



Test Report

No.: ETR22502240

Date: 20-May-2022

Page: 1 of 5

MURATA MANUFACTURING CO., LTD.

1-10-1, HIGASHI KOTARI, NAGAOKAKYO-SHI, KYOTO, 617-8555, JAPAN.

The following sample(s) was/were submitted and identified by the applicant as:

Sample Submitted By : MURATA MANUFACTURING CO., LTD.

Sample Name : Ni PLATING_220520

CLIENT REF No : 1220420036

Sample Receiving Date : 13-May-2022

Testing Period : 13-May-2022 to 20-May-2022

Test Requested : Testing item(s) is/are specified by client. Please refer to result table for testing item(s).

Test Results : Please refer to following pages.

Troy Chang
Troy Chang / Department Manager
Signed for and on behalf of
SGS TAIWAN LTD.
Chemical Laboratory - Taipei



PIN CODE: 7FA62CB6

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Page: 2 of 5

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Test Part Description

No.1 : SILVER COLORED SHEET

Test Result(s)

| Test Item(s) | Method | Unit | MDL | Result |
|-------------------------------------|--|-------|-----|--------|
| | | | | No.1 |
| Fluorine (F) (CAS No.: 14762-94-8) | With reference to BS EN 14582: 2016, analysis was performed by IC. | mg/kg | 50 | n.d. |
| Chlorine (Cl) (CAS No.: 22537-15-1) | With reference to BS EN 14582: 2016, analysis was performed by IC. | mg/kg | 50 | n.d. |
| Bromine (Br) (CAS No.: 10097-32-2) | With reference to BS EN 14582: 2016, analysis was performed by IC. | mg/kg | 50 | n.d. |
| Iodine (I) (CAS No.: 14362-44-8) | With reference to BS EN 14582: 2016, analysis was performed by IC. | mg/kg | 50 | n.d. |
| Antimony (Sb) (CAS No.: 7440-36-0) | With reference to US EPA 3050B: 1996, analysis was performed by ICP-OES. | mg/kg | 2 | n.d. |
| Phosphorus (P) (CAS No.: 7723-14-0) | With reference to US EPA 3050B: 1996, analysis was performed by ICP-OES. | mg/kg | 2 | n.d. |

Note :

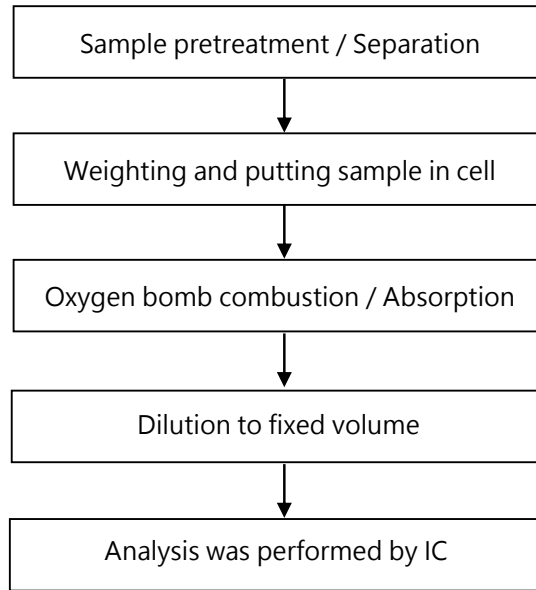
1. mg/kg = ppm ; 0.1wt% = 0.1% = 1000ppm
2. MDL = Method Detection Limit
3. n.d. = Not Detected (Less than MDL)

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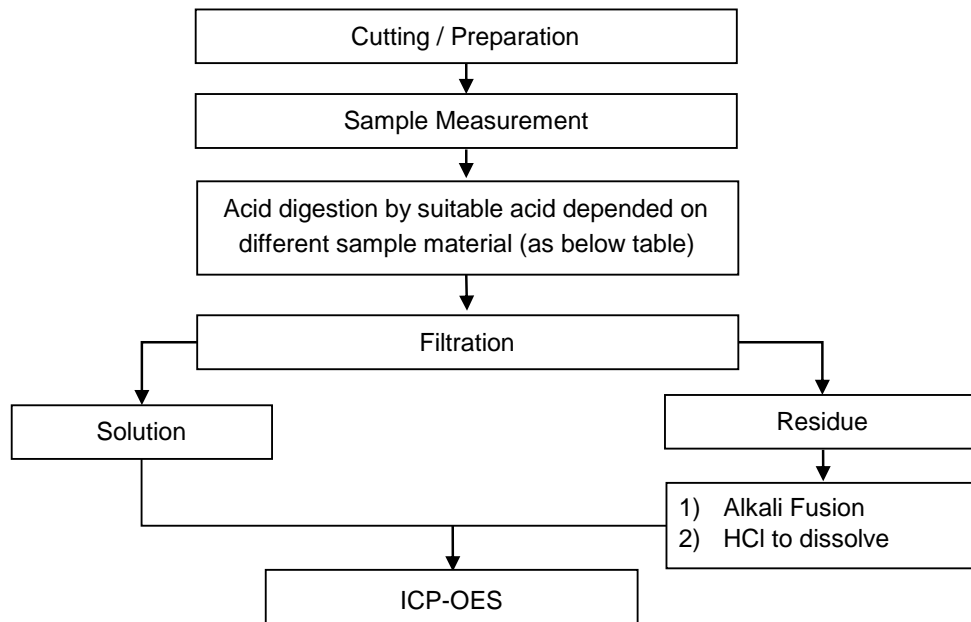
Analytical flow chart - Halogen



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Flow Chart of digestion for the elements analysis performed by ICP-OES

These samples were dissolved totally by pre-conditioning method according to below flow chart.



| | |
|------------------------------------|---|
| Steel, copper, aluminum, solder | Aqua regia, HNO ₃ , HCl, HF, H ₂ O ₂ |
| Glass | HNO ₃ /HF |
| Gold, platinum, palladium, ceramic | Aqua regia |
| Silver | HNO ₃ |
| Plastic | H ₂ SO ₄ , H ₂ O ₂ , HNO ₃ , HCl |
| Others | Added appropriate reagent to total digestion |

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Page: 5 of 5

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* The tested sample / part is marked by an arrow if it's shown on the photo. *

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** End of Report **

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