



E S Laboratories (M) Sdn. Bhd. (251842-A)

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MS ISO/IEC 17025
TESTING
SAMM NO. 076

Certificate of Analysis

Registration No. : L-GB-TA1811CUN-0363
Customer : UniSZA Consultancy Sdn. Bhd. (Dungun-Jerangau)
Sampling Point : 1. A1 : At an open space located at FELDA Jerangau Barat.
[N 04° 55' 16.4", E 103° 06' 56.3"]
2. A2 : At an open space located at Kg Gunung.
[N 04° 56' 33.1", E 103° 03' 45.1"]
3. A3 : At an open space located at Kg Lubuk Periuk.
[N 04° 53' 29.9", E 103° 03' 46.8"]
4. A4 : At an open space located at Kg Rantau Panjang.
[N 04° 47' 15.8", E 103° 06' 22.3"]
Sampling Date : 21/11/2018 – 24/11/2018
Receiving Date : 24/11/2018
Reporting Date : 21/12/2018

Ambient air quality monitoring results:-

Parameters	Results, ($\mu\text{g}/\text{m}^3$)				Malaysian Ambient Air Quality Standard (2020)	Method Used
	A1	A2	A3	A4		
Particulate Matter 10 μm (PM10)	54	-	50	-	100 $\mu\text{g}/\text{m}^3$ (24 hours averaging time)	ASTM D 4096, 1993
	-	58	-	47		In-House Method (ESL/F/A-06) based on Manufacturer Measurement Procedure (MiniVol TM TAS)
Particulate Matter 2.5 μm (PM2.5)	20	33	28	25	35 $\mu\text{g}/\text{m}^3$ (24 hours averaging time)	
Sulphur Dioxide as SO ₂	<5	<5	<5	<5	80 $\mu\text{g}/\text{m}^3$ (24 hours averaging time)	ASTM D2914, 1993
Nitrogen Dioxide as NO ₂	<0.5	<0.5	<0.5	<0.5	70 $\mu\text{g}/\text{m}^3$ (24 hour averaging time)	ASTM D1607, 1991
Carbon Monoxide as CO	<0.1	<0.1	<0.1	<0.1	10 mg/m ³ (8 hour averaging time)	ASTM D4599-14
*Ozone as O ₃	<20	<20	<20	<20	100 $\mu\text{g}/\text{m}^3$ (8 hour averaging time)	APHA 820

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Ong Poh Cheng
MMIC M1429/2600/1995
(Lab Manager)

Notes:

1. This report shall not be reproduced, distributed or copied in any way including but not limited to be tendered in court as evidence without prior written consent of ES Laboratories (M) Sdn. Bhd.
2. The results reported relate only to the item tested as per the details given in this Certificate of Analysis.
3. ASTM means Annual Book of ASTM Standards by American Society for Testing and Materials.
4. APHA means Method of Air Sampling and Analysis by APHA.
5. "<" means less than the minimum detectable limit or "not detected".
6. (*) means not SAMM Accredited.

Attention : Mr. Mohd Zaid Arqam
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Certificate of Analysis

Registration No. : L-GB-TA1811CUN-0363
Customer : **UniSZA Consultancy Sdn. Bhd. (Dungun-Jerangau)**
Sampling Point : 5. A5 : At an open space located at Kg Dendang.
[N 04° 49'15.4", E 103° 10'50.0"]
6. A6 : At an open space located at Kg Jerangau.
[N 04° 50'18.2", E 103° 11'49.3"]
7. A7 : At an open space located at FELDA Jerangau.
[N 04° 53'54.4", E 103° 11'12.5"]
Sampling Date : 21/11/2018 – 24/11/2018
Receiving Date : 24/11/2018
Reporting Date : 21/12/2018

Ambient air quality monitoring results:-

Parameters	Results, ($\mu\text{g}/\text{m}^3$)			Malaysian Ambient Air Quality Standard (2020)	Method Used
	A5	A6	A7		
Particulate Matter 10 μm (PM10)	53	60	-	100 $\mu\text{g}/\text{m}^3$ (24 hours averaging time)	ASTM D 4096,1993
	-	-	67		In-House Method (ESL/F/A-06) based on Manufacturer Measurement Procedure (MiniVol TM TAS)
Particulate Matter 2.5 μm (PM2.5)	35	36	39	35 $\mu\text{g}/\text{m}^3$ (24 hours averaging time)	
Sulphur Dioxide as SO ₂	<5	<5	<5	80 $\mu\text{g}/\text{m}^3$ (24 hours averaging time)	ASTM D2914, 1993
Nitrogen Dioxide as NO ₂	<0.5	<0.5	<0.5	70 $\mu\text{g}/\text{m}^3$ (24 hour averaging time)	ASTM D1607, 1991
Carbon Monoxide as CO	<0.1	<0.1	<0.1	10 mg/m ³ (8 hour averaging time)	ASTM D4599-14
*Ozone as O ₃	<20	<20	<20	100 $\mu\text{g}/\text{m}^3$ (8 hour averaging time)	APHA 820

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(Lab Manager)

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