

**Panasonic Industrial Devices Malaysia Sdn. Bhd.** (013394-M)  
(Formerly known as Panasonic Electronic Devices Malaysia Sdn. Bhd.)  
Quality Innovation Department  
No. 1, Jalan Jemuju 16/13, 40200 Shah Alam, Selangor Darul Ehsan, Malaysia.  
P.O. Box 7720, Pejabat Pos Besar Shah Alam, 40724 Shah Alam, Malaysia.  
Tel No: 03-5891 2832 Fax No: 03-5891 2838

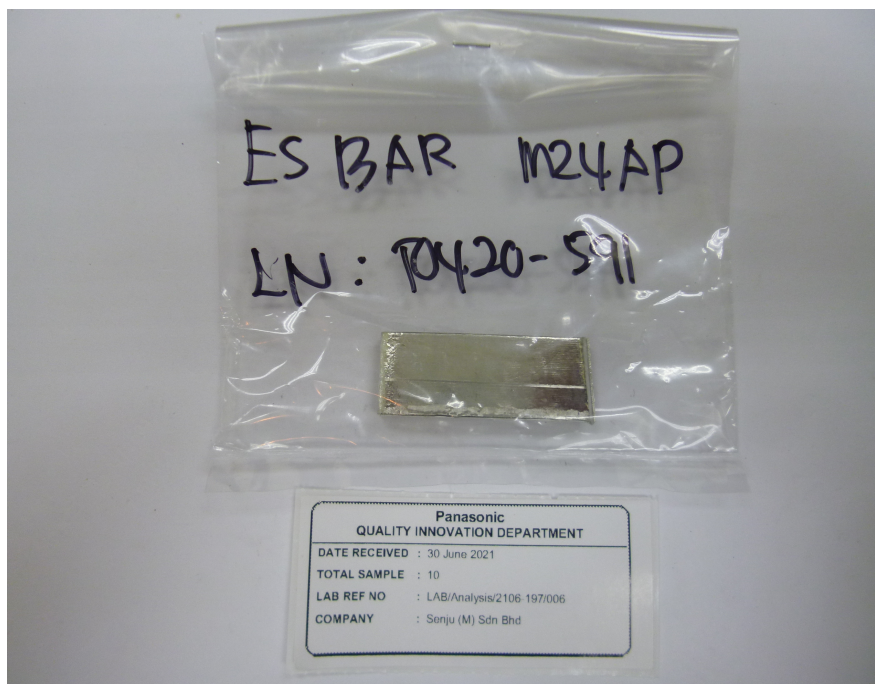


MS ISO/IEC 17025  
TESTING/CALIBRATION  
SAMM NO. 183

## CERTIFICATE OF ANALYSIS

**DATE ISSUED** : 4 August 2021  
**LAB REFERENCE NO** : LAB/Analysis/2106-197/006  
**COMPANY** : **Senju (M) Sdn Bhd**  
QA/QC  
Lot 36, Persiaran Sabak Bernam,  
Sektor B, Hicom Industrial Area, Seksyen 26  
40000 Shah Alam, Selangor  
Tel : 03-51912227

**DATE OF SAMPLE RECEIVED** : 30 June 2021  
**DATE OF MEASUREMENT** : 30 June 2021 to 4 August 2021  
**SAMPLE** : **ECOSOLDER BAR/WIRE M24AP**  
(One Solid Sample)  
Part No : --  
Lot No : T0420-591  
Ref No : --  
Supplier : SENJU (M) SDN. BHD.

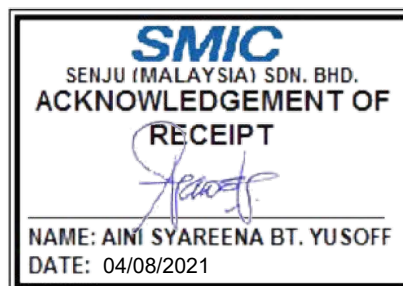


**ASMAHANI BINTI MOKHTAR**

BSc.(Hons), LMIC

Chemist

Signed for and on behalf of Quality Innovation Department



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### ANALYSIS RESULTS (As Per Sample)

Test Parameter	Unit	Result	Method Reference	MDL
<b>Table 1</b>				
Cadmium	mg/kg	ND	QC-I-QE-M-027 (Reference to IEC 62321-5 : 2013)	2
Lead	mg/kg	177	QC-I-QE-M-027 (Reference to IEC 62321-5 : 2013)	5
Mercury	mg/kg	ND	IEC 62321-4: 2013	10
Hexavalent Chromium	µg/cm <sup>2</sup>	ND	QC-I-QE-M-055 (Reference to IEC 62321 – 7-1 : 2015)	0.1

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### ANALYSIS RESULTS (As Per Sample)

Test Parameter	Unit	Result	Method Reference	MDL
<b>Table 2</b>				
Polybrominated Biphenyls				
4 -Bromobiphenyl	mg/kg	ND	QC-I-QE-M-026 (Reference to IEC 62321 - 6 : 2015)	7
4,4' - Dibromobiphenyl	mg/kg	ND	QC-I-QE-M-026 (Reference to IEC 62321 - 6 : 2015)	7
2,4,5 - Tribromobiphenyl	mg/kg	ND	QC-I-QE-M-026 (Reference to IEC 62321 - 6 : 2015)	7
2,2',4,5' - Tetrabromobiphenyl	mg/kg	ND	QC-I-QE-M-026 (Reference to IEC 62321 - 6 : 2015)	7
2,2',4,5',6 - Pentabromobiphenyl	mg/kg	ND	QC-I-QE-M-026 (Reference to IEC 62321 - 6 : 2015)	7
2,2',4,4',5,5' - Hexabromobiphenyl	mg/kg	ND	QC-I-QE-M-026 (Reference to IEC 62321 - 6 : 2015)	7
2,2',3,4,4',5,5' - Heptabromobiphenyl	mg/kg	ND	QC-I-QE-M-026 (Reference to IEC 62321 - 6 : 2015)	7
Dow FR-250 (Octabromobiphenyl)	mg/kg	ND	QC-I-QE-M-026 (Reference to IEC 62321 - 6 : 2015)	7
2,2',3,3',4,4',5,5',6 - Nonabromobiphenyl	mg/kg	ND	QC-I-QE-M-026 (Reference to IEC 62321 - 6 : 2015)	7
Decabromobiphenyl	mg/kg	ND	QC-I-QE-M-026 (Reference to IEC 62321 - 6 : 2015)	7

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### ANALYSIS RESULTS (As Per Sample)

Test Parameter	Unit	Result	Method Reference	MDL
<b>Table 3</b>				
Polybrominated Diphenyl Ethers				
4 - Bromodiphenyl ether	mg/kg	ND	QC-I-QE-M-026 (Reference to IEC 62321 - 6 : 2015)	5
4,4' - Dibromodiphenyl ether	mg/kg	ND	QC-I-QE-M-026 (Reference to IEC 62321 - 6 : 2015)	5
2,4,4' - Tribromodiphenyl ether	mg/kg	ND	QC-I-QE-M-026 (Reference to IEC 62321 - 6 : 2015)	5
2,2',4,4' - Tetrabromodiphenyl ether	mg/kg	ND	QC-I-QE-M-026 (Reference to IEC 62321 - 6 : 2015)	5
2,2',4,4',5 - Pentabromodiphenyl ether	mg/kg	ND	QC-I-QE-M-026 (Reference to IEC 62321 - 6 : 2015)	5
2,2',4,4',5,5' - Hexabromodiphenyl ether	mg/kg	ND	QC-I-QE-M-026 (Reference to IEC 62321 - 6 : 2015)	5
2,2',3,4,4',5',6 - Heptabromodiphenyl ether	mg/kg	ND	QC-I-QE-M-026 (Reference to IEC 62321 - 6 : 2015)	5
2,2',3,4,4',5,5',6 - Octabromodiphenyl ether	mg/kg	ND	QC-I-QE-M-026 (Reference to IEC 62321 - 6 : 2015)	5
2,2',3,3',4,4',5,5',6 - Nonabromodiphenyl ether	mg/kg	ND	QC-I-QE-M-026 (Reference to IEC 62321 - 6 : 2015)	5
Decabromodiphenyl ether	mg/kg	ND	QC-I-QE-M-026 (Reference to IEC 62321 - 6 : 2015)	10

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### ANALYSIS RESULTS (As Per Sample)

Test Parameter	Unit	Result	Method Reference	MDL
<b>Table 4</b>				
Phthalate Ester				
Diethyl Phthalate (DEP)	mg/kg	ND	QC-I-QE-M-041 (Reference to IEC 62321 – 8 : 2017)	10
Diisobutyl Phthalate (DIBP)	mg/kg	ND	QC-I-QE-M-041 (Reference to IEC 62321 – 8 : 2017)	10
Dibutyl phthalate (DBP)	mg/kg	ND	QC-I-QE-M-041 (Reference to IEC 62321 – 8 : 2017)	10
Benzyl butyl phthalate (BBP)	mg/kg	ND	QC-I-QE-M-041 (Reference to IEC 62321 – 8 : 2017)	10
Bis (2-ethylexyl) phthalate (DEHP)	mg/kg	ND	QC-I-QE-M-041 (Reference to IEC 62321 – 8 : 2017)	10
Di - n - octyl phthalate (DNOP)	mg/kg	ND	QC-I-QE-M-041 (Reference to IEC 62321 – 8 : 2017)	10
Diisnononyl phthalate (DINP)	mg/kg	ND	QC-I-QE-M-041 (Reference to IEC 62321 – 8 : 2017)	100
Diisodecyl phthalate (DIDP)	mg/kg	ND	QC-I-QE-M-041 (Reference to IEC 62321 – 8 : 2017)	100

### NOTE

- 1) ND = Not Detected
- 2) MDL = Method Detection Limit
- 3) mg/kg = ppm

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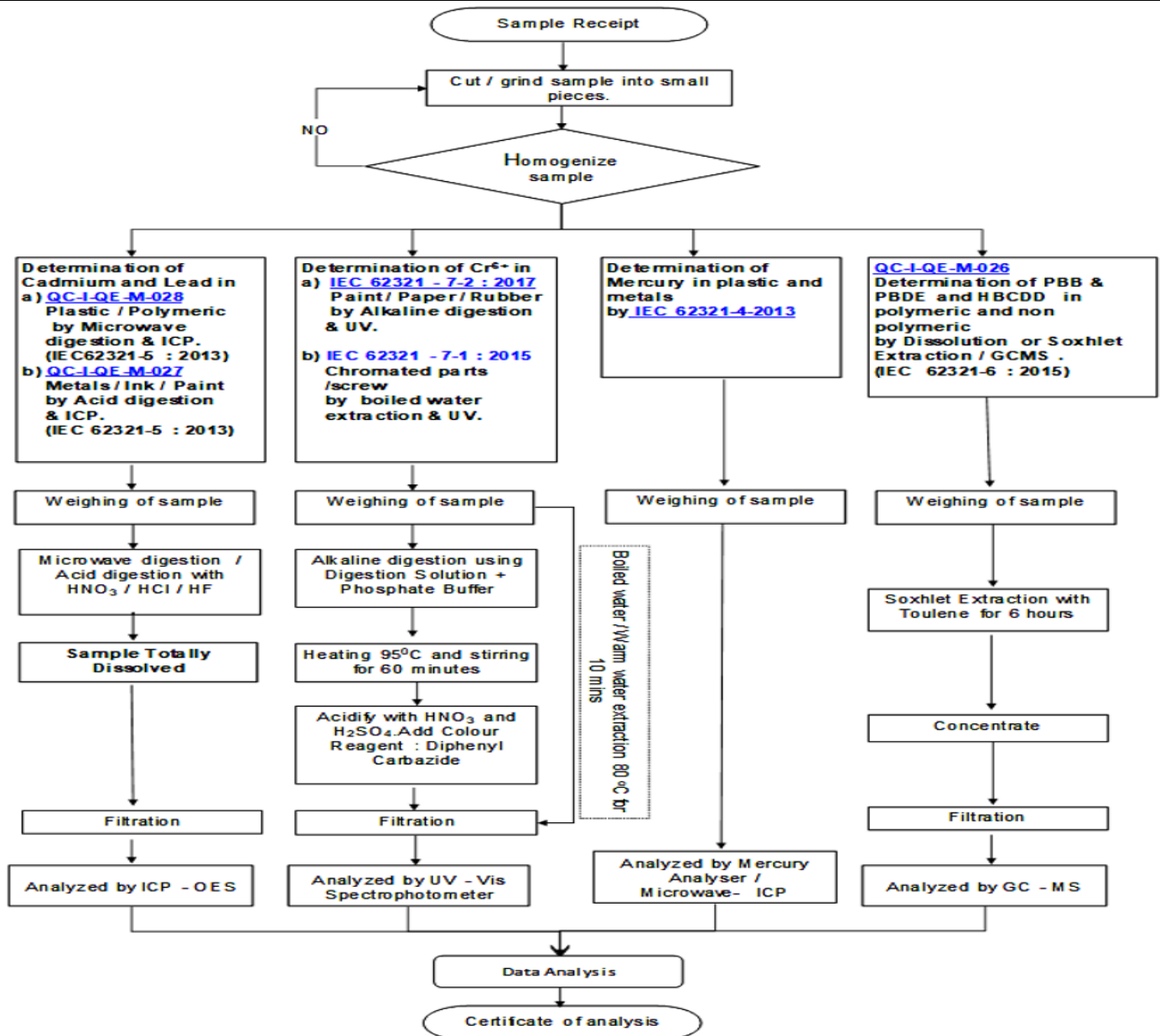
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## ANALYSIS FLOW CHART



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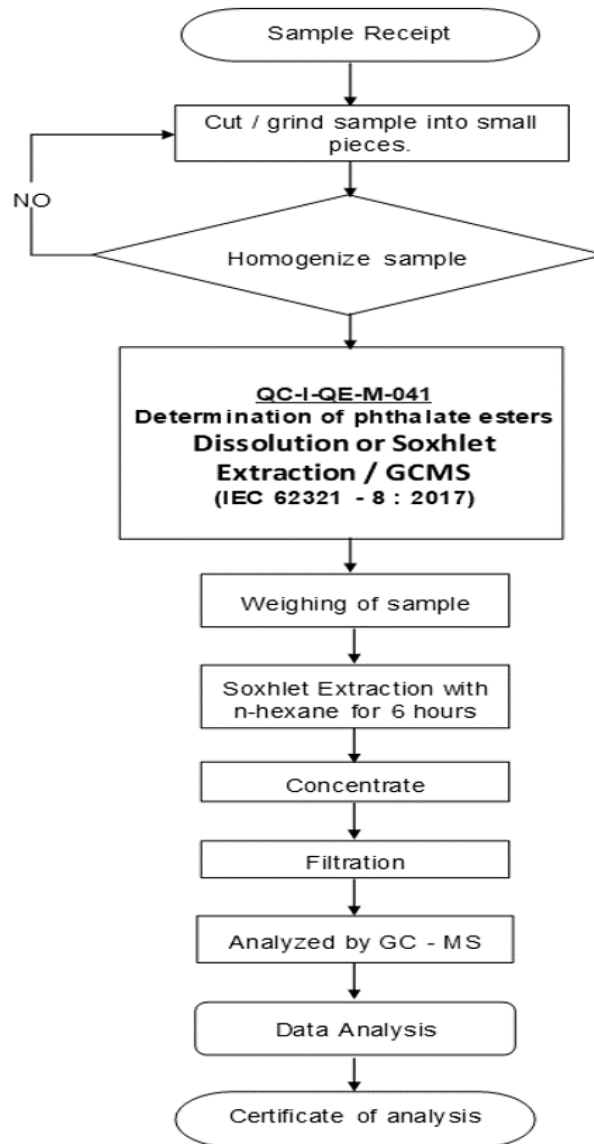
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## ANALYSIS FLOW CHART



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## **NOTE**

- 1) The Laboratory issues test report / calibration certificate(s) based on the test / calibration requested on the specific sample / unit under test(s) submitted. The significance of this test report / calibration certificate is subjected to the adequacy and representative character of the sample / unit under test(s) and to the comprehensiveness of the test / calibration method requested.
- 2) This test report / calibration certificate is neither a Quality Assurance Certificate nor an Approval Permit.
- 3) All test report / calibration certificate(s) will be maintained with strict confidentiality unless otherwise requested by the customer with a validity of 1 year.
- 4) The Laboratory is not responsible for any loss or damage of part / samples / unit under test(s) during transportation or postage.
- 5) The Laboratory shall keep the tested sample / unit under test(s) for a period of 2 months (except for wastewater - for 1 month) after testing / calibration and reserves the right to dispose off the said remaining sample(s) unless requested to do otherwise.
- 6) Customer is deemed to have accepted the test report / calibration certificate if there is no notification of any changes in writing to the issuing laboratory within 7 working days after its receipt.
- 7) The Laboratory shall have no liability for any indirect and/or consequential loss including without limitation loss of profits, loss of business, loss of opportunity, loss of goodwill and cost of product recall. It shall further have no liability for any loss, damage or expenses arising from the claims of any third party (including, without limitation, product liability claims) that may be incurred by the Client.

\*\*\* End of Report \*\*\*

A handwritten signature in black ink, appearing to read 'Asmahani Binti Mokhtar'.

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