



# Test Report

No.: ETR21C03310

Date: 27-Dec-2021

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/on behalf of the applicant as:

Sample Submitted By : MURATA MANUFACTURING CO., LTD.

Sample Name : Ceramic ZC\_211227

CLIENT REF No : 1211203024

Sample Receiving Date : 17-Dec-2021

Testing Period : 17-Dec-2021 to 27-Dec-2021

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, Manager  
 Signed for and on behalf of  
 SGS TAIWAN LTD.  
 Chemical Laboratory - Taipei




PIN CODE: 4409FBB1

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <https://www.sgs.com.tw/terms-of-service> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <https://www.sgs.com.tw/terms-of-service>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of client's instruction, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced, except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.

# Test Report

No.: ETR21C03310

Date: 27-Dec-2021

Page: 2 of 5

MURATA MANUFACTURING CO., LTD.

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

## Test Part Description

No.1 : Ceramic ZC\_211227

## 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 3052: 1996, analysis was performed by ICP-OES.	mg/kg	2	n.d.
Phosphorus (P) (CAS No.: 7723-14-0)	With reference to US EPA 3052: 1996, analysis was performed by ICP-OES.	mg/kg	2	n.d.

## Note :

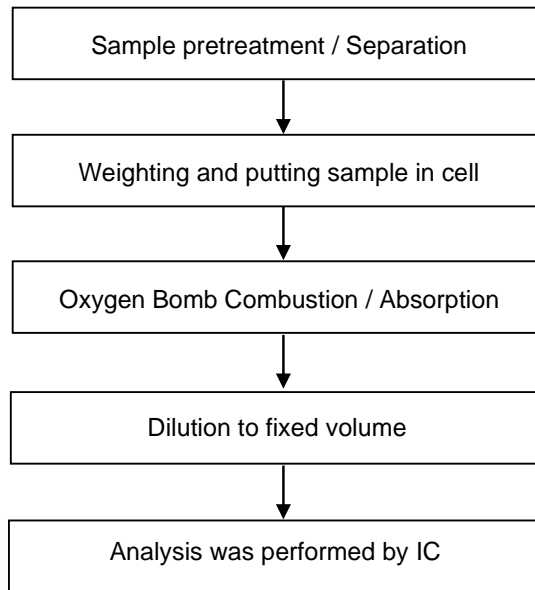
1. mg/kg = ppm ; 0.1wt% = 1000ppm
2. MDL = Method Detection Limit
3. n.d. = Not Detected ( Less than MDL)

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <https://www.sgs.com.tw/terms-of-service> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <https://www.sgs.com.tw/terms-of-service>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of client's instruction, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced, except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.

MURATA MANUFACTURING CO., LTD.

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

### Analytical flow chart - Halogen



This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <https://www.sgs.com.tw/terms-of-service> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <https://www.sgs.com.tw/terms-of-service>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of client's instruction, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced, except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.

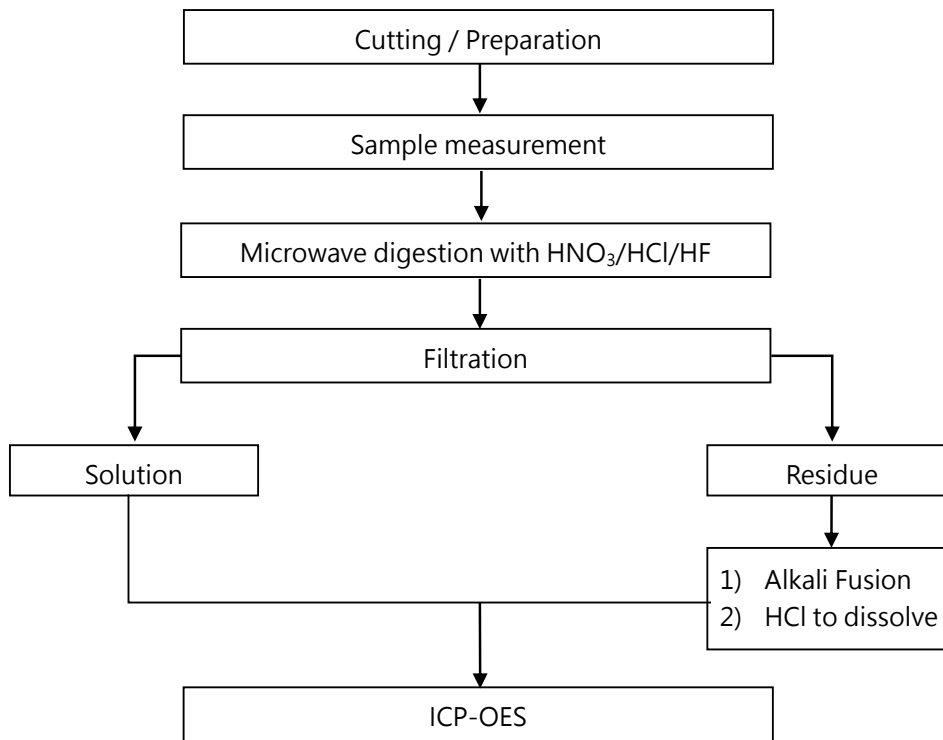
MURATA MANUFACTURING CO., LTD.

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

### Analytical flow chart of Elements (Heavy Metal included)

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

【 Reference method : US EPA 3051A · US EPA 3052 】



\* US EPA 3051A method does not add HF.

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <https://www.sgs.com.tw/terms-of-service> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <https://www.sgs.com.tw/terms-of-service>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of client's instruction, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced, except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.

## Test Report

No.: ETR21C03310

Date: 27-Dec-2021

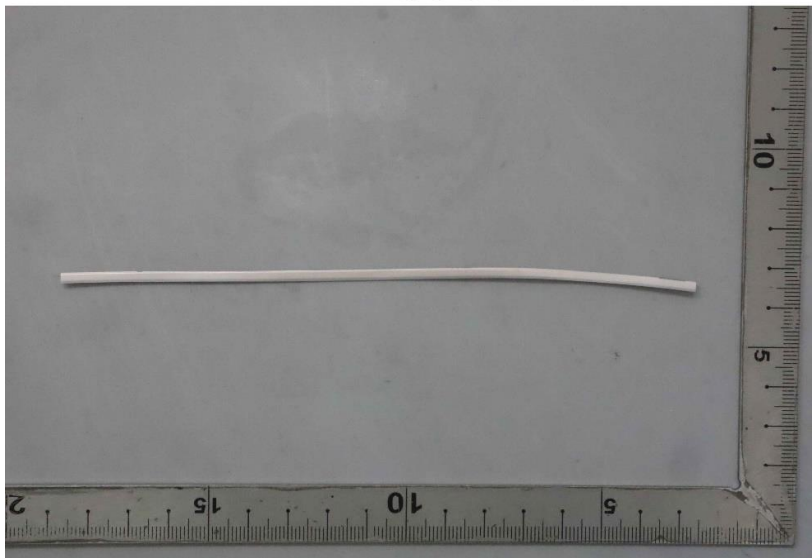
Page: 5 of 5

MURATA MANUFACTURING CO., LTD.

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

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

### ETR21C03310



\*\* End of Report \*\*

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <https://www.sgs.com.tw/terms-of-service> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <https://www.sgs.com.tw/terms-of-service>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of client's instruction, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced, except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.