ENVIRONMENTAL MATRIX REFERENCE MATERIAL

MISSIPPI-14, lot 0523

Product Information Sheet

A River Water Sample

Environment and Climate Change Canada matrix reference materials (RMs) are collected in bulk from various locations across North America. MISSIPPI-14 was collected from the Mississippi River in LeClair, Iowa in 2014. The bulk sample was pre filtered to remove particulates and filtered through a 0.2 µm sterilizing filter to remove bacteria. This bulk Major Ions and Nutrients in water RM is stored in a dark cold room and is unpreserved.

This Reference Material is intended for the verification or development of analytical methods for environmental analysis. It is not intended for use as a calibration standard.

Measurand	Assigned Value in mg/L*	C.I.	N
Alkalinity, Total (as $CaCO_3$)	115	± 6	127
Calcium	39.1	± 3.1	134
Chloride	15.9	± 0.8	133
Colour (Hazen Units)	38.0	± 8.3	86
Conductivity (µS/cm, 25°C)	331	± 11	157
Dissolved Inorganic Carbon (DIC)	26.8	± 3.6	61
Fluoride	0.118	± 0.026	77
Magnesium	12.6	± 1.1	134
Nitrate + Nitrite (as N)	2.94	± 0.23	173
pH (units, 25°C)	8.08	± 0.27	152
Potassium	2.49	± 0.20	130
Silicates (as SiO_2)	6.21	± 0.44	89
Sodium	7.82	± 0.64	130
Sulfate (as SO_4^{2-})	19.4	± 1.1	132
Total Nitrogen	3.37	± 0.36	131
Hardness, Total (as $CaCO_3$)	150	± 11	89

*Unless otherwise Indicated

Assigned values are the robust means calculated using Algorithm A (ISO/IEC 13528). Confidence interval (C.I.) represents +/- 2 times the calculated robust standard deviation (R.STD) of all reported laboratory values, calculated by Algorithm A (ISO/IEC 13528).

Traceability

The stated values are derived from analysis of the inter-laboratory consensus data from the accredited Environment and Climate Change Canada Proficiency Testing studies. (A2LA scope 2867.01)

Methods

Report details of measurement methods used for specific parameters are available upon request.

Storage and Handling

RMs should be stored refrigerated, well sealed and in the dark. Care should be taken when subsampling to avoid contamination of the sample bottle. An aliquot should be removed as necessary and any remaining aliquot sample should be put to waste as appropriate. We strongly recommend that the RM be tightly capped and refrigerated immediately after use.

Expiry Date

Please note that expiry dates of **1 year** from the date of shipping are indicative of sample stability, sample transport, handling, and storage. Expiry dates are indicated directly on the sample bottle label. Environment and Climate Change Canada is not liable for samples beyond the stated expiry on the bottle label.

Disclaimer, Liability & Warranty

Environment and Climate Change Canada warrants that the materials conform to the stated values for the duration of the sample validity period. In the event of a breach of this warranty, Environment and Climate Change Canada will only be liable for a replacement sample, an equivalent substitute, or the invoice price of the RM during the period of sample validity. In no event will Environment and Climate Change Canada be liable for direct, indirect, special, incidental or consequential damages arising from the use of or inability to use the material or documentation, or for the loss of revenue or profit, even if advised of the possibility of such damages. Environment and Climate Change Canada's liability does not extend to third party purchasers.

Further Information

Additional information is available on request. Analytical results, any comments or suggestions are welcome. Difficulties or discrepancies arising with the reference materials should be communicated immediately.

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