

Our Ref : ACL/MIS-OTH 220159

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 **Postharvest Soil**  
**Marking: USM Penang L14-Building, Plant House - Insect Frass Species**  
**Acheta Domesticus**

## Results of Analysis

Parameter	Unit	Method	Results
pH	-	In House based on APHA 4500 H <sup>+</sup> B	6.8
Exchangeable Potassium	mg/L	MS 678: Pt. I to V : 1980	17.5
Exchangeable Calcium	mg/L	MS 678: Pt. I to V : 1980	67.0
Exchangeable Magnesium	mg/L	MS 678: Pt. I to V : 1980	55.5
Cation Exchange Capacity	meq/100g	MS 678: Pt. I to V : 1980	7.2
Total Organic Carbon	%w/w	MS678:Pt I to IV:1980	1.8
Total Organic Matter	%w/w	In House	9.9

Note:

"<" denote "Less Than"

  
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 IKM Registered Chemist : L/2784/8241/18

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Our Ref : ACL/MIS-OTH 220159/A

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**Acheta Domesticus**

**Results of Analysis**

Parameter	Unit	Method	Results
Total Nitrogen	%w/w	MS 1120 (2004)	0.27
Available Phosphorus	mg/kg	Bray Extraction	167

*Note:**"<" denote "Less Than"*

MOHD BADRULLAH BIN BUANG  
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Our Ref : ACL/MIS-OTH 220159/B

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

Sample description : Received one (1) samples labelled as **Postharvest Soil**  
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**Acheta Domesticus**

**Results of Analysis**

Parameter	Unit	Method	Results
C/N Ratio	-	In-House	6.7

*Note:**"<" denote "Less Than"*

MOHD BADRULLAH BIN BUANG  
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Our Ref : ACL/MIS-OTH 220159/C

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

Sample description : Received one (1) samples labelled as **Postharvest Soil**  
**Marking: USM Penang L14-Building, Plant House - Insect Frass Species**  
**Acheta Domesticus**

**Results of Analysis**

Parameter	Unit	Method	Results
Soil Conductivity	$\mu\text{S/cm}$	MS 678:Part VI to IX:1980	149

*Note:**"<" denote "Less Than"*

MOHD BADRULLAH BIN BUANG  
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Our Ref : ACL/MIS-OTH 220333

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

Sample description : Received one (1) samples labelled as **Postharvest Soil Marking:**  
**USM Penang L14-Building, Plant House - Insect Frass Species**  
**Acheta Domesticus**

**Results of Analysis**

Parameter	Unit	Method	Results
Total Potassium as K	mg/kg	ICP-OES	1,160.0

  
MOHD BADRULLAH BIN BUANG  
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Our Ref : ACL/MIS-OTH 220340

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

Sample description : Received one (1) samples labelled as **Postharvest Soil Marking:**  
**USM Penang L14-Building, Plant House - Insect Frass Species**  
**Acheta Domesticus**

**Results of Analysis**

Parameter	Unit	Method	Results
Total Sulphur as S	mg/kg	ICP-OES	470.0



MOHD BADRULLAH BIN BUANG  
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Our Ref : ACL/MIS-OTH 220293

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

Sample description : Received one (1) samples labelled as **Postharvest Soil Marking:**  
**USM Penang L14-Building, Plant House - Insect Frass Species**  
**Acheta Domesticus**

**Results of Analysis**

Parameter	Unit	Method	Results
Total Phosphorus	mg/kg	ICP-OES	563.5
Ammonium	mg/kg	Ion Chromatography	79.8
Nitrate	mg/kg	Ion Chromatography	0.01
Nitrite	mg/kg	Ion Chromatography	0.01

*Note:**"ND" denotes "Not Detected"**"<" denotes "Less Than"*

MOHD BADRULLAH BIN BUANG  
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Our Ref : ACL/MIS-OTH 220350

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

Sample description : Received one (1) samples labelled as **Postharvest Soil Marking:  
USM Penang L14-Building, Plant House - Insect Frass Species  
Acheta Domesticus**

**Results of Analysis**

Parameter	Unit	Method	Results
Sulphate as SO <sub>4</sub>	% w/w	MS 678 : Part VI to IX:1980	1.9
Sulphide as S <sup>2-</sup>	mg/kg	APHA 4500-S <sub>2</sub> -D	< 0.5
Phosphate as PO <sub>4</sub>	mg/kg	Spectrometry	144.4

*Note:**"<" denotes "Less Than"*

MOHD BADRULLAH BIN BUANG  
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Our Ref : ACL/MIS-OTH 220355

Company : **DR AHMAD BUKHARY BIN AHMAD KHAIR**  
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Sample description : Received one (1) samples labelled as **Postharvest Soil Marking:**  
**USM Penang L14-Building, Plant House - Insect Frass Species**  
**Acheta Domesticus**

**Results of Analysis**

Parameter	Unit	Method	Results
Crude Fiber	% w/w	MS 1414 (1997)	1.3

  
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