

09/02/2021

Report #: 238.05.0921

Client: USGS Illinois
Heather Krempa
(913) 638-2618
hkrempe@usgs.gov

Report: Taste and Odor analysis

REPORT RESULTS

Samples Received: 09/01/2021

Samples Analyzed: 09/01/2021

The samples were shipped to our laboratory in 40 mL glass vials sealed with Teflon lids. Upon their arrival at EPS, they were refrigerated at 4°C until sample preparation. All samples were measured in duplicate (i.e., two separate aliquots of water withdrawn from each vial) via Solid Phase Microextraction (SPME)/Gas Chromatography/Mass Spectrometer (GC/MS) using method 6040 D of the Standard Methods for the Examination of Water and Wastewater 22nd Edition.

Herein, the averaged concentrations for your samples are displayed in Table 1, with detailed measurements in the quality control (QC) section of the report. The method detection limit (MDL) is 0.5 nanogram per liter (ng/L) for 2-Isopropyl-3-methoxypyrazine (IPMP), 2-Isobutyl-3-methoxypyrazine (IBMP) and 2,4,6-Trichloroanisole (TCA), 2-Methylisoborneol (MIB) and geosmin. The method reporting limit (MRL) is 1.0 ng/L for the same compounds

Table 1.

Sample ID	Date Collected	Time Collected	IPMP (ng/L)	IBMP (ng/L)	MIB (ng/L)	TCA (ng/L)	Geosmin (ng/L)
ILBR	8/31/21	0730	<1.0	<1.0	70.3	<1.0	6.2
ILSR	8/31/21	0830	<1.0	<1.0	68.1	<1.0	5.9
ILUS	8/31/21	1600	<1.0	<1.0	97.5	<1.0	6.3
FOXMH	8/31/21	1410	<1.0	<1.0	16.0	<1.0	12.2

< Below MRL

We appreciate the opportunity to provide you with this analysis. If you have any questions concerning this report, please do not hesitate to call us at 904.645.7775.

Finalized by: Rick Loftis Date: 09/02/2021

QC Report

Sample ID	IPMP (ng/L)		IBMP (ng/L)		MIB (ng/L)		TCA (ng/L)		Geosmin (ng/L)	
	1	2	1	2	1	2	1	2	1	2
ILBR	<1.00	<1.00	<1.00	<1.00	70.60	69.98	<1.00	<1.00	6.15	6.18
ILSR	<1.00	<1.00	<1.00	<1.00	65.71	70.58	<1.00	<1.00	5.87	6.01
ILUS	<1.00	<1.00	<1.00	<1.00	100.43	94.52	<1.00	<1.00	6.22	6.32
FOXMH	<1.00	<1.00	<1.00	<1.00	15.94	16.04	<1.00	<1.00	11.98	12.44

< Below MRL; % RSD control limit is $\pm 20\%$

References

Analyte	Method Reporting Limit	Target	Found	% Recovery	Control Limit
IPMP (ng/L)	1.0 ng/L	5.00	4.81	96	80-120%
IBMP (ng/L)	1.0 ng/L	5.00	5.05	101	80-120%
MIB (ng/L)	1.0 ng/L	5.00	5.18	104	80-120%
TCA (ng/L)	1.0 ng/L	5.00	4.72	94	80-120%
Geosmin (ng/L)	1.0 ng/L	5.00	4.71	94	80-120%
Analyte	Method Reporting Limit	Target	Found	% Recovery	Control Limit
MIB (ng/L)	1.0 ng/L	10.00	10.04	100	80-120%
Geosmin (ng/L)	1.0 ng/L	10.00	9.80	98	80-120%
Analyte	Method Reporting Limit	Target	Found	% Recovery	Control Limit
MIB (ng/L)	1.0 ng/L	50.00	49.81	100	80-120%
Geosmin (ng/L)	1.0 ng/L	50.00	51.94	104	80-120%
Analyte	Method Reporting Limit	Target	Found	% Recovery	Control Limit
MIB (ng/L)	1.0 ng/L	100.00	93.73	94	80-120%
Geosmin (ng/L)	1.0 ng/L	100.00	99.10	99	80-120%

Method Blanks

Analyte	Method Reporting Limit	Blank Concentration
IPMP (ng/L)	1.0 ng/L	<1.0
IBMP (ng/L)	1.0 ng/L	<1.0
MIB (ng/L)	1.0 ng/L	<1.0
TCA (ng/L)	1.0 ng/L	<1.0
Geosmin (ng/L)	1.0 ng/L	<1.0