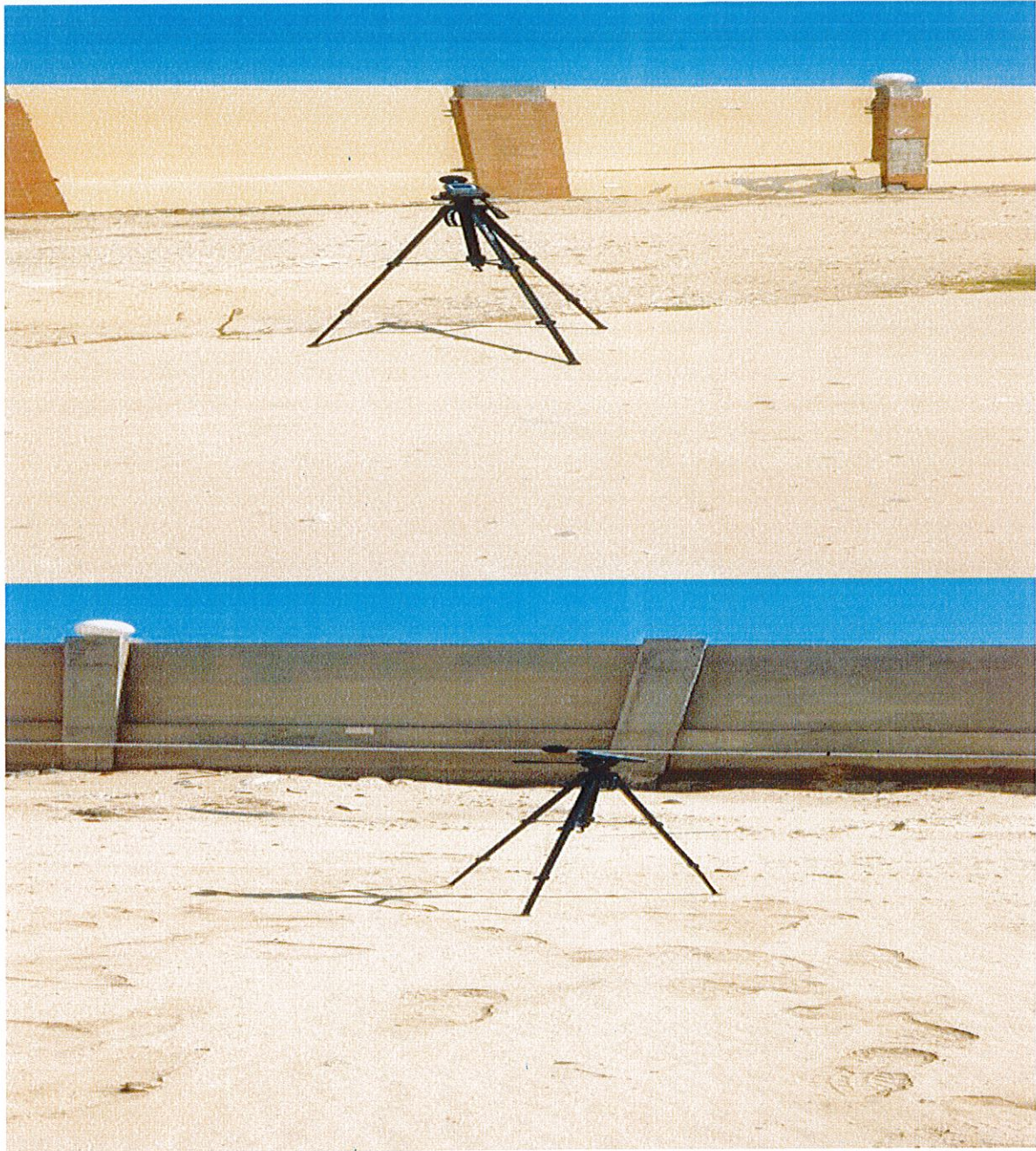
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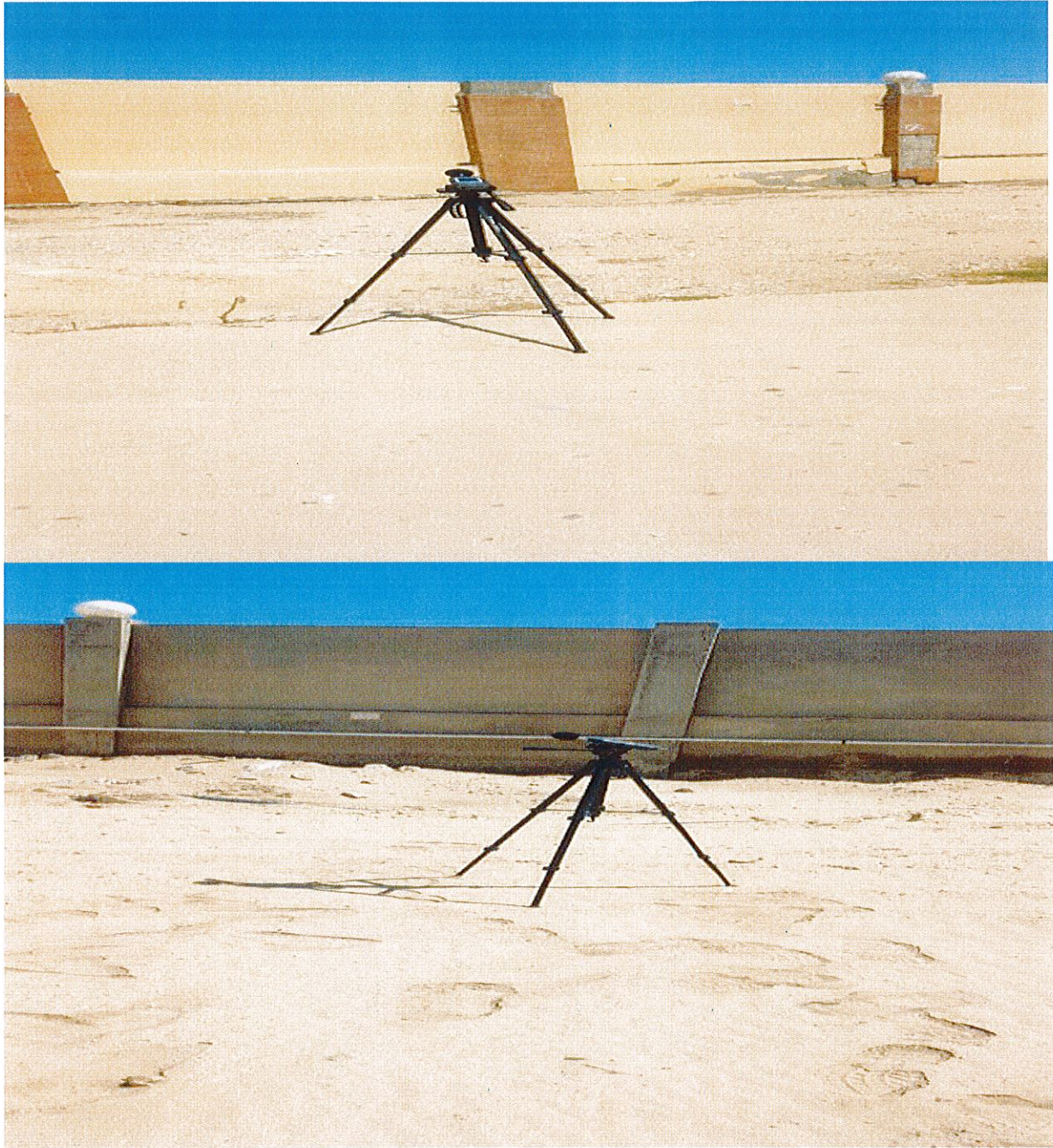












Calibrate report

Product	Air Quality Monitor System	Model	AQM-09
Quantity	1pcs	Cali date	September, 27, 2022
Product No.	OC202209270060255		
Appearance	<input checked="" type="checkbox"/> Clean <input checked="" type="checkbox"/> Non corrosive <input checked="" type="checkbox"/> No damage		
Gas type	CO: ppm SO ₂ :ppb NO ₂ :ppb O ₃ :ppb PM2.5:ug/m ³ PM10:ug/m ³ TSP:ug/m ³ Atmospheric : hpa Noise:db Temperature and humidity: °C/%RH		
Accuracy	±3%F.S		
resolution	0.1ppm 1ppb 1ug/m ³		
Response time	≤30S		
Survey range	CO:0-200ppm SO ₂ :0-2000ppb NO ₂ :0-2000ppb O ₃ :0-2000ppb PM2.5:0-1000ug/m ³ PM10:0-1000ug/m ³ TSP:0-1000ug/m ³ Noise:30-130dB Temperature: -20-50°C Humidity:0%-100%RH		
Signal output mode	4G LTE		
Power supply voltage	AC 220V/50Hz		
Power dissipation	≤ 30W		
Working temperature and humidity range	-20°C-50°C / 0%RH-100%RH		
Testing condition indoor	Temperature: 25°C Humidity: 60%RH		
Calibration gas	CO NO ₂ SO ₂ O ₃		
Cali gas test	1.CO: Cali gas concentration: <u>100</u> ppm Inspect concentration: <u>99</u> ppm 2.NO ₂ : Cali gas concentration: <u>1000</u> ppb Inspect concentration: <u>998</u> ppb 3.SO ₂ : Cali gas concentration: <u>1000</u> ppb Inspect concentration: <u>997</u> ppb 4.O ₃ : Cali gas concentration: <u>1000</u> ppb Inspect concentration: <u>1000</u> ppb 5.PM2.5:Measured value: <u>1.8</u> ug/m ³ PM10:Measured value: <u>2.2</u> ug/m ³ 6.TSP:Measured value: <u>2.5</u> ug/m ³ Noise: Measured value: <u>61.3</u> dB 7.Temperature: Measured value: <u>26.5</u> °C Humidity:Measured value: <u>56</u> %RH		
Test result	Qualified		
Remark			

Quality judgment:

Company: Henan Oceanus Import & Export Co., Ltd.

Date:September,27, 2022



Tester: xiu tai chen

OQC : hong yan jin

Auditor: yan hui wang



Aeroqual Limited
460 Rosebank Road, Auckland 1026, New Zealand
Phone: +649-623 3013 Fax: +64-9-623 3012
www.aeroqual.com

Calibration Certificate

Calibration Date: 3 October 2022

Model: PM2.5 PM10 0-1.000 mg/m3

Serial No: 5002-B98F-001

Measurements

	PM2.5 mg/m3	PM10 mg/m3
Reference Zero	0.000	0.000
AQL Sensor Zero	0.000	0.000
Reference Span	0.136	0.188
AQL Sensor Span	0.139	0.191

Calibration Standard

Standard	Manufacturer	Model	Serial number
Optical Particle Counter	Met One Instruments	9722-1	U11996
Test aerosol	ATI	0.54 µm latex microspheres	n/a



QC Approval: _____

Date: _____

22/319/107
26 Oct 22

Certificate of Calibration and Conformity

Instrument Type CEL-712 Microdust Pro
Serial Number 1950703 **Probe Serial Number** 4394585
Firmware Revision 08



Calibration Principle:

The sensitivity of this instrument has been established using a factory reference 'Calibration Insert'. The 'Calibration Insert' uses the optical light scattering technique.

The factory reference 'Calibration Insert' has demonstrated traceability to gravimetric calibration using Casella's Wind tunnel dust generation system using ISO 12103-1 A2 Fine test dust (Natural ground mineral dust, predominantly silica, Arizona Road Dust equivalent, Particle size range 0.1 to 60 µm).

The value shown on the supplied user 'Calibration Insert' is to provide a stable method for the user to return to the instrument sensitivity level back to factory conditions and thus traceable to wind tunnel gravimetric tests. For calibration and optimum accuracy to user specific dusts, types and conditions, please refer to the user handbook.

Test Conditions:

Temperature :- 21.9 °C
 Humidity :- 52.6 %RH
 Pressure :- 1004.3 mBar

Equipment used for Calibration of "Reference Insert":

Wind Tunnel:-	Casella Wind Tunnel	Serial Number:	EQ11223
Microbalance:-	Cahn C-23	Serial Number:	Sn75811
Velocity Probe:-	DA40 Vane Anemo	Serial Number:	Sn10060
Flow Meter:-	BG1 TriCo	Serial Number:	EQ10851

Calibration Results:

Casella Factory Reference 'Calibration Insert' :-	Serial Number:	EQ11062	Value:	13.607
Supplied 'Calibration Insert' For Probe :-	Serial Number:	4394585	Value:	121.8

Declaration of conformity:

This test certificate confirms that the instrument as specified above has been successfully tested and adjusted to comply with the manufacturer's published specifications.

This product is certified as being compliant to the requirements of the CE Directive.

Test Engineer:
Date of Issue:

Nurzio Dipace
 14/09/2022



Casella
 Regent House, Woodley Road
 Kempston, Bedford
 MK42 7JY
 United Kingdom
 Tel: +44 (0) 1234 841100
 Fax: +44(0) 1234 841490
 E-mail: info@casellasolutions.com
 Web: www.casellasolutions.com

Casella Inc.
 415 Lawrence Bell Drive, Unit A
 Buffalo, NY 14221, USA
 Toll Free (800) 368-2866
 Tel: (716) 278 3040
 Fax: (716) 278 3043
 E-mail: info@casellausa.com

Ideal Industries India Pvt Ltd.
 229-230, Boulevard, Tower - B, Sakinaka Road,
 Sector-47, Gurgaon-122001, Haryana (India)
 Tel: +91 124 4495106
 E-mail: casella@ies@ideal-industries.in

Ideal Industries China
 No. 61, Lane 1000, Zhongheng Road,
 Pudong District (Shanghai), 201203, China
 Telephone: 0086-21-51263118
 Fax: 0086-21-81658968
 Email: info@casellasolutions.cn



www.casellasolutions.com



Solutions for Risk Reduction

Certificate of Conformity and Calibration

Instrument Type TUFF 4 Plus I.S. Personal Air Sampler
Serial Number 1850112
Firmware Version 026.14-68

Applicable standards:-

EN1232 - Workplace Atmospheres: Pumps for Personal Sampling of Chemical Agents
 MDHS14/3 - General Methods for Sampling and Gravimetric Analysis of Respirable and Inhalable Dust
 NIOSH 0800 - Particulates Not Otherwise Regulated, Respirable



Test Conditions:-

Temperature 24 °C
 Humidity 39 %RH
 Pressure 1019 mBar

Test Engineer:- Stephen Potten
Date of Issue:- September 9, 2022

Equipment Used

Air Flow Calibrator: BGI Challenger Serial Number: 000152-L
Type:

Declaration of conformity

This test certificate confirms that the instrument specified above has been successfully tested to comply with the manufacturer's published specifications.

Tests are performed using equipment traceable to national standards in accordance with Casella's ISO 9001:2008 quality procedures. This product is certified as being compliant to the requirements of the CE Directive.

Test and Calibration Results :-

General tests

Item	Measured value	Lower Limit	Upper Limit	Status
Pump temperature (°C)	24	19	29	Pass
Battery voltage (V)	5.09	4.4	5.8	Pass
General hardware	N/A	N/A	N/A	Pass
Infrared communication	N/A	N/A	N/A	Pass

General tests

All Tests Pass

Flow rate accuracy

Set flow point (litres/min)	Measured flow rate (litres/min)	Error (%)	Error Limits (%)		Status
			Min	Max	
1.50	1.46	-2.67%	-5%	5%	Pass
2.20	2.21	0.45%	-5%	5%	Pass
3.50	3.59	2.57%	-5%	5%	Pass

Flow rate accuracy

All Tests Pass

Flow control accuracy

Set flow point (litres/min)	Inlet pressure loading (cm H ₂ O)	Measured flow rate (litres/min)	Error (%)	Error Limits (%)		Status
				Min	Max	
2.20	10	2.21	Ref.	Ref.	Ref.	Pass
2.20	40	2.19	-0.60%	-5%	5%	Pass

Flow control accuracy

Casella CEL
 Regent House, Wolseley Road,
 Kempston, Bedford
 MK42 7JY
 United Kingdom

Phone: +44 (0) 1234 844100
 Fax: +44(0) 1234 841490
 E-mail: info@casellameasurement.com
 Web: www.casellameasurement.com



٢٠٢٣/٣/٢

شهادة معايرة

السادة / شركة الدولية للخدمات البيئية

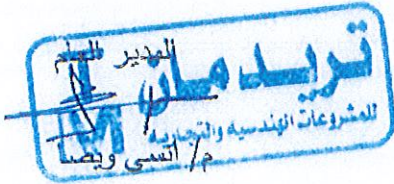
تشهد شركة تريدمان للمشروعات الهندسية والتجارية بصفتها الوكيل الوحيد في ج.م.ع لشركة
RAE Sys. الامريكية بأنه قد تم معايرة خلية قياس (VOCs) الخاصة بالجهاز رقم M01C019040
موديل MultiRAE Lite

Type of gas	Applied value ppm	Reading value ppm
VOCs	100 ppm	100 ppm

علما بان معايرة هذه الخلايا سارية لمدة ٦ شهور من تاريخه حتى (٢٠٢٣/٩/١)

وهذه شهادة منا بذلك.

وتفضلوا سيادتكم بقبول فائق الاحترام ،،،



We hereby certify that we have tested above products in accordance with the SENKO's standard inspection procedures and that the quality is in fully conformity with the specifications and the standards.

Calibration and Test Certificate

Calibration date : 2023.01.02

Certificate date : 2023.01.02

Specification

Product Name	Serial No.	Sensor	Range
SP-MGT-P	S J2319113	CH4	0 - 100 %LEL
		O2	0 - 30 %vol
		CO	0 - 500 ppm
		H2S	0 - 100 ppm

Calibration

Gas	Concentration	Reading	Response Time(T90)
CH4	50 %LEL	49 %LEL	≤ 10 seconds
O2	18.0 %vol	18.0 %vol	
CO	100 ppm	104 ppm	
H2S	25 ppm	25.4 ppm	

Factory Alarm Settings

	Low Alarm	High Alarm	STEL	TWA
CH4	10 %LEL	25 %LEL	-	-
O2	19.5 %vol	23.5 %vol	-	-
CO	20 ppm	100 ppm	100 ppm	20 ppm
H2S	5 ppm	30 ppm	10 ppm	5 ppm

Performance Test

Start up	Pass
Self-Diagnosis	Pass
Zero Calibration	Pass
Span Calibration	Pass
Temperature Test	Pass
Alarm Test	Pass

Calibrated by

Approved by



CERTIFICATE OF CALIBRATION

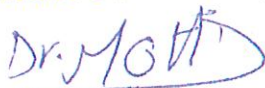
شهادة معايرة

Certificate No: 6082/12C002/14/114/2023

■ NIS Lab اسم المختبر	:	Acoustics Metrology Lab.
■ Issued For صادر لـ	:	الدولية للخدمات البنينة IES Lab برج الجيزة - أعلى بلك مصير - الجواهرية - الجيزة
■ Contact Information of the Customer بيانات التواصل بالبريد	:	01001058421
■ Location of Calibration مكان إجراء المعايرة	:	NIS
■ Device Description اسم وصف الجهاز تحت المعايرة	:	Sound Calibrator
■ Manufacturer اسم الشركة المنتجة	:	CASELLA (UK)
■ Model/Type نموذج النوع	:	CEL-120/1
■ Serial Number الرقم المسجل للجهاز	:	2383566
■ Date of Receipt تاريخ الاستلام	:	25/05/2023
■ Issue Date تاريخ الإصدار	:	01/06/2023
■ Date of Calibration تاريخ المعايرة	:	01/06/2023
■ Due Date تاريخ إعادة المعايرة	:	31/05/2024
■ Code كود	:	-----

Approved by

Head of Laboratory



Ass. Prof Dr. Mohammed Abd-Elbasseer

NIS President



Prof. Dr. Noha E. Khaled

CERTIFICATE OF CALIBRATION

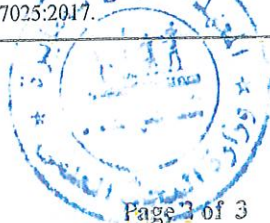
شهادة معايرة



• Certificate No.	6082/12C002/14/114/2023				
• Customer	IES Lab الدولية للخدمات البيئية برج الجوهرة - أعلى بنك مصر - العوامدية - الجيزة				
• Location	NIS	• Date of Receipt	25/05/2023		
• Calibrated by	Dr. Hatem Khalaf	• Date of Calibration	01/06/2023		
• Number of pages	3	• Issue Date	01/06/2023		
• File name	-----	• Due Date	31/05/2024		
• Device Under Calibration					
Device Description	Sound Calibrator				
Manufacturer	CASELLA (UK)				
Model/Type	CEL-120/1				
Serial Number	2383566				
Code	-----				
• Environmental Conditions					
Temperature (°C)	(21.0±0.5)	Humidity (%)	(50.0±5.0)		
Pressure (kPa)	(101.6±0.02)	-----	-----		
• Calibration Method					
The calibration was carried out according to IEC 60924:2003 "Electro-acoustics. Sound Calibrators"					
• Traceability					
Description of Reference Device	Serial Number	Calibration Date	Certificate No.	Expanded Uncertainty	Traceability
Laboratory Standard Microphone	2787505	20/01/2022	NIS/12/MIC/half03/2022	0.05 dB	NIS
Pulse Generator	2878208	23/05/2022	776/22C001/8/103/2022	0.000018 Hz	NIS
Pulse Generator	2878208	15/12/2021	NIS/AC.Pulse-08	0.00003 V	NIS
• Uncertainty Statement					
The combined standard uncertainty is calculated based on IEC 60924:2003 which include at least the standard uncertainty reported for the reference standard, the standard uncertainty for the measurement process, the standard uncertainty for any uncorrected errors. The combined standard uncertainty is multiplied by a coverage factor (k) of 2 to provide an expanded uncertainty, which defines a level of confidence of approximately 95 percent (95.45 %). The expanded uncertainty presented in this certificate/report is consistent with the ISO/IEC GUIDE 98-3:2008 "Uncertainty of measurement — Part 3: Guide to the expression of uncertainty in measurement (GUM:1995)".					
• ISO 17025 Statement					
All NIS laboratories implement the NIS unified quality management system which was built to be in compliance with ISO 17025:2017. It is the customer responsibility to indicate - on the calibration label - the due date for calibration in accordance with the aforementioned ISO/SOP calibration procedure and in compliance with ISO 17025:2017.					

Calibrated by

HATEM
Dr. Hatem Khalaf



Reviewed by

T. M. El-Basheer
Dr. Tarek M. El-Basheer

Page 3 of 3

CERTIFICATE OF CALIBRATION

شهادة معايرة



Certificate No.	6082/12C002/14/114/2023	Serial Number	2383566
-----------------	-------------------------	---------------	---------

• Conformity Statement

Conformity Criterion	Not applicable
Decision	-----

• Calibrated Items

- Sound Pressure Level, SPL (dB)
- Frequency (Hz)
- Harmonic Distorsion (%)

• Calibration Results

1) **Sound Pressure Level, SPL (dB)**

Nominal Frequency (Hz)	Nominal Level (dB)	Measured Level (dB)	Absolute Deviation (dB)	IEC 60942 Tolerance limits (dB)		Expanded Uncertainty (dB) K=2
				Class 1	Class 2	
1000.0	94.00	94.44	0.44	0.40	0.75	0.08
1000.0	114.00	114.50	0.50	0.40	0.75	0.05

2) **Frequency (Hz)**

Nominal SPL (dB)	Nominal Frequency (Hz)	Measured Frequency (Hz)	Absolute Deviation (Hz)	IEC 60942 Tolerance limits (Hz)		Expanded Uncertainty (Hz) K=2
				Class 1	Class 2	
94.0	1000.0	1000.0	0.0	10.0	20.0	0.78
114.0	1000.0	1000.0	0.0	10.0	20.0	0.78

3) **Harmonic Distorsion (%)**

Nominal SPL (dB)	Nominal SPL (dB)	THD (%)	IEC 60942 Tolerance limits (%)		Expanded Uncertainty (%) K=2
			Class 1	Class 2	
1000.0	94.0	0.03	3.0	4.0	0.08
1000.0	114.0	0.38	3.0	4.0	0.09

Calibrated by

HATEM
Dr. Hatem Khalaf

Reviewed by

T.M.
Dr. Tarek M. ElBashier





CERTIFICATE OF CALIBRATION
شهادة معايرة

Certificate No: 6082/12C001/67/111/2023

■ NIS Lab : Acoustics Metrology Lab.
اسم المختبر

■ Issued For : IES Lab الدولية للخدمات البنائية
صاحب العمل

■ Contact Information of the Customer : 01001058421
بيانات التواصل بالزبون

■ Location of Calibration : NIS
مكان اجراء المعايرة

■ Device Description : Sound Level Meter
اسم ووصف الجهاز تحت المعايرة

■ Manufacturer : CASELLA
اسم الشركة المنتجة

■ Model/Type : CEL-62X
نوع الجهاز

■ Serial Number : 1286357
الرقم المسلسل للجهاز

■ Code : ----
كود

■ Date of Receipt : 25/05/2023
تاريخ الاستلام

■ Date of Calibration : 29/05/2023
تاريخ المعايرة

■ Issue Date : 05/06/2023
تاريخ الإصدار

■ Due Date : 28/05/2024
تاريخ إعادة المعايرة

Approved by

Head of Laboratory

Dr. Mott

Ass. Prof. Dr. Mohammed Abd-Elbassoer

NIS President

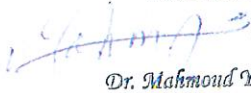
Prof. Dr. Noha E. Khaled



CERTIFICATE OF CALIBRATION
شهادة معايرة

• Certificate No.	6082/12C001/67/111/2023				
• Customer	IES Lab الدولية للخدمات البيئية برج الجيزة - اعلى بنك مصر - الجرائد - الجيزة				
• Location	NIS	• Date of Receipt	25/05/2023		
• Calibrated by	Dr. Mahmoud Y. Elaidy	• Date of Calibration	29/05/2023		
• Number of pages	4	• Issue Date	05/06/2023		
• File name	-----	• Due Date	23/05/2024		
• Device Under Calibration					
Device Description	Sound Level Meter				
Manufacturer	CASELLA				
Model/Type	CEL-62X				
Serial Number	1286357				
Code	-----				
• Environmental Conditions					
Temperature (°C)	(22.0±0.5)	Humidity (%)	(48.0±5.0)		
Pressure (kPa)	(101.60±0.02)	-----	-----		
• Calibration Method					
The calibration was carried out according to IEC 61672-1:2013 " Electro-acoustics — Sound Level Meter — Part 1: Specifications"					
• Traceability					
Description of Reference Device	Serial Number	Calibration Date	Certificate No.	Expanded Uncertainty	Traceability
Multifunction Acoustic Calibrator	1899917	22/11/2021	NIS/12/MAC/01/2021	0.24 dB	NIS
Laboratory Standard Microphone	2787505	20/01/2022	NIS/12/MJC/half 03/2022	0.05 dB	NIS
• Uncertainty Statement					
The combined standard uncertainty is calculated based on IEC 61672-1:2013 which include at least the standard uncertainty reported for the reference standard, the standard uncertainty for the measurement process, the standard uncertainty for any uncorrected errors. The combined standard uncertainty is multiplied by a coverage factor (k) of 2 to provide an expanded uncertainty, which defines a level of confidence of approximately 95 percent (95.45 %). The expanded uncertainty presented in this certificate/report is consistent with the ISO/IEC GUIDE 98-3:2008 "Uncertainty of measurement — Part 3: Guide to the expression of uncertainty in measurement (GUM:1995)".					
• ISO 17025 Statement					
All NIS laboratories implement the NIS unified quality management system which was built to be in compliance with ISO 17025:2017. It is the customer responsibility to indicate - on the calibration label - the due date for calibration in accordance with the aforementioned ISO/SOP calibration procedure and in compliance with ISO 17025:2017.					

Calibrated by


Dr. Mahmoud Y. Elaidy



Reviewed by


Dr. Hatem Khalaf

Page 2 of 4

CERTIFICATE OF CALIBRATION

شهادة معايرة

Certificate No.	6082/12C001/67/111/2023	Serial Number	1286357
• Conformity Statement			
Conformity Criterion	Not applicable		
Decision	-----		

• Calibrated Items			
Frequency Weighting	:	dB (A and C)	
Time Weighting	:	Fast and Slow	
Level Range	:	(30-130) dB	

• Calibration Results

1) Frequency Weighting

Reference Frequency	:	1000	Hz
Reference Level	:	94	dB
Time Weighting	:	Fast	
Level Range	:	(Auto)	dB

A-Weighting

Frequency (Hz)	Difference Between Measured and Reference Level (dB)	IEC 61672 Acceptance Limits (dB)		Expanded Uncertainty (dB) k=2
		Class 1	Class 2	
31.5	-0.2	±1.5	±3.0	0.16
63	0.0	±1.0	±2.0	0.15
125	0.1	±1.0	±1.5	0.15
250	0.1	±1.0	±1.5	0.15
500	0.0	±1.0	±1.5	0.14
1000	0.0	±0.7	±1.0	0.15
2000	-0.2	±1.0	±2.0	0.15
4000	-0.8	±1.0	±3.0	0.15
8000	-3.4	+1.5/-2.5	±5.0	0.16

C-Weighting

Frequency (Hz)	Difference Between Measured and Reference Level (dB)	IEC 61672 Acceptance Limits (dB)		Expanded Uncertainty (dB) k=2
		Class 1	Class 2	
31.5	-0.6	±1.5	±3.0	0.16
63	-1.0	±1.0	±2.0	0.40
125	-1.2	±1.0	±1.5	0.42
250	-1.2	±1.0	±1.5	0.35
500	-1.4	±1.0	±1.5	0.44
1000	0.0	±0.7	±1.0	0.15
2000	0.9	±1.0	±2.0	0.19
4000	0.7	±1.0	±3.0	0.16
8000	0.9	+1.5/-2.5	±5.0	0.17

Calibrated by

Dr. Mahmoud Y. Elaidy

Reviewed by

Dr. Hatem Khalaf



CERTIFICATE OF CALIBRATION
شهادة معايرة

Certificate No.	6082/12.C001/67/111/2023	Serial Number	1236357
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Weighting Difference			IEC 61672		Expanded Uncertainty (dB) k=2
A-Weighting	C-Weighting	Deviation (dB)	Acceptance Limits (dB)		
			Class 1	Class 2	
94.0	94.0	0.0	±0.2	±0.2	0.15

2) Time Weighting

Reference Frequency : 1000 Hz
Reference Level : 94 dB
Level Range : (Auto) dB
Frequency Weighting : A-Weighting

Fast	Slow	Deviation (dB)	IEC 61672		Expanded Uncertainty (dB) k=2
			Acceptance Limits (dB)		
			Class 1	Class 2	
94.0	94.0	0.0	±0.1	±0.1	0.15

3) Level Linearity

Reference Frequency : 1000 Hz
Time Weighting : Fast
Level Range : (Auto) dB

10 dB Changing

A-Weighting			IEC 61672		Expanded Uncertainty (dB) k=2
Reference Level (dB)	Reference Level (dB)	Deviation (dB)	Acceptance Limits (dB)		
			Class 1	Class 2	
104.0	104.0	0.0	±0.3	±0.5	0.15
114.0	114.0	0.0	±0.3	±0.5	0.15

C-Weighting			IEC 61672		Expanded Uncertainty (dB) k=2
Reference Level (dB)	Reference Level (dB)	Deviation (dB)	Acceptance Limits (dB)		
			Class 1	Class 2	
104.0	104.0	0.0	±0.3	±0.5	0.15
114.0	114.0	0.0	±0.3	±0.5	0.15

Calibrated by

Dr. Mahmoud L. Elaidy
Dr. Mahmoud L. Elaidy



Reviewed by

HATEM
Dr. Hatem Khalaf

Certificate of conformity and calibration

Instrument Model :- CEL-246
Serial Number 3717793
Firmware revision V509-02
Microphone type :- Internal



Instrument Class/Type:- 2

Applicable standards:-

IEC 61672:2002/EN60651 (Electro acoustics-Sound Level Meters) ,IEC60651: 1979(Sound Level Meters), IEC60804:2000 (Integrating- averaging Sound Level Meters), ANSI S1.4:1985 (Specifications For Sound Level Meters) , ANSI S1.4:1997 (Specifications Integrating- averaging Sound Level Meters)

Note: The test sequences Performed in this report are in accordance with the current Sound Level Meter Standard-IEC61672.The combination of tests Performed are Considered to Confirm the Products Electro-acoustic Performance to all applicable standards including superseded Sound Level Meter

Standards –IEC60651 AND IEC60804

Test Conditions:- 25.2 C **Test Engineer:-** Millie Duncan
 69%RH **Date of Issue :-** April 28,2023
 1005mBar

Declaration of conformity:-

This test certificate confirms that the instrument specified above has been successfully tested to comply with the manufacturers published specifications. Tests are performed using equipment traceable to national standards in Accordance with Casella's ISO 9001:2008 quality procedures. This Product is certified as being compliant to the requirements of the CE Directive.

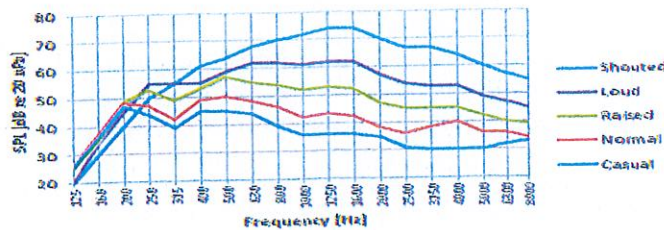
Test Summary:-

Self-generated noise test
 Electrical signal test of frequency weightings
 Frequency & time weightings at 1 KHz
 Level linearity on the reference level range
 Tone burst Response test **Combined electro-Acoustic Frequency Response – A Weighted**
 C- peak sound levels
 Overload indication
 Acoustic tests

All tests pass
 All tests pass
 All tests pass
 All tests pass
 All tests pass
 All tests pass
 All tests pass

Combined Electro-Acoustic Frequency Response –A Weighted (IEC 61672-3:2006

The following A –Weighted frequency response graph shows this instruments overall frequency response based upon the application of multi – frequency pressure field calibrations. The microphones pressure to free field correction coefficient are applied to pressure response. Reference level taken at 1 KHz.



Casella
 Regent House, Wolseley Road
 Kempston, Bedford MK42 7JY
 T :+44 (0)1234 844100
 F :+44 (0)1234 841490
 E: info@casellasolutions.com
 W: www.casellasolutions.com

CALIBRATION CERTIFICATE

Monitor Parameter	Sound Level Meter
Date	06/03/2023
Certificate Number	98807-2023

Applicable standards:-

IEC 61672:2002/EN60651 (Electro acoustics-Sound Level Meters)
IEC60651: 1979(Sound Level Meters), ANSI S1.4:1983(Specifications For Sound Lev Meters)

Model Number	TM-103
Serial Number	210300640

This test certificate confirms that the instrument specified above has been successfully tested to comply with the manufacturers published specifications. Tests are performed using equipment traceable to national standards in Accordance with Casella's ISO 9001:2008 quality procedures. This Product is certified as being compliant to the requirements of the CE Directive.

Parameter	Units	Calibrate Value	Reading Value	Result
Sound Level Meter	dB	114.00	114.00	PASS
		94.00	94.00	PASS

Note: Combined electro-Acoustic Frequency Response – A Weighted

The following A –Weighted frequency response graph shows this instruments overall frequency response based upon the application of multi – frequency pressure field calibrations.

The microphones pressure to free field correction coefficient are applied to pressure response. Reference level taken at 1 KHz.

Self-generated noise test	All tests pass
Electrical signal test of frequency weightings	All tests pass
Frequency & time weightings at 1 KHz	All tests pass
Level linearity on the reference level range	All tests pass
Tone burst Response test	All tests pass
C- peak sound levels	All tests pass
Overload indication	All tests pass
Acoustic tests	All tests pass

Authorized By
Mark Sultzbach /QA Administrator
06/03/2023



**وزارة البيئة
جهاز شؤون البيئة**

شهادة قيد واعتماد
بيت خبرة في مجال البيئة (مكتب استشاري)

يشهد جهاز شؤون البيئة بأنه قد تم قيد واعتماد بيت الخبرة (المكتب الاستشاري)

الشركة الدولية للخدمات البيئية

بيثا للخبرة في مجال البيئة بناء على قرار اللجنة العليا المؤرخ في ١٠ / ٩ / ٢٠٤٤ ومديره المستول

السيد / **رجب عبد الخالق أبو بكر**

إعمالاً للمادة رقم ١٢ مكرراً من القانون رقم ٤ لسنة ١٩٩٤ والمعتمد بالقانون رقم ٩ لسنة ٢٠٠٩

في شأن حماية البيئة ولائحته التنفيذية المعدلة بالقرار رقم ١٠٩٥ لسنة ٢٠١١

برقم قيد ٢٠٤٤ / ٩ / ١ / ٤٠

وهذه الشهادة سارية لمدة خمس سنوات اعتباراً من ١٠ / ٩ / ٢٠٤٤ وحتى ١٠ / ٣ / ٢٠٤٧

وتعتبر هذه الشهادة لاغية في حالة وقف الترخيص لبيت الخبرة لأي سبب قانوني.

وزير البيئة
رئيس اللجنة العليا للقيد والاعتماد
محمد عبد الوهاب

الرئيس التنفيذي
رئيس الأمانة الفنية للجنة العليا للقيد والاعتماد
علي محمد



**وزارة البيئة
جهاز شؤون البيئة**

شهادة قيد واعتماد
استشاري بيئي

يشهد جهاز شؤون البيئة بأن السيد / **رجب عبد الخالق أبو بكر**

قد تم قيده واعتماده من قبل استشاري بيئي في مجال إجراء القياسات البيئية في المعامل المتقدمة

بناء على قرار اللجنة العليا للقيد والاعتماد المؤرخ في ١٥ / ٩ / ٢٠٢٠ إعمالاً للمادة رقم ١٢

مكرر من القانون رقم ٤ لسنة ١٩٩٤ والمعتمد بالقانون رقم ٩ لسنة ٢٠٠٩ في شأن حماية

البيئة ولائحته التنفيذية المعدلة بالقرار رقم ١٠٩٥ لسنة ٢٠١١

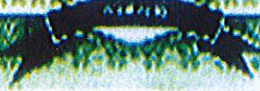
وهذه الشهادة سارية لمدة خمس سنوات اعتباراً من ١٥ / ٩ / ٢٠٢٠ وحتى ١٥ / ٣ / ٢٠٢٥

رقم القيد ٢٠٢٠ / ٩ / ٥ / ٨١

وتعتبر هذه الشهادة لاغية في حالة وقف الترخيص لسيدته لأي سبب قانوني.

وزير البيئة
رئيس اللجنة العليا للقيد والاعتماد
محمد عبد الوهاب

الرئيس التنفيذي
رئيس الأمانة الفنية للجنة العليا للقيد والاعتماد
علي محمد



وزارة البيئة
جهاز شؤون البيئة

شهادة قيد واعتماد
استشاري بيئي

يشهد جهاز شؤون البيئة بأن السيد / **وجع عبد الخالق أبو بكر حسن**
قد تم قيده واعتماده كاستشاري بيئي في مجال **أعمال إرصد الذات للمنشآت وإدارة شبكات الصرف**
بناء على قرار اللجنة العليا للقيد والاعتماد المؤرخ في ٤ / ٢ / ٢٠٢٠ عملاً للمادة رقم ١٢
مكرر من القانون رقم ٤ لسنة ١٩٩٤ والمعدل بالقانون رقم ٩ لسنة ٢٠٠٩ في شأن حماية
البيئة ولائحته التنفيذية المعدل بالقرار رقم ١٠٩٥ لسنة ٢٠١١
وهذه الشهادة سارية لمدة خمس سنوات اعتباراً من ٤ / ٢ / ٢٠٢٠ وحتى ٤ / ٢ / ٢٠٢٥
رقم القيد: ٢٠٢٠/٢/٤/٢٠٩
وتعتبر هذه الشهادة لاغية في حالة وقف الترخيص لسيادته لأي سبب قانوني.

وزير البيئة
رئيس اللجنة العليا للقيد والاعتماد

الرئيس التنفيذي
رئيس الأمانة الفنية للجنة العليا للقيد والاعتماد



وزارة البيئة
جهاز شؤون البيئة

شهادة قيد واعتماد
إحصائي بيئي

يشهد جهاز شؤون البيئة بأن السيد / **أمين خالد أمين عبد الحميد**
قد تم قيده واعتماده كإحصائي بيئي في مجال **إجراء القياسات البيئية في المعامل المعتمدة**
بناء على قرار اللجنة العليا للقيد والاعتماد المؤرخ في ٥ / ٢ / ٢٠٢٣ عملاً للمادة رقم ١٢
مكرر من القانون رقم ٤ لسنة ١٩٩٤ والمعدل بالقانون رقم ٩ لسنة ٢٠٠٩ في شأن حماية
البيئة ولائحته التنفيذية المعدل بالقرار رقم ١٠٩٥ لسنة ٢٠١١
وهذه الشهادة سارية لمدة خمس سنوات اعتباراً من ٥ / ٢ / ٢٠٢٣ وحتى ٥ / ٢ / ٢٠٢٨
رقم القيد: ٢٠٢٣/٢/٥/١٩٢
وتعتبر هذه الشهادة لاغية في حالة وقف الترخيص لسيادته لأي سبب قانوني.

وزير البيئة
رئيس اللجنة العليا للقيد والاعتماد

الرئيس التنفيذي
رئيس الأمانة الفنية للجنة العليا للقيد والاعتماد





Accreditation Certificate No. (219016A)

Arab Republic of Egypt

Egyptian Accreditation Council (EGAC)

Certifies that

International Environmental Services Company Laboratory

El Gawhara Tower - 7th Floor - Mahmoud Abd El Ghany Street

El Sheikh Etman Village - El Hawamdeya City,

Giza Governorate - Egypt

Has been accredited by EGAC in compliance with the requirements of

ISO/IEC 17025:2017

In Some Environmental Measurements

The scope of accreditation is described in the attached schedule No. (219016B)

Scope Issue No. (01)

Issue No. (01): September 17, 2020

Valid to: September 16, 2024

**Subject to continued compliance to the above standard
and the requirements of EGAC**

**EGAC is an ILAC MRA Signatory in the Field of Calibration, Testing, Medical Labs,
Proficiency Testing Providers and Inspection Bodies Accreditation**

Eng. Hany El Desouki

EGAC Executive Director

Nevein Gamea

Nevein Gamea

Chairman of EGAC

Minister of Trade and Industry



شهادة اعتماد رقم (٢١٩٠١٦ أ)



جمهورية مصر العربية

المجلس الوطنى للاعتماد (إيجاك)
يشهد بأن

معمل الشركة الدولية للخدمات البيئية

برج الجوهرة - الدور السابع - شارع محمود عبد الغنى - قرية الشيخ عثمان - مدينة الحوامدية
محافظه الجيزة - مصر

قد حصل على اعتماد المجلس حيث تم تقييمه طبقاً للمواصفة الدولية

ISO/IEC 17025:2017

في بعض القياسات البيئية

الموضحة بالبيان المرفق رقم (٢١٩٠١٦ ب)

رقم إصدار المجال (أ)

صالحة حتى : ١٦ سبتمبر ٢٠٢٤

إصدار رقم (٠١) : ١٧ سبتمبر ٢٠٢٠

شروط الحفاظ على التوافق مع المواصفات أعلاه والمتطلبات الخاصة بالمجلس

والمجلس الوطنى للاعتماد موقع على اتفاقية الاعتراف المتبادل مع منظمة التعاون الدولى لاعتماد المعامل (ILAC)

في مجال اعتماد معامل المعايرة والاختبار والتحليل الطبية ومقدمى خدمة إختبارات الكفاءة الفنية وجهات التفيش

نيقين جامع
نيقين جامع
رئيس المجلس



وزير التجارة والصناعة

مهندس / هانى الدسوقي

طايحى

المدير التنفيذى للمجلس



شهادة قيد واعتماد
استشاري بيئي

وزارة البيئة
جهاز شؤون البيئة

يشهد جهاز شؤون البيئة بأن السيد / **رجب عبد الخالق أبو بكر حسن**
قد تم قيده واعتماده كاستشاري بيئي في مجال **أعمال ابرصد الأذوق للنشأة وادارة شبكات ابرصد**
بناء على قرار اللجنة العليا للقيد والاعتماد المؤرخ في ٤ / ٤ / ٢٠٢٥ إصملاً للمادة رقم ١٢
مكرر من القانون رقم ٤ لسنة ١٩٩٤ والمعدل بالقانون رقم ٦ لسنة ٢٠٠٩ في شأن حماية
البيئة ولائحته التنفيذية المعدلة بالقرار رقم ١٠٨٥ لسنة ٢٠١١
وهذه الشهادة سارية لمدة خمس سنوات اعتباراً من ٤ / ٤ / ٢٠٢٥ وحتى ٤ / ٤ / ٢٠٣٠
رقم القيد : ٤٠٤٥ / ٤ / ٢ / ٢٠٢٥
وتعتبر هذه الشهادة لاغية في حالة وقف الترخيص لسببته لأي سبب قانوني .

وزير البيئة
رئيس اللجنة العليا للقيد والاعتماد



الرئيس التنفيذي
رئيس الأمانة الفنية للجنة العليا للقيد والاعتماد



دولة فلسطين



شهادة قيد واعتماد
إخصائي بيئي

وزارة البيئة
جهاز شؤون البيئة

يشهد جهاز شؤون البيئة بأن السيد / **أمين خالد أمين عبد الحميد**
قد تم قيده واعتماده كإخصائي بيئي في مجال **اجراء القياسات البيئية في المعامل المعتمدة**
بناء على قرار اللجنة العليا للقيد والاعتماد المؤرخ في ٥ / ٤ / ٢٠٢٧ إصملاً للمادة رقم ١٢
مكرر من القانون رقم ٤ لسنة ١٩٩٤ والمعدل بالقانون رقم ٦ لسنة ٢٠٠٩ في شأن حماية
البيئة ولائحته التنفيذية المعدلة بالقرار رقم ١٠٩٥ لسنة ٢٠١١
وهذه الشهادة سارية لمدة خمس سنوات اعتباراً من ٥ / ٤ / ٢٠٢٧ وحتى ٥ / ٤ / ٢٠٣٢
رقم القيد : ٢٠٢٣ / ٤ / ٥ / ١٩٤
وتعتبر هذه الشهادة لاغية في حالة وقف الترخيص لسببته لأي سبب قانوني .

وزير البيئة
رئيس اللجنة العليا للقيد والاعتماد



الرئيس التنفيذي
رئيس الأمانة الفنية للجنة العليا للقيد والاعتماد



دولة فلسطين



شهادة قيد واعتماد
بيت خبرة في مجال البيئة (مكتب استشاري)

وزارة البيئة
جهاز شئون البيئة

يشهد جهاز شئون البيئة بأنه قد تم قيد واعتماد بيت الخبرة (المكتب الاستشاري)

الشركة الدولية للخدمات البيئية

بيتا للخبرة في مجال البيئة ببناء على قرار اللجنة العليا المؤرخ في ١٤ / ٩ / ٢٠٢٢ ومديره المستول

السيد / **رجب عبد الخالق أبو بكر**

وعمالا للمادة رقم ١٢ مكرر من القانون رقم ٤ لسنة ١٩٩٤ والمعدل بالقانون رقم ٩ لسنة ٢٠٠٩

في شأن حماية البيئة ولائحته التنفيذية المعدلة بالقرار رقم ١٠٩٥ لسنة ٢٠١١

برقم قيد : ٤٠٢٢ / ٩ / ١ / ٩٠

وهذه الشهادة سارية لمدة خمس سنوات اعتبارا من ٢٠٢٢ / ٩ / ١ وحتى ٢٠٢٧ / ٨ / ٣١

وتعتبر هذه الشهادة لاشية في حالة وقف الترخيص لبيت الخبرة لأي سبب قانوني.

وزير البيئة
رئيس اللجنة العليا للقيد والاعتماد

الرئيس التنفيذي
رئيس الأمانة الفنية للجنة العليا للقيد والاعتماد



شهادة قيد واعتماد
استشاري بيئي

وزارة البيئة
جهاز شئون البيئة

يشهد جهاز شئون البيئة بأنه قد تم قيد واعتماد بيت الخبرة (مكتب استشاري بيئي)

ببناء على قرار اللجنة العليا للتقيد والاعتماد المؤرخ في ١٤ / ٩ / ٢٠٢٢ ومديره المستول

السيد / **رجب عبد الخالق أبو بكر**

وعمالا للمادة رقم ١٢ مكرر من القانون رقم ٤ لسنة ١٩٩٤ والمعدل بالقانون رقم ٩ لسنة ٢٠٠٩

في شأن حماية البيئة ولائحته التنفيذية المعدلة بالقرار رقم ١٠٩٥ لسنة ٢٠١١

برقم قيد : ٤٠٢٢ / ٩ / ١ / ٩٠

وهذه الشهادة سارية لمدة خمس سنوات اعتبارا من ٢٠٢٢ / ٩ / ١ وحتى ٢٠٢٧ / ٨ / ٣١

وتعتبر هذه الشهادة لاشية في حالة وقف الترخيص لبيت الخبرة لأي سبب قانوني.

وزير البيئة
رئيس اللجنة العليا للقيد والاعتماد

الرئيس التنفيذي
رئيس الأمانة الفنية للجنة العليا للقيد والاعتماد





Accreditation Certificate No. (219016A)

Arab Republic of Egypt
Egyptian Accreditation Council (EGAC)

Certifies that

International Environmental Services Company Laboratory

El Gawhara Tower - 7th Floor - Mahmoud Abd El Ghany Street

El Sheikh Etman Village - El Hawamdeya City

Giza Governorate - Egypt

Has been accredited by EGAC in compliance with the requirements of

ISO/IEC 17025:2017

In Some Environmental Measurements

The scope of accreditation is described in the attached schedule No. (219016B)

Scope Issue No. (01)

Issue No. (01): September 17, 2020

Valid to: September 16, 2024

Subject to continued compliance to the above standard
and the requirements of EGAC

EGAC is an ILAC MRA Signatory in the Field of Calibration, Testing, Medical Labs,
Proficiency Testing Providers and Inspection Bodies Accreditation

Eng. Hany El Desouki

Hany El Desouki
EGAC Executive Director

Nevein Gamea

.....**Nevein Gamea**.....

Chairman of EGAC

Minister of Trade and Industry



شهادة اعتماد رقم (٢١٩٠١٦) (٢٠٢٤)



جمهورية مصر العربية

المجلس الوطني للاعتماد (إيجاك)
يشهد بأن

معمل الشركة الدولية للخدمات البيئية

برج الجوهرة - الدور السابع - شارع محمود عبد الغنى - قرية الشيخ عثمان - مدينة الحوامدية
محافظة الجيزة - مصر

قد حصل على اعتماد المجلس حيث تم تقييمه طبقاً للمواصفة الدولية

ISO/IEC 17025:2017

في بعض القياسات البيئية

الموضحة بالبيان المرفق رقم (٢١٩٠١٦) ب)

رقم إصدار المجال (٠١)

صالحة حتى : ١٦ سبتمبر ٢٠٢٤

إصدار رقم (٠١) : ١٧ سبتمبر ٢٠٢٠

شروط الحفاظ على التوافق مع المواصفات أعلاه والمتطلبات الخاصة بالمجلس
والمجلس الوطني للاعتماد موقع على اتفاقية الاعتراف المتبادل مع منظمة التعاون الدولي لاعتماد المعامل (ILAC)
في مجال اعتماد معامل المعايرة والاختبار والتحليل الطيفية ومقدمى خدمات اختبارات الكفاءة الفنية وجهات التفتيش

نائبين جامع
نائبين جامع
رئيس المجلس



وزير التجارة والصناعة

مهندس / هانى الدسوقي
صالح
المدير التنفيذي للمجلس

Certificate

International Environmental Services IES

El Gawhara Tower 6th Floor, El-Hawamdeia, Giza, Egypt

HAS BEEN ASSESSED AND FOUND TO BE IN CONFORMANCE TO THE FOLLOWING STANDARD

ISO 14001 : 2015

FOR THE FOLLOWING ACTIVITIES

Environmental consultation and services, Waste management and disposal

CERTIFICATE REGISTRATION NO. EG119

DATE OF INITIAL REGISTRATION	07 – FEBRUARY - 2022
DATE OF THIS CERTIFICATE	07 – FEBRUARY - 2022
SERVILLANCE AUDIT ON OR BEFORE	06 – FEBRUARY - 2023
RE-CERTIFICATION DUE/ CERTIFICATE EXPIRY	07 – FEBRUARY - 2025

THIS CERTIFICATION WAS CONDUCTED IN ACCORDANCE WITH FIRST PLUS AUDITING AND CERTIFICATION PROCEDURES AND IS SUBJECT TO REGULAR SURVILLANCE AUDITS. THIS CERTIFICATE IS THE PROPERTY OF FIRST PLUS AND SHALL BE RETURNED IMMEDIATELY WHEN DEMANDED.



TO VERIFY VALLDITY OF CERTIFICATE PLEASE VISIT WWW.FIRSTPLUSWEB.COM

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