

CERTIFICATE OF ANALYSIS

Chain of Custody: 662600	Job Name: Harpers Choice Middle School	Date Submitted: 10/11/2024
Client: Howard County Public School System	Job Location: 5450 Beaverkill Road, Columbia, MD	Date Analyzed: 10/18/2024
Address: 10910 Route 108 Ellicott City Maryland 21042	Job Number: 13.003	Report Date: 10/18/2024
Attention: Christopher Madden	P.O. Number: 115.24.B7	Date Sampled: 10/01/2024 - 10/08/2024
		Person Submitting: Christopher Madden

Summary of Drinking Water Analysis for Metals

AMA Sample Number	Client Sample Number	Date/Time	Location	Analysis Type	Sample Analyte	Reporting Limit	Final Result	Comments
662600-1	: HCMS-1 Flush	10/01/2024 6:40 AM	Faucet, Cold, Yes (= Consumption), Kitchen, , Sink, Main Bldg, 1st Floor	ICP	Lead	0.5 ug/L	2.0 ug/L	
662600-2	: HCMS-2 Flush	10/01/2024 6:42 AM	Faucet, Cold, Yes (= Consumption), Kitchen, , Sink, Main Bldg, 1st Floor	ICP	Lead	0.5 ug/L	4.0 ug/L	
662600-3	: HCMS-3 First-Draw	10/01/2024 5:58 AM	Bottle Filler/Drinking Fountain Combo Unit - Fountain - Cooler/Chiller Style (Refrigerated), Yes (= Consumption), Cafeteria, , Fountain, Main Bldg, 1st Floor	ICP	Lead	0.5 ug/L	1.9 ug/L	
662600-4	: HCMS-5 First-Draw	10/01/2024 6:04 AM	Drinking Water Fountain - Cooler/Chiller Style (Refrigerated), Yes (= Consumption), Locker Room, , Fountain, Main Bldg, 1st Floor	ICP	Lead	0.5 ug/L	3.2 ug/L	
662600-5	: HCMS-6 First-Draw	10/01/2024 6:07 AM	Drinking Water Fountain - Cooler/Chiller Style (Refrigerated), Yes (= Consumption), Locker Room, , Fountain, Main Bldg, 1st Floor	ICP	Lead	0.5 ug/L	4.2 ug/L	
662600-6	: HCMS-7 First-Draw	10/01/2024 6:09 AM	Drinking Water Fountain - Cooler/Chiller Style (Refrigerated), Yes (= Consumption), Hallway, , Fountain, Main Bldg, 1st Floor	ICP	Lead	0.5 ug/L	<0.5 ug/L	
662600-7	: HCMS-9 First-Draw	10/01/2024 6:11 AM	Drinking Water Fountain - Cooler/Chiller Style (Refrigerated), Yes (= Consumption), Hallway, , Fountain, Main Bldg, 1st Floor	ICP	Lead	0.5 ug/L	<0.5 ug/L	
662600-8	: HCMS-10 First-Draw	10/01/2024 6:12 AM	Drinking Water Fountain - Cooler/Chiller Style (Refrigerated), Yes (= Consumption), Hallway, , Fountain, Main Bldg, 1st Floor	ICP	Lead	0.5 ug/L	<0.5 ug/L	
662600-9	: HCMS-11 First-Draw	10/01/2024 6:15 AM	Drinking Water Fountain - Cooler/Chiller Style (Refrigerated), Yes (= Consumption), Teachers' Lounge/Break Room, , Fountain, Main Bldg, 1st Floor	ICP	Lead	0.5 ug/L	0.67 ug/L	
662600-10	: HCMS-12 First-Draw	10/01/2024 6:18 AM	Faucet, Cold, Yes (= Consumption), Staff Workroom, , Sink , Main Bldg, 1st Floor	ICP	Lead	0.5 ug/L	0.78 ug/L	
662600-11	: HCMS-15 First-Draw	10/01/2024 6:21 AM	Drinking Water Fountain - Cooler/Chiller Style (Refrigerated), Yes (= Consumption), Hallway, , Fountain, Main Bldg, 1st Floor	ICP	Lead	0.5 ug/L	2.4 ug/L	
662600-12	: HCMS-16 First-Draw	10/01/2024 5:59 AM	Drinking Water Fountain - Cooler/Chiller Style (Refrigerated), Yes (= Consumption), Cafeteria, , Fountain, Main Bldg, 1st Floor	ICP	Lead	0.5 ug/L	4.3 ug/L	

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Summary of Drinking Water Analysis for Metals

AMA Sample Number	Client Sample Number	Date/Time	Location	Analysis Type	Sample Analyte	Reporting Limit	Final Result	Comments
662600-13	: HCMS-17 First-Draw	10/01/2024 6:22 AM	Drinking Water Fountain - Cooler/Chiller Style (Refrigerated), Yes (= Consumption), Hallway, , Fountain, Main Bldg, 1st Floor	ICP	Lead	0.5 ug/L	3.2 ug/L	
662600-14	: HCMS-18 First-Draw	10/01/2024 6:25 AM	Faucet, Cold, Yes (= Consumption), Nurse's Office/Health Room, , Sink, Main Bldg, 1st Floor	ICP	Lead	0.5 ug/L	1.0 ug/L	
662600-15	: HCMS-19 First-Draw	10/01/2024 6:29 AM	Faucet, Cold, Yes (= Consumption), Classroom (Home Economics), , Sink, Main Bldg, 1st Floor	ICP	Lead	0.5 ug/L	<0.5 ug/L	
662600-16	: HCMS-20 First-Draw	10/01/2024 6:30 AM	Faucet, Cold, Yes (= Consumption), Classroom (Home Economics), , Sink, Main Bldg, 1st Floor	ICP	Lead	0.5 ug/L	0.53 ug/L	
662600-17	: HCMS-21 First-Draw	10/01/2024 6:31 AM	Faucet, Cold, Yes (= Consumption), Classroom (Home Economics), , Sink, Main Bldg, 1st Floor	ICP	Lead	0.5 ug/L	<0.5 ug/L	
662600-18	: HCMS-22 First-Draw	10/01/2024 6:32 AM	Faucet, Cold, Yes (= Consumption), Classroom (Home Economics), , Sink, Main Bldg, 1st Floor	ICP	Lead	0.5 ug/L	<0.5 ug/L	
662600-19	: HCMS-23 First-Draw	10/01/2024 6:33 AM	Faucet, Cold, Yes (= Consumption), Classroom (Home Economics), , Sink, Main Bldg, 1st Floor	ICP	Lead	0.5 ug/L	<0.5 ug/L	
662600-20	: HCMS-24 First-Draw	10/01/2024 6:35 AM	Faucet, Cold, Yes (= Consumption), Classroom (Home Economics), , Sink, Main Bldg, 1st Floor	ICP	Lead	0.5 ug/L	<0.5 ug/L	
662600-21	: HCMS-3BW First-Draw	10/08/2024 7:14 AM	Bottle Filler/Drinking Fountain Combo Unit - Bottle Filler, Yes (= Consumption), Cafeteria, , Bottle Filler, Main Bldg, 1st Floor	ICP	Lead	0.5 ug/L	2.2 ug/L	

Sample Collector: Christopher Madden

Certification:

Analysis Method: ICP: EPA 200.8 (Rev. 5.4)
Preparation Method: None
mg/L = Parts Per Million (ppm), N/A = Not Applicable, µg/L = Parts Per Billion, N/P = Not Provided

All results are to be considered preliminary and subject to change unless signed by the Technical Director or Deputy.

Analyst(s): Paul Littleton



**Technical
Director** _____
George Land



CERTIFICATE OF ANALYSIS

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Client:	Howard County Public School System	Job Location:	5450 Beaverkill Road, Columbia, MD	Date Analyzed:	10/18/2024
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Attention:	Christopher Madden	P.O. Number:	115.24.B7	Date Sampled:	10/01/2024 - 10/08/2024
				Person Submitting:	Christopher Madden

Summary of Drinking Water Analysis for Metals

This report applies only to the sample, or samples, investigated and is not necessarily indicative of the quality or condition of apparently identical or similar products. As a mutual protection to clients, the public, and these Laboratories, this report is submitted and accepted for the exclusive use of the client to whom it is addressed and upon the condition that it is not to be used, in whole or in part, in any advertising or publicity matter without prior written authorization from us. Sample types, locations, and collection protocols are based upon the information provided by the persons submitting them and, unless collected by personnel of these Laboratories, we expressly disclaim any knowledge and liability for the accuracy and completeness of this information. The results apply only to the sample(s) tested as received. Residual sample material will be discarded in accordance with the appropriate regulatory guidelines, unless otherwise requested by the client. This report must not be used to claim, and does not imply product certification, approval, or endorsement by NY ELAP, AIHA-LAP, or any agency of the Federal Government. All rights reserved. AMA Analytical Services, Inc.



QC Summary for SDG #81473

Overview

Analysis Type: ICP
Sample Type: Lead Water
Analysis Date: 10/18/2024

Samples Included

662600-21

Preparation Blank

Result: 0.000 ppm

Report Limit Verification Sample

Percent Recovery: 108.2 %

Duplicates

RPD: N/A

Matrix Spike Analysis

Spiked Sample Percent Recovery: 104.6%
Spike Duplicate Percent Recovery: 104.0%
RPD: 0.6%

Matrix Blank

Result: 0.000 ppm

Lab Control Sample #1

Percent Recovery: 105.06 %

Lab Control Sample #2

Percent Recovery: 104.02 %

Reference Sample

Percent Recovery: 101.9%

Calibration Curve

Correlation: 1.0

Serial Dilution / Bench Spike

Serial Dilution RPD: N/A
Bench Spike Percent Recovery: N/A

Notes

Both Duplicate results are below the reporting limit, making RPD limits for these QC samples not applicable.



QC Summary for SDG #81481

Overview

Analysis Type: ICP
Sample Type: Lead Water
Analysis Date: 10/18/2024

Samples Included

662600-1, 662600-2, 662600-3, 662600-4, 662600-5, 662600-6, 662600-7, 662600-8, 662600-9, 662600-10, 662600-11, 662600-12, 662600-13, 662600-14, 662600-15, 662600-16, 662600-17, 662600-18, 662600-19, 662600-20

Preparation Blank

Result: -0.000 ppm

Report Limit Verification Sample

Percent Recovery: 91.2 %

Duplicates

RPD: N/A

Matrix Spike Analysis

Spiked Sample Percent Recovery: 103.1%
Spike Duplicate Percent Recovery: 100.7%
RPD: 2.3%

Matrix Blank

Result: -0.000 ppm

Lab Control Sample #1

Percent Recovery: 105.70 %

Lab Control Sample #2

Percent Recovery: 101.66 %

Reference Sample

Percent Recovery: 93.6%

Calibration Curve

Correlation: 1.0

Serial Dilution / Bench Spike

Serial Dilution RPD: N/A
Bench Spike Percent Recovery: N/A

Notes



School Name: Harpers Choice Middle
Address: 5450 Beaverkill Road, Columbia, MD
County: Howard County
MSDE ID #: 13.003

Project Manager: Christopher Madden
PM Cell Phone No.: 410-313-8874
Email Results To: christopher_madden@hcpss.org
Email Invoice To: christopher_madden@hcpss.org

Samples Collected by: Christopher Madden
Sampler's Phone Number: 410-313-6699
Sampler's Affiliation: Howard County Public School System

Turn-Around-Time: **5-Day**
Due Date & Time: **10/18/2024 5:00 PM**
Enter as M/D/YY HH:MM

Start Date & Time: 10/1/2024 5:58AM & 10/8/2024 7:14AM
Stop Date & Time: 10/1/2024 6:40AM & 10/8/2024 7:14AM
Enter as M/D/YY HH:MM

Sample Collection Data

AMA ID	Bottle ID # <small>(Label bottle submitted to lab w/ this ID #)</small>	Outlet ID Code <small>(Unique ID for each Outlet)</small>	Draw Type <small>(First Draw or Flush)</small>	Sample ID for AMA LIMS	Outlet Type <small>(Select from the Drop-Down Options)</small>	Outlet Use <small>(Consumption or Non-Consumption)</small>	Outlet Area Type <small>(Select from Drop-Down Options)</small>	Outlet Location Description <small>(Be as detailed as possible; ie, between Room 123 & 126)</small>	Outlet Description <small>(Be as detailed as possible; ie, Left Bubble)</small>	Building ID <small>(Only required if school has multiple buildings; ie, Main Bldg, Trailer 1)</small>	Building Floor <small>(Use "1" if Bldg is single story)</small>	Sample Location for AMA LIMS	Date Collected <small>(MM/DD/YYYY)</small>	Time Collected <small>(military time, ie 08:00 or 15:00)</small>	Collection Date/Time for AMA LIMS	Date of Last Use <small>(MM/DD/YYYY)</small>	Time of Last Use <small>(military time, ie 08:00 or 15:00)</small>	Sample Purpose <small>(Select from Drop-Down Options)</small>
-1		HCMS-1	Flush	HCMS-1 Flush	Faucet, Cold	Yes (= Consumption)	Kitchen		Sink	Main Bldg	1st Floor	Faucet, Cold, Yes (= Consumption), Kitchen, Sink, Main Bldg, 1st Floor	10/1/2024	06:40	10/1/2024 6:40 AM	9/30/2024	21:00	Extra/Special
-2		HCMS-2	Flush	HCMS-2 Flush	Faucet, Cold	Yes (= Consumption)	Kitchen		Sink	Main Bldg	1st Floor	Faucet, Cold, Yes (= Consumption), Kitchen, Sink, Main Bldg, 1st Floor	10/1/2024	06:42	10/1/2024 6:42 AM	9/30/2024	21:00	Extra/Special
-3		HCMS-3	First-Draw	HCMS-3 First-Draw	Bottle Filler/Drinking Fountain Combo Unit - Fountain - Cooler/Chiller Style (Refrigerated)	Yes (= Consumption)	Cafeteria		Fountain	Main Bldg	1st Floor	Bottle Filler/Drinking Fountain Combo Unit - Fountain - Cooler/Chiller Style (Refrigerated), Yes (= Consumption), Cafeteria, Fountain, Main Bldg, 1st Floor	10/1/2024	05:58	10/1/2024 5:58 AM	9/30/2024	21:00	Standard/Routine
-4		HCMS-5	First-Draw	HCMS-5 First-Draw	Drinking Water Fountain - Cooler/Chiller Style (Refrigerated)	Yes (= Consumption)	Locker Room		Fountain	Main Bldg	1st Floor	Drinking Water Fountain - Cooler/Chiller Style (Refrigerated), Yes (= Consumption), Locker Room, Fountain, Main Bldg, 1st Floor	10/1/2024	06:04	10/1/2024 6:04 AM	9/30/2024	21:00	Standard/Routine
-5		HCMS-6	First-Draw	HCMS-6 First-Draw	Drinking Water Fountain - Cooler/Chiller Style (Refrigerated)	Yes (= Consumption)	Locker Room		Fountain	Main Bldg	1st Floor	Drinking Water Fountain - Cooler/Chiller Style (Refrigerated), Yes (= Consumption), Locker Room, Fountain, Main Bldg, 1st Floor	10/1/2024	06:07	10/1/2024 6:07 AM	9/30/2024	21:00	Standard/Routine
-6		HCMS-7	First-Draw	HCMS-7 First-Draw	Drinking Water Fountain - Cooler/Chiller Style (Refrigerated)	Yes (= Consumption)	Hallway		Fountain	Main Bldg	1st Floor	Drinking Water Fountain - Cooler/Chiller Style (Refrigerated), Yes (= Consumption), Hallway, Fountain, Main Bldg, 1st Floor	10/1/2024	06:09	10/1/2024 6:09 AM	9/30/2024	21:00	Standard/Routine
-7		HCMS-9	First-Draw	HCMS-9 First-Draw	Drinking Water Fountain - Cooler/Chiller Style (Refrigerated)	Yes (= Consumption)	Hallway		Fountain	Main Bldg	1st Floor	Drinking Water Fountain - Cooler/Chiller Style (Refrigerated), Yes (= Consumption), Hallway, Fountain, Main Bldg, 1st Floor	10/1/2024	06:11	10/1/2024 6:11 AM	9/30/2024	21:00	Standard/Routine
-8		HCMS-10	First-Draw	HCMS-10 First-Draw	Drinking Water Fountain - Cooler/Chiller Style (Refrigerated)	Yes (= Consumption)	Hallway		Fountain	Main Bldg	1st Floor	Drinking Water Fountain - Cooler/Chiller Style (Refrigerated), Yes (= Consumption), Hallway, Fountain, Main Bldg, 1st Floor	10/1/2024	06:12	10/1/2024 6:12 AM	9/30/2024	21:00	Standard/Routine
-9		HCMS-11	First-Draw	HCMS-11 First-Draw	Drinking Water Fountain - Cooler/Chiller Style (Refrigerated)	Yes (= Consumption)	Teachers' Lounge/Break Room		Fountain	Main Bldg	1st Floor	Drinking Water Fountain - Cooler/Chiller Style (Refrigerated), Yes (= Consumption), Teachers' Lounge/Break Room, Fountain, Main Bldg, 1st Floor	10/1/2024	06:15	10/1/2024 6:15 AM	9/30/2024	21:00	Standard/Routine
-10		HCMS-12	First-Draw	HCMS-12 First-Draw	Faucet, Cold	Yes (= Consumption)	Staff Workroom		Sink	Main Bldg	1st Floor	Faucet, Cold, Yes (= Consumption), Staff Workroom, Sink, Main Bldg, 1st Floor	10/1/2024	06:18	10/1/2024 6:18 AM	9/30/2024	21:00	Standard/Routine
-11		HCMS-15	First-Draw	HCMS-15 First-Draw	Drinking Water Fountain - Cooler/Chiller Style (Refrigerated)	Yes (= Consumption)	Hallway		Fountain	Main Bldg	1st Floor	Drinking Water Fountain - Cooler/Chiller Style (Refrigerated), Yes (= Consumption), Hallway, Fountain, Main Bldg, 1st Floor	10/1/2024	06:21	10/1/2024 6:21 AM	9/30/2024	21:00	Standard/Routine
-12		HCMS-16	First-Draw	HCMS-16 First-Draw	Drinking Water Fountain - Cooler/Chiller Style (Refrigerated)	Yes (= Consumption)	Cafeteria		Fountain	Main Bldg	1st Floor	Drinking Water Fountain - Cooler/Chiller Style (Refrigerated), Yes (= Consumption), Cafeteria, Fountain, Main Bldg, 1st Floor	10/1/2024	05:59	10/1/2024 5:59 AM	9/30/2024	21:00	Standard/Routine
-13		HCMS-17	First-Draw	HCMS-17 First-Draw	Drinking Water Fountain - Cooler/Chiller Style (Refrigerated)	Yes (= Consumption)	Hallway		Fountain	Main Bldg	1st Floor	Drinking Water Fountain - Cooler/Chiller Style (Refrigerated), Yes (= Consumption), Hallway, Fountain, Main Bldg, 1st Floor	10/1/2024	06:22	10/1/2024 6:22 AM	9/30/2024	21:00	Standard/Routine
-14		HCMS-18	First-Draw	HCMS-18 First-Draw	Faucet, Cold	Yes (= Consumption)	Nurse's Office/Health Room		Sink	Main Bldg	1st Floor	Faucet, Cold, Yes (= Consumption), Nurse's Office/Health Room, Sink, Main Bldg, 1st Floor	10/1/2024	06:25	10/1/2024 6:25 AM	9/30/2024	21:00	Standard/Routine
-15		HCMS-19	First-Draw	HCMS-19 First-Draw	Faucet, Cold	Yes (= Consumption)	Classroom (Home Economics)		Sink	Main Bldg	1st Floor	Faucet, Cold, Yes (= Consumption), Classroom (Home Economics), Sink, Main Bldg, 1st Floor	10/1/2024	06:29	10/1/2024 6:29 AM	9/30/2024	21:00	Standard/Routine
-16		HCMS-20	First-Draw	HCMS-20 First-Draw	Faucet, Cold	Yes (= Consumption)	Classroom (Home Economics)		Sink	Main Bldg	1st Floor	Faucet, Cold, Yes (= Consumption), Classroom (Home Economics), Sink, Main Bldg, 1st Floor	10/1/2024	06:30	10/1/2024 6:30 AM	9/30/2024	21:00	Standard/Routine
-17		HCMS-21	First-Draw	HCMS-21 First-Draw	Faucet, Cold	Yes (= Consumption)	Classroom (Home Economics)		Sink	Main Bldg	1st Floor	Faucet, Cold, Yes (= Consumption), Classroom (Home Economics), Sink, Main Bldg, 1st Floor	10/1/2024	06:31	10/1/2024 6:31 AM	9/30/2024	21:00	Standard/Routine
-18		HCMS-22	First-Draw	HCMS-22 First-Draw	Faucet, Cold	Yes (= Consumption)	Classroom (Home Economics)		Sink	Main Bldg	1st Floor	Faucet, Cold, Yes (= Consumption), Classroom (Home Economics), Sink, Main Bldg, 1st Floor	10/1/2024	06:32	10/1/2024 6:32 AM	9/30/2024	21:00	Standard/Routine
-19		HCMS-23	First-Draw	HCMS-23 First-Draw	Faucet, Cold	Yes (= Consumption)	Classroom (Home Economics)		Sink	Main Bldg	1st Floor	Faucet, Cold, Yes (= Consumption), Classroom (Home Economics), Sink, Main Bldg, 1st Floor	10/1/2024	06:33	10/1/2024 6:33 AM	9/30/2024	21:00	Standard/Routine
-20		HCMS-24	First-Draw	HCMS-24 First-Draw	Faucet, Cold	Yes (= Consumption)	Classroom (Home Economics)		Sink	Main Bldg	1st Floor	Faucet, Cold, Yes (= Consumption), Classroom (Home Economics), Sink, Main Bldg, 1st Floor	10/1/2024	06:35	10/1/2024 6:35 AM	9/30/2024	21:00	Standard/Routine
-21		HCMS-3BW	First-Draw	HCMS-3BW First-Draw	Bottle Filler/Drinking Fountain Combo Unit - Bottle Filler	Yes (= Consumption)	Cafeteria		Bottle Filler	Main Bldg	1st Floor	Bottle Filler/Drinking Fountain Combo Unit - Bottle Filler, Yes (= Consumption), Cafeteria, Bottle Filler, Main Bldg, 1st Floor	10/8/2024	07:14	10/8/2024 7:14 AM	10/7/2024	23:00	Standard/Routine

(NOTE: Please delete unused rows prior to emailing this E-COC to info@amalab.com & kmaxwell@amalab.com)
Enter As M/D/YYYY HH:MM

Print Name		Sign Name		i.e., In-Person, FedEx, UPS, Courier, etc.	
Relinquished by:	Christopher Madden	<i>Christopher Madden</i>	Date & Time:	10/8/2024 10:05 AM	Via: AMA Courier
Received by:	Dana Nicodemus Hudson	<i>Dana Nicodemus Hudson</i>	Date & Time:	10/8/2024 10:00 AM	Via: Pick Up