

Our Ref : ACL/MIS-OTH 210884

Company : **DR AHMAD BUKHARY BIN AHMAD KHAIR**
 School of Biological Sciences
 G08 Building, Universiti Sains Malaysia
 11800 USM Pulau Pinang

Sample description : Received one (1) samples labelled as **Soil**
Marking: USM Penang L14 Building, Plant House

Results of Analysis

Parameter	Unit	Method	Results
pH	-	In House based on APHA 4500 H ⁺ B	6.4
Total Organic Carbon	%w/w	MS678:Pt I to IV:1980	0.4
Total Organic Matter	%w/w	In House	8.9
Cation Exchange Capacity	meq/100g	MS 678: Pt. I to V : 1980	5.3
Exchangeable Magnesium	mg/L	MS 678: Pt. I to V : 1980	4.0
Exchangeable Potassium	mg/L	MS 678: Pt. I to V : 1980	15.5
Exchangeable Calcium	mg/L	MS 678: Pt. I to V : 1980	34.5



MOHD BADRULLAH BIN BUANG
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 IKM Registered Chemist : L/2784/8241/18

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SMM 190

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Report No. : 025/2022 S



SOIL ANALYSIS TEST REPORT

Customer : DR. AHMAD BUKHARY AHMAD KHAIR,
 Address : SCHOOL OF BIOLOGICAL SCIENCES,
 :G08 BUILDING,
 :UNIVERSITI SAINS MALAYSIA,
 :11800 USM PULAU PINANG.

Batch No. : 138/2022S

Condition When Received : SATISFACTORY

Reference : (01 Soil Sample)

Saidatullah
ChM. SAIDATULADHHA ABDUL RAHMAN
 (M/2790/5530/09)
 SENIOR CHEMIST
 APPROVED SIGNATORY

Page 1 of 1

No.	SAMPLE DESCRIPTION	PARTICLE-SIZE DISTRIBUTION (%)			
		*Coarse Sand	*Fine Sand	*Clay	*Silt
1	Marker: USM Penang L14-Building	26.9	38.9	28.1	6.1

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 Result relate only to the sample as received

NOTE : * NOT SMM ACCREDITED

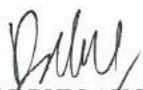
Our Ref : ACL/MIS-OTH 220051

Company : **DR AHMAD BUKHARY BIN AHMAD KHAIR**
School of Biological Sciences
G08 Building, Universiti Sains Malaysia
11800 USM Pulau Pinang

Sample description : Received one (1) samples labelled as Soil
Marking : USM Penang L14 Building, Plant House: Soil Sample

Results of Analysis

Parameter	Unit	Method	Results
Total Nitrogen	%w/w	MS 1120 (2004)	0.07
Available Phosphorus	mg/kg	Bray Extraction	19



MOHD BADRULLAH BIN BUANG
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Our Ref : ACL/MIS-OTH 220131

Company : **DR AHMAD BUKHARY BIN AHMAD KHAIR**
School of Biological Sciences
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11800 USM Pulau Pinang

Sample description : Received one (1) samples labelled as Soil
Marking : USM Penang L14 Building, Plant House: Soil Sample

Results of Analysis

Parameter	Unit	Method	Results
C/N Ratio	-	In-House	5.7


MOHD BADRULLAM BIN BUANG
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Our Ref : ACL/MIS-OTH 220156

Company : **DR AHMAD BUKHARY BIN AHMAD KHAIR**
School of Biological Sciences
G08 Building, Universiti Sains Malaysia
11800 USM Pulau Pinang

Sample description : Received one (1) samples labelled as Soil
Marking: USM Penang L14 Building, Plant House: Soil Sample

Results of Analysis

Parameter	Unit	Method	Results
Soil Conductivity	$\mu\text{S/cm}$	MS 678:Part VI to IX:1980	72.8



MOHD BADRULLAH BIN BUANG
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IKM Registered Chemist : L/2784/8241/18

Our Ref : ACL/MIS-OTH 220336

Company : **DR AHMAD BUKHARY BIN AHMAD KHAIR**
School of Biological Sciences
G08 Building, Universiti Sains Malaysia
11800 USM Pulau Pinang

Sample description : Received one (1) samples labelled as **Soil Marking :
USM Penang L14-Building, Plant House - Soil Sample**

Results of Analysis

Parameter	Unit	Method	Results
Total Potassium as K	mg/kg	ICP-OES	21.50


MOHD BADRULLAH BIN BUANG
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Our Ref : ACL/MIS-OTH 220343

Company : **DR AHMAD BUKHARY BIN AHMAD KHAIR**
School of Biological Sciences
G08 Building, Universiti Sains Malaysia
11800 USM Pulau Pinang

Sample description : Received one (1) samples labelled as **Soil Marking :
USM Penang L14-Building, Plant House - Soil Sample**

Results of Analysis

Parameter	Unit	Method	Results
Total Sulphur as S	mg/kg	ICP-OES	75.0



MOHD BADRULLAH BIN BUANG
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Our Ref : ACL/MIS-OTH 220290

Company : **DR AHMAD BUKHARY BIN AHMAD KHAIR**
School of Biological Sciences
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11800 USM Pulau Pinang

Sample description : Received one (1) samples labelled as **Soil Marking :**
USM Penang L14-Building, Plant House - Soil Sample

Results of Analysis

Parameter	Unit	Method	Results
Total Phosphorus	mg/kg	ICP-OES	207.0
Ammonium	mg/kg	Ion Chromatography	9.1
Nitrate	mg/kg	Ion Chromatography	0.03
Nitrite	mg/kg	Ion Chromatography	0.01

Note:

"ND" denotes "Not Detected"

"<" denotes "Less Than"


MOHD BADRULLAH BIN BUANG
BSc(Hons), MMIC
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Our Ref : ACL/MIS-OTH 220353

Company : **DR AHMAD BUKHARY BIN AHMAD KHAIR**
 School of Biological Sciences
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 11800 USM Pulau Pinang

Sample description : Received one (1) samples labelled as **Soil Marking :**
USM Penang L14-Building, Plant House - Soil Sample

Results of Analysis

Parameter	Unit	Method	Results
Sulphate as SO ₄	% w/w	MS 678 : Part VI to IX:1980	1.9
Sulphide as S ²⁻	mg/kg	APHA 4500-S ₂ -D	< 0.5
Phosphate as PO ₄	mg/kg	Spectrometry	74.2

Note:

"<" denotes "Less Than"



MOHD BADRULLAH BIN BUANG
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Our Ref : ACL/MIS-OTH 220358

Company : **DR AHMAD BUKHARY BIN AHMAD KHAIR**
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11800 USM Pulau Pinang

Sample description : Received one (1) samples labelled as **Soil Marking :**
USM Penang L14-Building, Plant House - Soil Sample

Results of Analysis

Parameter	Unit	Method	Results
Crude Fiber	% w/w	MS 1414 (1997)	2.1


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