ARMI | MBH

276 Abby Road, Manchester, NH 03103 USA
Tel: 1+ 603.622.7660
Email: lgcusa@lgcgroup.com | Online: lgcstandards.com

Reference Material Certificate of Analysis

ISO 17034:2016 | ISO/IEC 17025:2017 | ISO 9001:2015

Product ID: IARM-AL2024-18

Revision No.: 000
Revision Date: 06/29/2022

Product Description: Aluminum Reference Material, AA2024 / UNS A92024

Description and Intended Use:
This Reference Material was processed under a quality management system that is registered/accredited to **ISO 17034, ISO/IEC 17025 and ISO 9001.** This RM may come in the form of a solid disk, or chips. The intended use of this RM may include, but is not limited to, the calibration of instruments and the validation of analytical methods.

Assigned Values listed in wt.%

Cr	**0.020**	**Ga**	**0.014**	**Ni**	**0.003**	**V**	**0.012**
Cu	**4.33**	**Mg**	**1.44**	**Si**	**0.067**	**Zn**	**0.033**
Fe	**0.221**	**Mn**	**0.649**	**Ti**	**0.026**	**Zr**	**0.001**

Homogeneity:
Homogeneity samples are selected by a systematic sampling procedure. The number of samples may be determined by the equation below, where N_{prod} is the number of units produced and N_{min} is the number of samples used for homogeneity testing. These samples are arranged in a simple randomized design such that each sample is analyzed multiple times. Homogeneity may also have been determined within sample using an applied version of ASTM E826.

$$N_{MIN} = \max\left(10, \sqrt[3]{N_{PROD}}\right)$$

Instructions for Use:
The test surface is on the opposite side of the labeled surface, which includes the material identification. The assigned values are applicable for the entire thickness of the unit. However, the user is cautioned not to measure disks less than 2 mm thick when using X-ray fluorescence spectrometry. Each packaged disk has been prepared by finishing the test surface using a lathe. The user must determine the correct surface preparation procedure for each analytical technique. The user is cautioned to use care when either resurfacing the disk or performing additional polishing, as these processes may contaminate the surface. The minimum sample size for chips should be individually evaluated based on the analytical technique used; this would typically be greater than 0.1 grams. The material should be stored in a cool, dry location when not in use.

Chips are not recommended for gas analysis.

Period of Validity:
The assigned value of this material is valid indefinitely provided the material is handled and stored in accordance with the instructions stated on this certificate. The assigned values are nullified if the material is damaged, contaminated, otherwise modified, or used in a manner for which it was not intended.

Chuck Goudreau

Chuck Goudreau, Certifying Officer

June 29, 2022
Date Issued

ACCREDITED

ISO 17034 Accredited: Reference Materials Producer, Certificate # 2848.02
ISO/IEC 17025 Accredited: Chemical Testing, Certificate # 2848.01