



Product Information Sheet

Korea Testing Laboratory 723, Haeam-ro, Sangnok-gu, Ansan-si, Gyeonggi-do, Republic of Korea TEL: +82-31-500-0498 FAX: +82-31-500-0478	Certificate No : 00-000000-00-0 Page of Pages (1) / (3)	
<p>1. Reference Material Description : Yttrium oxide reference material for chemical analysis Reference Material Code : KTL-RM106-04-1 Serial Number : 2020-01-000 Intended Use : This RM is intended to be used for calibrating instruments and evaluating the reliability of analytical methods for the determination of impurities in Ytria Stabilized Zirconia</p> <p>2. Test Environment : Temperature (23 ± 3) °C, Humidity (40 ± 30) % R.H.</p> <p>3. Method of Certification : Preparation and certification of reference materials used for determination of impurities in Ytria Stabilized Zirconia</p> <p>4. Stock information : Refer to the “INSTRUCTIONS” on the next page(s).</p> <p>5. Certification Date : 2021. 06. 30</p> <p>6. Expiration Date : One year from supplied data</p> <p>7. Approved by Description : Technical Manager Name : Jin Sook Lee </p>		
This Product Information Sheet is the result of reference material accredited by Korea Laboratory Accreditation Scheme (KOLAS)		
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Instructions of Yttrium oxide reference material for chemical analysis

1. Purpose

It is used for calibrating instruments and evaluating the reliability of analytical methods for the determination of impurities in Yttrium oxide.

2. Description of the Product

It is a white powder of zirconia with 3 mol% Y and packaged in brown glass bottle by 50 g.

3. Property values or indicative values

The property values of this RM are provided as shown in following table. The property values and their uncertainties are traceable to the International System of Units (SI). The values are average values measured by using Inductively coupled plasma - optical emission spectrometer (ICP-OES).

Table. The main components of the RM (Property values & indicative values)

Section	Components	Property values*
Elements	Al	1 102 ± 12 mg/kg
	Ti	53 ± 10 mg/kg
	Hf	1.606 ± 0.069 %
	Y	4.29 ± 0.61 %

* 95 % confidence level, k = 2

4. Indicative values

The indicative values of this RM are provided as shown in following table.

Table. The main components of the RM (Property values & indicative values)

Section	Indicative values	Equipment
Monoclinic	< 2 %	X-ray diffractometer
Mean particle size	< 50 μm	Particle size analyzer

* The indicative values is a value for which traceability is not ensured, and uncertainty is not specified and minimal information is provided.

5. Instructions for Storage

This RM must be stored in the original unopened bottles at R.T.(20 °C ~ 26 °C) and away from direct sunlight. Property values and indication values are not applicable to bottles stored after opening, even if resealed.

6. Instructions for Use

Take at least 0.5 g of RM material from the bottle.

7. Homogeneity

10 bottles were randomly selected to investigate the homogeneity. The sample (0.5 g) should be decomposed by alkali fusion. Decomposed solution was measured 3 times using inductively coupled plasma - optical emission spectrometer (ICP-OES). The results were calculated by ANOVA.

8. Stability

The property and indicative values of this RM is valid, with the measurement uncertainty specified, until the expiration date provided stored in accordance with the instruction.

9. Characterization

It is characterized by comparing and analyzing the certified values specified in CRM and the measured values calculated from the candidate reference materials.

10. Safety Information

Personal protective equipment, such as a protective mask and gloves, should be used when handling this CRM. The usual laboratory safety precautions apply.

11. Additional Notices

The Property values are valid only if this RM is handled, stored, and used in accordance with the Notices given in this certificate. KTL accepts no legal liability if this RM is used for an administrative measure such as a proficiency test which may create a legal issue. KTL will periodically monitor the property values of this RM over the period of its validity. If technically substantial changes occur, affecting its property values before the expiration of this certificate, it will be notified to the purchaser.

10. Contacts

Material Technology Center, Korea Testing Laboratory

Jin Sook Lee, Tel : +82-31-500-0498, Fax : +82-31-500-0478, E-mail : ljsmaria@ktl.re.kr

Hyun-hwa Son, Tel : +82-31-500-0467, Fax : +82-31-500-0478, E-mail : hyunhwa@ktl.re.kr

Dong-won Lee, Tel : +82-2-860-1577, Fax : +82-2-860-1584, E-mail : dwlee@ktl.re.kr