Approved by General Administration of Quality Supervision, Inspection and Quarantine of the People's Republic of China

GBW(E)100265

Certificate of Certified Reference Material

Purity of Folic Acid

Date of Certification:

Date of Expiration:

Producer: National Institute of Metrology (cachet)

Address: No.18,Beisanhuan donglu Beijing **Tel:** +86-10-64524710

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1. Description of Material & Intended Use

This certified reference material (CRM) is mainly intended for quality control of manufacture organization and analysis laboratory for determination of folic acid in food analysis and clinical analysis.

2. Preparation

The candidate of this reference material was obtained from commercial product folic acid (alias: Vitamin B9. CAS No.: 59-30-3). According to its purity and properties, it was subdivided after qualitative analysis and preliminary quantitative analysis.

3. Traceability and certification

The traceability of the certified value is ensured by using measurement methods and measuring instruments that meet the requirements of metrology. Two methods with different principles, mass balance method and quantitative nuclear magnetic resonance, were applied for purity value assignment. In mass balance method, organic purity was determined by normalization of liquid chromatography (LC) with diode-array detector (DAD), as well as water content, ash content, volatile content and inorganic element content were determined.

4. Certified value and uncertainty

The certified value and the relative expanded uncertainties of the CRM are as follows:

Code	Certified value / %	Expanded uncertainty / %, k=2
GBW(E) 100265	90.6	1.1

The major impurity is water (water content is 8.7%, including crystal water). The uncertainty from impurities such as water as well as the uncertainty from homogeneity and stability were considered in uncertainty evaluation of the certified reference material.

5. Homogeneity and Stability Testing

According to the requirement of national criterion for primary certified reference materials, the homogeneity and stability testing were carried out through random sampling by using LC-DAD method including water content determination, and the testing results were considered in uncertainty evaluation of the certified reference material.

The minimum sampling amount is 1 mg. The stability of this CRM is regularly monitored by NIM. Any change of the certified value during this period will be informed to the customers in time.

6. Instructions for use

- This certified reference material is sealed in amber screwed glass vial, with 20 mg in each vial.
- This certified reference material should be kept in dark, dry and cold (-20°C) place
- After open, it should be sealed immediately and stored at abovementioned condition.

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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