

Schweizerische Eidgenossenschaft Confédération suisse Confederazione Svizzera Confederaziun svizra

Swiss Confederation

## **SRMS** Directory

Federal Department of Economic Affairs, Education and Research EAER

State Secretariat for Economic Affairs SECO Swiss Accreditation Service SAS

## Accreditation number: SRMS 0001

International standard: Swiss standard:	ISO 17034:2016 SN EN ISO 17034:2017	
Sigma-Aldrich Production GmbH Industriestrasse 25 9471 Buchs	Head: Responsible for MS: Telephone: E-Mail: Internet: Initial accreditation: Current accreditation: Scope of accreditation see:	Michael Mühlhofer Dr. Andrea Schwaiberger +41 81 755 2852 andrea.schwaiberger@merck- group.com http://www.sigmaaldrich.com 14.11.2007 05.09.2022 to 04.09.2027 www.sas.admin.ch (Accredited bodies)

#### Scope of accreditation as of 05.01.2024

# Producer of certified reference materials in the fields of organic compounds, organic and inorganic pure substances, solutions, microbiological discs and matrix reference materials

Reference material matrix / artefact	Properties characterized	Туре	Approach used to assign property values
CHEMICAL REFERENCE MATERIALS			
Organic compounds	Mass fraction of main or minor component	CRM	Quantitative determination by quantitative performance NMR spectroscopy (qNMR) (a, b, d) <sup>1</sup>
Organic compounds	Mass fraction of main or minor component	CRM	Quantitative determination by LC- MS (IDMS) (a, d) <sup>1</sup>
Organic compounds	Mass fraction of main or minor component	CRM	Quantitative determination by LC-MS (a, d) <sup>1</sup>
Organic compounds	Mass fraction of main or minor component	CRM	Quantitative determination by LC-CAD (a, d) <sup>1</sup>
Organic compounds	Mass fraction of main or minor component	CRM	Quantitative determination by LC-UV (a, d) <sup>1</sup>
Organic compounds	Mass fraction of main or minor component	CRM	Quantitative determination by GC-MS (IDMS) (a, d) <sup>1</sup>



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Organic compounds	Mass fraction of main or minor component	CRM	Quantitative determination by GC-MS (a, d) <sup>1</sup>
Organic compounds	Mass fraction of main or minor component	CRM	Quantitative determination by GC-FID (a, d) <sup>1</sup>
Organic and inorganic pure substances	Mass fraction of the main compo- nent	CRM	Quantitative determination by metrological precision titration (a, d) <sup>1</sup>
Organic and inorganic pure substances	Mass fraction of main analyte	CRM	Quantitative determination by ICP-OES (a, d) <sup>1</sup>
Organic and inorganic pure substances	Mass fraction of minor compo- nents in the pure substance	CRM	Quantitative determination by ICP-OES, ICP-MS, AAS (a, d) <sup>1</sup>
Organic and inorganic pure substances	Mass fraction of minor compo- nents in the pure substance	CRM	Quantitative determination by IC (a, d) <sup>1</sup>
Organic and inorganic pure substances	Mass fraction of main analyte	CRM	Quantitative determination by IC (a, d) <sup>1</sup>
Solutions	Mass fraction of single or multiple components	CRM	Gravimetric production with high precision weighing, starting from pure or high purity starting materi- als, the content of which has been characterized by the 100% minus impurities approach or by qNMR, LC-MS, LC-CAD, LC-UV, LC-IDMS, IC, titration, GC-MS, GC-IDMS, GC-FID or ICP-OES. (b, e) <sup>1</sup>
Solutions	Mass fraction of single compo- nent	CRM	Quantitative determination of the main analyte by metrological pre- cision titration (a, d) <sup>1</sup>
Solutions	Mass fraction of single compo- nent	CRM	Quantitative determination of the main analyte by ICP-OES (a, d) <sup>1</sup>
Solutions	Mass fraction of single or multiple components	CRM	Quantitative determination of mi- nor components by ICP-OES, ICP-MS, AAS (a, d) <sup>1</sup>
Solutions	Mass fraction of single or multiple components	CRM	Quantitative determination of the main analyte and/or minor components by IC (a, d) <sup>1</sup>
Solutions	Mass fraction of single or multiple components	CRM	Quantitative determination of the main analyte and/or minor components by quantitative NMR spectrometry (qNMR) (a, d) <sup>1</sup>
Solutions	Mass fraction of single or multiple components	CRM	Quantitative determination of the main analyte and/or minor components by LC-MS (IDMS) (a, d) <sup>1</sup>



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Reference material matrix / artefact	Properties characterized	Туре	Approach used to assign property values
Solutions	Mass fraction of single or multiple components	CRM	Quantitative determination of the main analyte and/or minor components by LC-MS (a, d) <sup>1</sup>
Solutions	Mass fraction of single or multiple components	CRM	Quantitative determination of the main analyte and/or minor components by LC-CAD (a, d) <sup>1</sup>
Solutions	Mass fraction of single or multiple components	CRM	Quantitative determination of the main analyte and/or minor components by LC-UV (a, d) <sup>1</sup>
Solutions	Mass fraction of single or multiple components	CRM	Quantitative determination of the main analyte and/or minor components by GC-MS (IDMS) (a, d) <sup>1</sup>
Solutions	Mass fraction of single or multiple components	CRM	Quantitative determination of the main analyte and/or minor components by GC-MS (a, d) <sup>1</sup>
Solutions	Mass fraction of single or multiple components	CRM	Quantitative determination of the main analyte and/or minor components by GC-FID (a, d) <sup>1</sup>
MICROBIOLOGICAL REFERENCE MATERIALS			
Plano-convex discs	Number of colony-forming bacte- ria, yeasts, moulds	CRM	Cultural quantitative methods of determination by a laboratory us- ing reference methods (a) <sup>1</sup>
FOOD REFERENCE MATERIALS			
Milk powder	Mass fraction of main or minor components	CRM	Quantitative determination by LC- MS (IDMS) (a, d) <sup>1</sup>

In case of contradictions in the language versions of the directories, the German version shall apply.

<sup>1</sup> Categories according to the standard SN EN ISO 17034:2017 § 7.12.3:

- a) using a single reference measurement procedure (as defined in ISO/IEC Guide 99) in a single laboratory
- b) characterization of a non-operationally defined measurand using two or more methods of demonstrable accuracy in one or more competent laboratories
- c) characterization of an operationally defined measurand using a network of competent laboratories
- d) value transfer from an RM to a closely matched candidate RM performed using a single measurement procedure performed by one laboratory
- e) characterization based on mass or volume of ingredients used in the preparation of the RM



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Abbreviation	Signification
CAD	Charged aerosol detector
CFU	Colony forming unit
CRM	Certified reference material
GC	Gas chromatography
IC	Ion chromatography
ICP-OES	Inductively coupled plasma optical emission spectrometry
ICP-MS	Inductively coupled plasma combined with mass spectrometry
IDMS	Isotope dilution mass spectrometry
LC	Liquid chromatography
MS	Mass spectrometry
NMR	Nuclear magnetic resonance
UV	Ultraviolet

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