



# CERTIFICATE OF ANALYSIS

**Chain of Custody:** 631761  
**Client:** Howard County Public School System  
**Address:** 10910 Route 108  
Ellicott City, MD 21042  
**Attention:** Jeff Klenk

**Job Name:** Hammond Elementary School  
**Job Location:** 8110 Aladdin Drive, Laurel, MD 20723  
**Job Number:** 13.064  
**P.O. Number:** Not Provided

**Date Submitted:** 12/22/2021  
**Date Analyzed:** 12/29/2021  
**Report Date:** 12/30/2021  
**Date Sampled:** 12/14/2021  
**Person Submitting:** Jeff Klenk

## Summary of Drinking Water Analysis for Metals

AMA Sample Number	Client Sample Number	Date/Time	Sample Collection Information Location	Analysis Type	Sample Analyte	Reporting Limit	Final Result	Comments
631761-1	HES 3 First-Draw	12/14/2021 5:10 pm	Drinking Water Fountain - Cooler/Chiller Style, Consumption, Cafeteria, , Fountain, ,	ICP	Lead	0.5 ug/L	0.7 ug/L	0.70 ug/L.
631761-2	HES 4 First-Draw	12/14/2021 5:10 pm	Drinking Water Fountain - Cooler/Chiller Style, Consumption, Hallway, , Fountain, ,	ICP	Lead	0.5 ug/L	1.4 ug/L	
631761-3	HES 7 First-Draw	12/14/2021 5:10 pm	Drinking Water Fountain - Cooler/Chiller Style, Consumption, Hallway, , Fountain, ,	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
631761-4	HES 8 First-Draw	12/14/2021 5:10 pm	Drinking Water Fountain - Cooler/Chiller Style, Consumption, Hallway, , Fountain, ,	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
631761-5	HES 9 First-Draw	12/14/2021 5:10 pm	Drinking Water Fountain - Cooler/Chiller Style, Consumption, Hallway, , Fountain, ,	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
631761-6	HES 10 First-Draw	12/14/2021 5:10 pm	Drinking Water Fountain - Cooler/Chiller Style, Consumption, Hallway, , Fountain, ,	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
631761-7	HES 11 First-Draw	12/14/2021 5:10 pm	Drinking Water Fountain - Cooler/Chiller Style, Consumption, Hallway, , Fountain, ,	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
631761-8	HES 12F First-Draw	12/14/2021 5:10 pm	Drinking Water Fountain - Bubbler Style, Consumption, Classroom, , Fountain, ,	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
631761-9	HES 13F First-Draw	12/14/2021 5:10 pm	Drinking Water Fountain - Bubbler Style, Consumption, Classroom, , Fountain, ,	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
631761-10	HES 15F First-Draw	12/14/2021 5:10 pm	Drinking Water Fountain - Bubbler Style, Consumption, Classroom, , Fountain, ,	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
631761-11	HES 16F First-Draw	12/14/2021 5:10 pm	Drinking Water Fountain - Bubbler Style, Consumption, Classroom, , Fountain, ,	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
631761-12	HES 17F First-Draw	12/14/2021 5:10 pm	Drinking Water Fountain - Bubbler Style, Consumption, Classroom, , Fountain, ,	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
631761-13	HES 18F First-Draw	12/14/2021 5:10 pm	Drinking Water Fountain - Bubbler Style, Consumption, Classroom, , Fountain, ,	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
631761-14	HES 19F First-Draw	12/14/2021 5:10 pm	Drinking Water Fountain - Bubbler Style, Consumption, Classroom, , Fountain, ,	ICP	Lead	0.5 ug/L	0.69 ug/L	



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631761-15	HES 20F First-Draw	12/14/2021 5:10 pm	Drinking Water Fountain - Bubbler Style, Consumption, Classroom, , Fountain, ,	ICP	Lead	0.5 ug/L	0.66 ug/L	
631761-16	HES 21F First-Draw	12/14/2021 5:10 pm	Drinking Water Fountain - Bubbler Style, Consumption, Classroom, , Fountain, ,	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
631761-17	HES 22F First-Draw	12/14/2021 5:10 pm	Drinking Water Fountain - Bubbler Style, Consumption, Classroom, , Fountain, ,	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
631761-18	HES 23F First-Draw	12/14/2021 5:10 pm	Drinking Water Fountain - Bubbler Style, Consumption, Classroom, , Fountain, ,	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
631761-19	HES 24F First-Draw	12/14/2021 5:10 pm	Drinking Water Fountain - Bubbler Style, Consumption, Classroom, , Fountain, ,	ICP	Lead	0.5 ug/L	0.51 ug/L	
631761-20	HES 25F First-Draw	12/14/2021 5:10 pm	Drinking Water Fountain - Bubbler Style, Consumption, Classroom, , Fountain, ,	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
631761-21	HES 26F First-Draw	12/14/2021 5:10 pm	Drinking Water Fountain - Bubbler Style, Consumption, Classroom, , Fountain, ,	ICP	Lead	0.5 ug/L	1.1 ug/L	
631761-22	HES 27F First-Draw	12/14/2021 5:10 pm	Drinking Water Fountain - Bubbler Style, Consumption, Classroom, , Fountain, ,	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
631761-23	HES 28F First-Draw	12/14/2021 5:10 pm	Drinking Water Fountain - Bubbler Style, Consumption, Classroom, , Fountain, ,	ICP	Lead	0.5 ug/L	0.54 ug/L	
631761-24	HES 29F First-Draw	12/14/2021 5:10 pm	Drinking Water Fountain - Bubbler Style, Consumption, Classroom, , Fountain, ,	ICP	Lead	0.5 ug/L	0.62 ug/L	
631761-25	HES 30F First-Draw	12/14/2021 5:10 pm	Drinking Water Fountain - Bubbler Style, Consumption, Classroom, , Fountain, ,	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
631761-26	HES 31F First-Draw	12/14/2021 5:10 pm	Drinking Water Fountain - Bubbler Style, Consumption, Classroom, , Fountain, ,	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
631761-27	HES 32F First-Draw	12/14/2021 5:10 pm	Drinking Water Fountain - Bubbler Style, Consumption, Classroom, , Fountain, ,	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
631761-28	HES 33F First-Draw	12/14/2021 5:10 pm	Drinking Water Fountain - Bubbler Style, Consumption, Classroom, , Fountain, ,	ICP	Lead	0.5 ug/L	< 0.5 ug/L	



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631761-29	HES 34F First-Draw	12/14/2021 5:10 pm	Drinking Water Fountain - Bubblers Style, Consumption, Classroom, , Fountain, ,	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
631761-30	HES 35F First-Draw	12/14/2021 5:10 pm	Drinking Water Fountain - Bubblers Style, Consumption, Classroom, , Fountain, ,	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
631761-31	HES 36F First-Draw	12/14/2021 5:10 pm	Drinking Water Fountain - Bubblers Style, Consumption, Classroom, , Fountain, ,	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
631761-32	HES 37F First-Draw	12/14/2021 5:10 pm	Drinking Water Fountain - Bubblers Style, Consumption, Classroom, , Fountain, ,	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
631761-33	HES 38F First-Draw	12/14/2021 5:10 pm	Drinking Water Fountain - Bubblers Style, Consumption, Classroom, , Fountain, ,	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
631761-34	HES 39F First-Draw	12/14/2021 5:10 pm	Drinking Water Fountain - Bubblers Style, Consumption, Classroom, , Fountain, ,	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
631761-35	HES 40F First-Draw	12/14/2021 5:10 pm	Drinking Water Fountain - Bubblers Style, Consumption, Classroom, , Fountain, ,	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
631761-36	HES 41F First-Draw	12/14/2021 5:10 pm	Drinking Water Fountain - Bubblers Style, Consumption, Classroom, , Fountain, ,	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
631761-37	HES 42 First-Draw	12/14/2021 5:10 pm	Drinking Water Fountain - Cooler/Chiller Style, Consumption, Hallway, , Fountain, ,	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
631761-38	HES 43 First-Draw	12/14/2021 5:10 pm	Drinking Water Fountain - Cooler/Chiller Style, Consumption, Hallway, , Fountain, ,	ICP	Lead	0.5 ug/L	2.5 ug/L	
631761-39	HES 45F First-Draw	12/14/2021 5:10 pm	Drinking Water Fountain - Bubblers Style, Consumption, Nurse's Office/Health Room, , Fountain, ,	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
631761-40	HES 49F First-Draw	12/14/2021 5:10 pm	Drinking Water Fountain - Bubblers Style, Consumption, Classroom, , Fountain, ,	ICP	Lead	0.5 ug/L	0.69 ug/L	
631761-41	HES 1 First-Draw	12/15/2021 5:56 pm	Faucet, Cold, Consumption, Kitchen, , Sink, ,	ICP	Lead	0.5 ug/L	1.4 ug/L	
631761-42	HES 2 First-Draw	12/15/2021 5:56 pm	Faucet, Cold, Consumption, Kitchen, , Sink, ,	ICP	Lead	0.5 ug/L	1.2 ug/L	



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631761-43	HES 12S First-Draw	12/15/2021 5:56 pm	Faucet, Cold, Consumption, Classroom, , Sink, ,	ICP	Lead	0.5 ug/L	1.6 ug/L	
631761-44	HES 13S First-Draw	12/15/2021 5:56 pm	Faucet, Cold, Consumption, Classroom, , Sink, ,	ICP	Lead	0.5 ug/L	0.83 ug/L	
631761-45	HES 15S First-Draw	12/15/2021 5:56 pm	Faucet, Cold, Consumption, Classroom, , Sink, ,	ICP	Lead	0.5 ug/L	1.5 ug/L	
631761-46	HES 16S First-Draw	12/15/2021 5:56 pm	Faucet, Cold, Consumption, Classroom, , Sink, ,	ICP	Lead	0.5 ug/L	0.6 ug/L	0.61 ug/L.
631761-47	HES 17S First-Draw	12/15/2021 5:56 pm	Faucet, Cold, Consumption, Classroom, , Sink, ,	ICP	Lead	0.5 ug/L	1.6 ug/L	
631761-48	HES 18S First-Draw	12/15/2021 5:56 pm	Faucet, Cold, Consumption, Classroom, , Sink, ,	ICP	Lead	0.5 ug/L	1.2 ug/L	
631761-49	HES 19S First-Draw	12/15/2021 5:56 pm	Faucet, Cold, Consumption, Classroom, , Sink, ,	ICP	Lead	0.5 ug/L	4.6 ug/L	
631761-50	HES 20S First-Draw	12/15/2021 5:56 pm	Faucet, Cold, Consumption, Classroom, , Sink, ,	ICP	Lead	0.5 ug/L	2 ug/L	2.0 ug/L.
631761-51	HES 21S First-Draw	12/15/2021 5:56 pm	Faucet, Cold, Consumption, Classroom, , Sink, ,	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
631761-52	HES 22S First-Draw	12/15/2021 5:56 pm	Faucet, Cold, Consumption, Classroom, , Sink, ,	ICP	Lead	0.5 ug/L	2.1 ug/L	
631761-53	HES 23S First-Draw	12/15/2021 5:56 pm	Faucet, Cold, Consumption, Classroom, , Sink, ,	ICP	Lead	0.5 ug/L	1.7 ug/L	
631761-54	HES 24S First-Draw	12/15/2021 5:56 pm	Faucet, Cold, Consumption, Classroom, , Sink, ,	ICP	Lead	0.5 ug/L	2.2 ug/L	
631761-55	HES 25S First-Draw	12/15/2021 5:56 pm	Faucet, Cold, Consumption, Classroom, , Sink, ,	ICP	Lead	0.5 ug/L	4.2 ug/L	
631761-56	HES 26S First-Draw	12/15/2021 5:56 pm	Faucet, Cold, Consumption, Classroom, , Sink, ,	ICP	Lead	0.5 ug/L	2.5 ug/L	



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631761-57	HES 27S First-Draw	12/15/2021 5:56 pm	Faucet, Cold, Consumption, Classroom, , Sink, ,	ICP	Lead	0.5 ug/L	3.7 ug/L	
631761-58	HES 28S First-Draw	12/15/2021 5:56 pm	Faucet, Cold, Consumption, Classroom, , Sink, ,	ICP	Lead	0.5 ug/L	2.1 ug/L	
631761-59	HES 29S First-Draw	12/15/2021 5:56 pm	Faucet, Cold, Consumption, Classroom, , Sink, ,	ICP	Lead	0.5 ug/L	3.2 ug/L	
631761-60	HES 30S First-Draw	12/15/2021 5:56 pm	Faucet, Cold, Consumption, Classroom, , Sink, ,	ICP	Lead	0.5 ug/L	1.8 ug/L	
631761-61	HES 31S First-Draw	12/15/2021 5:56 pm	Faucet, Cold, Consumption, Classroom, , Sink, ,	ICP	Lead	0.5 ug/L	2.8 ug/L	
631761-62	HES 32S First-Draw	12/15/2021 5:56 pm	Faucet, Cold, Consumption, Classroom, , Sink, ,	ICP	Lead	0.5 ug/L	2.6 ug/L	
631761-63	HES 33S First-Draw	12/15/2021 5:56 pm	Faucet, Cold, Consumption, Classroom, , Sink, ,	ICP	Lead	0.5 ug/L	0.71 ug/L	
631761-64	HES 34S First-Draw	12/15/2021 5:56 pm	Faucet, Cold, Consumption, Classroom, , Sink, ,	ICP	Lead	0.5 ug/L	2.3 ug/L	
631761-65	HES 35S First-Draw	12/15/2021 5:56 pm	Faucet, Cold, Consumption, Classroom, , Sink, ,	ICP	Lead	0.5 ug/L	2.9 ug/L	
631761-66	HES 36S First-Draw	12/15/2021 5:56 pm	Faucet, Cold, Consumption, Classroom, , Sink, ,	ICP	Lead	0.5 ug/L	2.7 ug/L	
631761-67	HES 37S First-Draw	12/15/2021 5:56 pm	Faucet, Cold, Consumption, Classroom, , Sink, ,	ICP	Lead	0.5 ug/L	1.4 ug/L	
631761-68	HES 38S First-Draw	12/15/2021 5:56 pm	Faucet, Cold, Consumption, Classroom, , Sink, ,	ICP	Lead	0.5 ug/L	3.5 ug/L	
631761-69	HES 39S First-Draw	12/15/2021 5:56 pm	Faucet, Cold, Consumption, Classroom, , Sink, ,	ICP	Lead	0.5 ug/L	1.5 ug/L	
631761-70	HES 40S First-Draw	12/15/2021 5:56 pm	Faucet, Cold, Consumption, Classroom, , Sink, ,	ICP	Lead	0.5 ug/L	2.7 ug/L	



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631761-71	HES 41S First-Draw	12/15/2021 5:56 pm	Faucet, Cold, Consumption, Classroom, , Sink, ,	ICP	Lead	0.5 ug/L	1.5 ug/L	
631761-72	HES 44 First-Draw	12/15/2021 5:56 pm	Faucet, Cold, Consumption, Nurse's Office/Health Room, , Sink, ,	ICP	Lead	0.5 ug/L	0.63 ug/L	
631761-73	HES 45S First-Draw	12/15/2021 5:56 pm	Faucet, Cold, Consumption, Nurse's Office/Health Room, , Sink, ,	ICP	Lead	0.5 ug/L	6.8 ug/L	This results meets or exceeds the 5.5ppb action level as established by MDE for schools.
631761-74	HES 46 First-Draw	12/15/2021 5:56 pm	Faucet, Cold, Consumption, Teachers' Lounge/Break Room, , Sink, ,	ICP	Lead	0.5 ug/L	0.83 ug/L	
631761-75	HES 47 First-Draw	12/15/2021 5:56 pm	Refrigerator Water Dispenser, Consumption, Teachers' Lounge/Break Room, , Water Dispenser, ,	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
631761-76	HES 48 First-Draw	12/15/2021 5:56 pm	Faucet, Cold, Consumption, Classroom, , Sink, ,	ICP	Lead	0.5 ug/L	8 ug/L	8.0 ug/L. This results meets or exceeds the 5.5ppb action level as established by MDE for schools.
631761-77	HES 49S First-Draw	12/15/2021 5:56 pm	Faucet, Cold, Consumption, Classroom, , Sink, ,	ICP	Lead	0.5 ug/L	1.5 ug/L	
631761-78	HES 50 First-Draw	12/15/2021 5:56 pm	Faucet, Cold, Consumption, Workroom, , Sink, ,	ICP	Lead	0.5 ug/L	0.7 ug/L	



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Analysis Methods: Flame AA: APHA SM3111B (1999, 22nd Ed.), Furnace AA: APHA SM3113B (2010, 22nd Ed.), ICP: EPA 200.8 (Rev. 5.4)				Sample Collector: Jeff Klenk Certification:				
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): Jean-Paul Littleton								

**Technical  
Director** George Land

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