DFM
Danish National Metrology Institute

ABOUT DFM

DFM is Denmark's National Metrology Institute (NMI).
DFM is a signatory to the CIPM-MRA arrangement that ensures mutual recognition of measurements worldwide

TRACEABILITY

All measurements are traceable to recognised national and international standard.

ISO CERTIFICATION

All services are covered by DFM's ISO 9001 certification

CONTACT DFM

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Certified conductivity CRMs

Conductivity solutions at the highest level of metrology

DFM is pleased to provide certified reference materials (CRMs) for electrolytic conductivity between 10 mS/m and 10 S/m. Our very low uncertainties and proven track record against other National Metrology Institutes make our CRMs an excellent starting point in the traceability chain for electrolytic conductivity, either for the calibration of conductivity meters or the production of solutions.

Our CRMs are produced under DANAK accreditation RM511, according to ISO guide 34, and certified under DANAK accreditation 255, according to ISO 17025. Further, our electrolytic conductivity CRMs are covered by the CIPM MRA, declared as CMC through EURAMET and the CCQM. DFM regularly participates in Key Comparisons through the CCQM.

CERTIFICERING AF KVALITETSSYSTEM DNV·GL ISO 9001

DANAK CAL Reg. nr. 255

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The conductivity solutions in details

Certified Reference Materials

The conductivity solutions are one of the different Cerified Reference Materials (CRM) we produce. The conductivity CRMs are an aqueous solution of potassium chloride (KCl) delivered in a 500 mL glass bottle. Our solutions are calibrated on Jones-type open cells, between 24 °C and 26 °C, which are themselves calibrated against our primary reference cell.

Ordering the CRMs

DFM offers the following certified conductivity reference solutions:

R03.001	Reference solution, 0.5 litre KCl in H_2O, 0.01 S/m	U(CMC) = ±0.25 %
R03.002	Reference solution, 0.5 litre KCl in H_2O, 0.1 S/m	U(CMC) = ±0.15 %
R03.003	Reference solution, 0.5 litre KCl in H_2O, 1,0 S/m	U(CMC) = ±0.15 %
R03.004	Reference solution, 0.5 litre KCl in H_2O, 10 S/m	U(CMC) = ±0.15 %

Contact DFM at crm@dfm.dk for availability or for a quotation. Normally, DFM have the above solutions with decadic values between 10 mS/m and 10 S/m in stock. These solutions expire between 6 months and 18 months after the production.

Special orders

Aqueous reference solutions based on other salts or having other values than decadic can be produced by demand (minimum quantity is, however, 5 L). Such solutions can be produced with conductivity between 0.01 S/m and 25 S/m. For other salts than potassium chloride the upper limit might be lower depending on the solubility of the salt.

Examples of related services

- K03.001: Characterisation of conductivity solution at 24°C - 26°C *)
- K03.001: Characterisation of conductivity solution at 15°C - 35°C *)
- K03.001: Characterisation of conductivity solution at 10°C - 60°C (outside accr.)
- K03.101: Calibration of conductivity sensor cell / system, per point *)
- K03.102: Calibration in CRM fluids at 10 mS/m, 100 mS/m and 1 S/m , incl. CRM, in connection with K03.101 *)
- R03.101 – R03.105: Primary pH buffers (pH = 4.005 to pH =10.012) *)
- R03.106: Secondary pH buffer (pH = 7.38) *)

The services marked *) are under accreditation.

Prices and further descriptions of the services are found at www.dfm.dk.

CONSULTANCY SERVICES

Do you need new measurement capabilities, does a method call for a bit of scrutiny, or are you perhaps seeking to acquire new equipment? Take advantage of the consultancy services we provide in addition to our calibration services.

As an independent institute deeply rooted within research and metrology, DFM has gained the reputation of being an agile, solid, and valuable partner. Contact us and find out why.

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