

Cd、Cr、Hg、Pb in ABS

Sample Number:

Date of Certification:

Producer: National Institute of Metrology (cachet)

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1. Description of the sample

This set of CRMs is developed for the determination of Cd, Cr, Hg and Pb in plastic sample. The matrix of the CRMs is ABS. It includes five levels (BW 3079~3083) and one blank. The reference material is intended for method validation, quality control process and value assignment in the analysis of Cd, Cr, Hg, Pb in plastic sample.

2. Analytical method used for certification

Inductively coupled plasma mass spectrometry (Cd, Cr, Hg, Pb)

Inductively coupled plasma optical emission spectrometry (Cd, Cr, Hg, Pb)

Atomic absorption spectrometry (Cd)

Atomic Fluorescence spectrometry (Hg)

3. Certified Values and uncertainties

	Cd		Cr		Hg		Pb	
	Value (mg/kg)	Expanded Uncertainty (mg/kg) ($k=2$)	Value (mg/kg)	Expanded Uncertainty (mg/kg) ($k=2$)	Value (mg/kg)	Expanded Uncertainty (mg/kg) ($k=2$)	Value (mg/kg)	Expanded Uncertainty (mg/kg) ($k=2$)
GBW08407	8.7	0.4	97.3	2.3	91.5	4.4	93.1	4.2
GBW08408	26.7	0.5	288	6	271	11	276	9
GBW08409	36.3	0.7	380	7	373	9	378	7
GBW08410	76.0	2.3	777	21	748	29	778	17
GBW08411	107	2	1122	31	1096	34	1122	29

Note: The unit is mg/kg and the estimated expanded uncertainty U with a coverage factor $k=2$, corresponding to a level of confidence of about 95%. Uncertainty contributions arising from characterization as well as from homogeneity and stability assessment were taken into consideration.

4. Test of homogeneity and stability

The homogeneity of the CRMs is tested by ICP-OES method, and the results indicate

good homogeneity. The certificate value is valid until 10/2014; this validity may be extended as further evidence of stability becomes available.

5. Instructions for use and storage

This set of CRMs includes six bottles of samples, and each bottle contains about 10g sample. No correction for dry mass is required. The recommended minimum sample intake is 100 mg. All care must be taken to avoid contamination during the handling of the sample. The CRMs should be stored at room temperature. Exposure to sunlight and heat (>40°C) should be avoided.

6. Participants

National Institute of Metrology (NIM); Guangdong Bureau of Entry-Exit Inspection and Quarantine; Beijing Bureau of Entry-Exit Inspection and Quarantine; General Research Institute For Nonferrous Metals; NanJing Center, China Geological Survey; National Institute of Measurement & Test Technology

STATEMENT

1. The CRM is only limited in use of scientific research and analytical measurement. Any loss caused by improper use and storage by customer will not be respond by maker.
2. Please check the kind, number and package as soon as the sample arriving. The compensate do not relate to any loss except for the CRM.
3. The maker only answer for the intact certificate with CRM cachet of nim. Please keep the certificate appropriately.
4. Please contact with technical consultant section, if more information related to the use of the CRM is needed.

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