

# Certificate

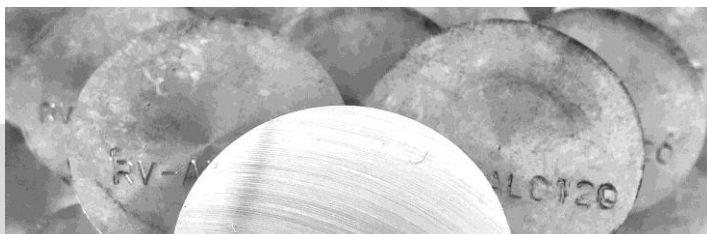
## Certificate of Analysis

### Reference Material SA 01/21 Secondary Alumina

Analyte	Certified value	Uncertainty
Mass fraction in %		
Na <sub>2</sub> O	0,72	± 0,19
SiO <sub>2</sub>	0,014	± 0,007
Fe <sub>2</sub> O <sub>3</sub>	0,018	± 0,004
ZnO	0,0080	± 0,0008
CaO	0,059	± 0,008
TiO <sub>2</sub>	0,0017	± 0,0008
P <sub>2</sub> O <sub>5</sub>	< 0,005	

Analyte	Certified value	Uncertainty
Mass fraction in %		
MnO	< 0,002	
V <sub>2</sub> O <sub>5</sub>	0,0036	± 0,0011
Ga <sub>2</sub> O <sub>3</sub>	0,0072	± 0,0010
C	0,17	± 0,08
S	0,20	± 0,12
F	2,0	± 0,4
α-Al <sub>2</sub> O <sub>3</sub>	2,7	± 1,3

Date of issue: May 31, 2021



# Reference material SA 01/21

## Description

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The base material for this secondary alumina reference material has been taken directly from the production cycle after gas treatment process of an aluminum smelter. It is process material which can be regarded as sufficiently homogeneous.

Grainsize D90:  $152 \pm 21 \mu\text{m}$

This reference material was certified in an interlaboratory test of 13 laboratories. The values given in this certificate are taken from the evaluation of the interlaboratory test.

The uncertainties were estimated at a 95 % confidence level, showing both the contribution of homogeneity and the uncertainties of the analytical methods used. The uncertainty values were calculated from the reproducibility standard deviations of the ILT with a coverage factor  $k = 2$ .

The certified values are given as oxides on an equivalent weight basis and assume stoichiometry in the oxide form listed.

## Recommended use

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This reference material is intended for the verification of analytical methods such as XRF, XRD, ICP OES or calibration of analytical instruments.

## Storage information

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This reference material should be stored in a dry and clean environment at room temperature, e.g. storage in desiccator.

## Methods used for characterization

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XRF, XRD, combustion analysis and ICP-OES.

## Disclaimer

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We inspect and test to the best of our knowledge and belief and assume no further liability for the accuracy of the inspection and test.

## Contact

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For more information see [www.metallogie.de/ringversuche/](http://www.metallogie.de/ringversuche/)

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