

# CERTIFICATE OF ANALYSIS

Product: DMSO  
Lot. No.: Example  
Man. Date: Example  
Exp. Date: Example  
Grade: ULSI  
Density (20°C): 1.100 g/cm<sup>3</sup>

MicroChemicals GmbH  
Fon Nicolaus-Otto-Str. 39  
Fax D-89079 Ulm  
Email +49 (0) 731 977343-0  
Internet +49 (0) 731 977343-29  
[Info@MicroChemicals.com](mailto:Info@MicroChemicals.com)  
[www.microchemicals.com](http://www.microchemicals.com)

From a representative sample the following values were determined:

16.06.2020  
QC Director Dr.-Ing. Christian Koch

Parameter	Specification	Result
Assay (GC, on anhydrous basis)	99.9-100 %	99.99 %
Color (APHA, Pt-Co)	<= 10	5
Water (KF)	<= 1000 ppm	200 ppm
Chloride (Cl)	<= 0.5 ppm	< 0.5 ppm
Cations		
Aluminum (Al)	< 20 ppb	< 1 ppb
Antimony (Sb)	< 20 ppb	< 1 ppb
Arsenic (As)	< 20 ppb	< 1 ppb
Barium (Ba)	< 20 ppb	< 1 ppb
Beryllium (Be)	< 20 ppb	< 1 ppb
Bismuth (Bi)	< 20 ppb	< 1 ppb
Boron (B)	< 20 ppb	< 1 ppb
Cadmium (Cd)	< 20 ppb	< 1 ppb
Calcium (Ca)	< 20 ppb	< 5 ppb
Chromium (Cr)	< 20 ppb	< 1 ppb
Cobalt (Co)	< 20 ppb	< 1 ppb
Copper (Cu)	< 20 ppb	< 1 ppb
Gallium (Ga)	< 20 ppb	< 1 ppb
Germanium (Ge)	< 20 ppb	< 1 ppb
Gold (Au)	< 20 ppb	< 1 ppb
Iron (Fe)	< 10 ppb	< 1 ppb
Lead (Pb)	< 20 ppb	< 1 ppb
Lithium (Li)	< 20 ppb	< 1 ppb
Magnesium (Mg)	< 20 ppb	< 1 ppb
Manganese (Mn)	< 20 ppb	< 1 ppb
Molybdenum (Mo)	< 20 ppb	< 1 ppb
Nickel (Ni)	< 20 ppb	< 1 ppb
Niobium (Nb)	< 20 ppb	< 1 ppb
Potassium (K)	< 20 ppb	< 1 ppb
Silver (Ag)	< 20 ppb	< 1 ppb
Sodium (Na)	< 20 ppb	< 1 ppb
Strontium (Sr)	< 20 ppb	< 1 ppb
Tantalum (Ta)	< 20 ppb	< 1 ppb
Thallium (Tl)	< 20 ppb	< 1 ppb
Tin (Sn)	< 20 ppb	< 1 ppb
Titanium (Ti)	< 20 ppb	< 1 ppb
Vanadium (V)	< 20 ppb	< 1 ppb
Zinc (Zn)	< 20 ppb	< 1 ppb
Zirconium (Zr)	< 20 ppb	< 1 ppb
Particles		
Particle count > 0.5 µm (Filtered through 0.2 µm, filled under inert gas.)	< 100 p/ml	< 10 p/ml

The analytical results should not be construed as guaranteeing specific properties of the product or its suitability for a particular application. The above data do not release from carrying out an incoming goods inspection. This report is not to be signed.