

National Certified Reference Material (NCRM)

Code: GBW06176



Reference Material Certificate

Purity of myo-Inositol



Batch Number:

Certification Date:

Period of Validity:



Reference Material Producer: National Institute of Metrology

Address: No.18, Bei San Huan Dong Lu, Chaoyang Dist, Beijing

P.R.China, 100029

Telephone: +86(10)64524710

Email: crm-service@nim.ac.cn



Version: 1.0



The CRM mainly applies to inositol detection in food, quality control of the producers and testing laboratories, calibration of analytical instruments, verification and validation of measurement methods, etc.

1. Sample Preparation

The material used to prepare the CRM sample was purchased from commercial partner and further purified with the methods of recrystallization, etc. After qualitative and preliminary analysis, the material was sub-packaged.

Compound	Molecular formula	CAS number
myo-Inositol	C ₆ H ₁₂ O ₆	87-89-8

2. Traceability and Characterization Methods

The material was qualitatively confirmed by IR, MS and NMR. The mass balance approach and qNMR approach were used to determine the purity of the reference material. For mass balance approach, the content of structurally related impurities was determined by HPLC-CAD. The content of water was determined by Karl-Fischer method. The content of volatile components was determined by HS-GC. The content of non-volatile components was determined by ICP-MS.

Through appropriate calibration procedures and measurement standards (including reference materials), the certified value of this CRM can be traced to the SI unit kilogram (kg) and mole (mol).

3. Property Value and Uncertainty

The property value and expanded uncertainty are as follows:

Code	Name	Certified value (%)	Uncertainty (%) ($k=2$)
GBW06176	Purity of myo-Inositol	99.8	0.2

The coverage factor was chosen to obtain an approximate 95% level of confidence. The uncertainty evaluation considered sources from characterization, homogeneity and stability.

4. Homogeneity and Stability Assessment

According to national technical specification of JJF 1343 (equivalent to ISO 33405), homogeneity and stability study for this certified reference material were carried out through random sampling of sub-packaged samples followed by HPLC-CAD method. The results demonstrated good homogeneity and stability of this CRM.

The minimum sample intake is 2 mg. The period of validity of this CRM is 3 years since the date of certification. The stability of this CRM is regularly monitored by NIM, customers will be informed of any change of the certified value just-in-less-time.

5. Packaging, Storage and Use

Packaging: The CRM is packaged in brown glass vials with screw caps, and each contains no less than 100 mg sample.

Storage: The CRM should be kept in low temperature (4 °C), away from light and excessive moisture.

Use: The CRM should be balanced to room temperature prior to use, and sealed as soon as possible after sampling.



Statement

1. The reference material is only for lab study and analytical testing. In case of any complaint due to the improper use or storage by the user, the institute will bear no responsibility.
2. After receiving it, please immediately check variety, quantity and packaging. Relevant compensation is only limited to the reference material itself.
3. The institute is only responsible for the complete certificate affixed with the “Dedicated Seal for Reference Material of National Institute of Metrology”. Please properly keep this certificate.
4. To obtain more application related information, please contact the Department of Technical Consultation.

National Institute of Metrology P.R. China

Tel.:+86(10)64524776,64524793,64524794,64524795(Technical Consultation)

Fax: +86(10) 64524716, 64524715

Website: www.nim.ac.cn, www.ncrm.org.cn (National Sharing Platform for Reference Materials)

