NCRM

Code：GBW10219

Certificate of Certified Reference Material

Aflatoxin B1 in Maize Power

Batch Number:

Certification Date:

Period of Validity:

Reference Material Producer：National Institute of Metrology

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Version：2.0

The present CRM mainly applies for evaluating analytical methods reliability of aflatoxin B1 in maize powder and similar component samples to ensure the accuracy and comparability of food analysis results. It can be boosting the technical level of food component samples analysis, and satisfy the demand from foodstuff machining, scientific research, checkout and quarantine.

1. Sample Preparation

The natural maize contaminated with aflatoxin B1 (CAS: 1162-65-8) was selected as the candidate of reference material, the candidate samples were prepared by the steps of impurity removal, crushing, sieving, mixing, homogeneity investigation and packaging.

2. Traceability and Characterization Methods

The Property value of aflatoxin B1 was determined by LC-IDMS/MS and HPLC-FLD method, the calibration results were verified by three laboratories. To meet the requirement of metrology characteristic, the measuring method and measuring instruments with traceability are used.

Through the use of pure certified reference material GBW 10172，the property value of this CRM can be traced to SI unit mole(mol) and kilogram (kg).

3. Property Value and Uncertainty

The property value and expanded uncertainty are as follows:

Code	Name	Property value (μg/kg)	Uncertainty (μg/kg) (k=2)
GBW10219	Aflatoxin B1 in maize powder	30.6	4.0

The coverage factor was chosen to obtain an approximate 95% level of confidence. The uncertainty evaluation considered sources from characterization, between-unit homogeneity and stability.**4. Homogeneity and Stability Assessment**

According to national technical specification of JJF1343（equivalent to ISO Guide 35）, homogeneity and stability testing for this certified reference were carried out through random sampling by HPLC-IDMS/MS method. The results demonstrated good homogeneity and stability of this CRM.

The minimum sample intake is 5.0 g. The certified value of the reference material and its uncertainty are valid only if the minimum sampling amount is followed. The certification of this CRM is valid for 24 months. The stability of this CRM is regularly monitored by NIM, during this period the customer will be informed of any change of the certified values just-in-less-time.

5. Instructions for package, storage and use

Packaging: The batch material was vacuum-packed in polyethylene bags and each packet was sealed in aluminum foil bag. Each one contains 50g of sample.

Storage and transportation: The CRM should be kept in dark and -20°C for long-term storage. This CRM is shipped under ambient temperature.

Use: Prior to use, it should be equilibrated to room temperature. And it is recommended to use it one time after being opened.

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, packaging and certification. Relevant compensation is only limited to the reference material itself, no other loss is involved.
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.

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