

# Montgomery County Public Schools Lead in Drinking Water Testing Report

Col Zadok Magruder High School  
5939 Muncaster Mill Road  
Rockville, MD 20855

Report Date: March 30<sup>th</sup>, 2020

## LEAD IN DRINKING WATER SAMPLE RESULTS SUMMARY

All Maryland public and nonpublic schools are required to sample all drinking water outlets for the presence of lead pursuant to the Code of Maryland Regulations (COMAR). Montgomery County Public Schools (MCPS) is required to remediate outlets where lead in drinking water concentrations exceed the Montgomery County Action Level (AL) of 5 parts per billion (ppb). A summary of the lead in water initial samples collected by SaLUT are presented in the table below.

Sampling Date	3/6/2020
# of Outlets Tested	44
# of Outlets $\geq$ 5 ppb	2

## NEXT STEPS

If an initial sample exceeds the AL (5 ppb), the outlet will be immediately shut-down, a follow-up sample collected, and a remedial plan of action developed for this outlet. Due to the Stay-at-Home Order to combat the spread of COVID-19 (coronavirus), no follow-up samples were collected. No additional sampling or remedial actions are required for schools where all initial samples are below the AL.

## HEALTH EFFECTS OF LEAD

Lead can cause serious health problems if too much enters your body from drinking water or other sources. It can cause damage to the brain and kidneys, and can interfere with the production of red blood cells that carry oxygen to all parts of your body. The greatest risk of lead exposure is to infants, young children, and pregnant women. Lead is stored in the bones and it can be released later in life. During pregnancy, the fetus receives lead from the mother's bones, which may affect brain development. Scientists have linked the effects of lead on the brain with lowered IQ in children. Adults with kidney problems and high blood pressure can be affected by low levels of lead more than healthy adults.

## **SOURCES OF HUMAN EXPOSURE TO LEAD**

There are many different sources of human exposure to lead. These include: lead-based paint, lead-contaminated dust or soil, some plumbing materials, certain types of pottery, pewter, brass fixtures, food, cosmetics, exposure in the work place and from certain hobbies. According to the Environmental Protection Agency (EPA), 10 to 20 percent of a person's potential exposure to lead may come from drinking water, while for an infant consuming formula mixed with lead-containing water this may increase to 40 to 60 percent.

## **TO REDUCE EXPOSURE TO LEAD IN DRINKING WATER:**

1. Run your water to flush out lead: If water hasn't been used for several hours, run water for 15 to 30 seconds or until it becomes cold or reaches a steady temperature before using it for drinking or cooking.
2. Use cold water for cooking and preparing baby formula: Lead from the plumbing dissolves more easily into hot water.

*\*Please note that boiling the water will not reduce lead levels.*

## **ADDITIONAL INFORMATION**

1. For additional information, please contact Brian Mullikin, Environmental Team Leader, at 240.740.2324 or [brian\\_a\\_mullikin@mcpsmd.org](mailto:brian_a_mullikin@mcpsmd.org).
2. For additional information on reducing lead exposure around your home/building and the health effects of lead, visit EPA's website at [www.epa.gov/lead](http://www.epa.gov/lead).
3. If you are concerned about exposure; contact your local health department or healthcare provider to find out how you can get your child tested for lead.

*Please refer to the attachment(s) for additional water sampling information.*

**Attachment(s)** A – Lead in Water Sample Results Table

**ATTACHMENT A**

**Lead in Water Sample Results Table**

## Sampling Results for Col Zadok Magruder HS

Fixture Barcode	Fixture Location	Fixture Type	Initial Results (ppb)	Pass/Fail	Follow up Results (ppb)	Status
LW01179	In classroom D127	Classroom Sink	<1	Pass	N/A	Testing Complete
LW01180	In hallway In front of D127	Drinking Fountain	<1	Pass	N/A	Testing Complete
LW01181	In hallway outside of gym	Drinking Fountain	<1	Pass	N/A	Testing Complete
LW01182	In chemistry prep room	Classroom Sink	1.4	Pass	N/A	Testing Complete
LW01183	In locker room - boys	Drinking Fountain	<1	Pass	N/A	Testing Complete
LW01184	In work room C120	Teachers Lounge Sink	<1	Pass	N/A	Testing Complete
LW01185	In Weight room A109	Drinking Fountain	<1	Pass	N/A	Testing Complete
LW01186	In hallway In front of A106	Drinking Fountain	<1	Pass	N/A	Testing Complete
LW01187	In hallway left of B110	Drinking Fountain	<1	Pass	N/A	Testing Complete
LW01188	In work room by administration	Teachers Lounge Sink	<1	Pass	N/A	Testing Complete
LW01189	In health room	Nurses Office Sink	<1	Pass	N/A	Testing Complete
LW01190	In break room	Teachers Lounge Sink	1.3	Pass	N/A	Testing Complete
LW01191	In hallway right of gym	Drinking Fountain	<1	Pass	N/A	Testing Complete
LW01192	In hallway right of gym	Drinking Fountain	<1	Pass	N/A	Testing Complete
LW01193	In hallway In front of B113	Drinking Fountain	<1	Pass	N/A	Testing Complete
LW01195	In home economics B113	Home Economics Room Sink	<1	Pass	N/A	Testing Complete
LW01196	In home economics B113	Home Economics Room Sink	<1	Pass	N/A	Testing Complete
LW02224	In home economics B113	Home Economics Room Sink	<1	Pass	N/A	Testing Complete
LW02225	In home economics B113	Home Economics Room Sink	<1	Pass	N/A	Testing Complete
LW02226	In home economics B113	Home Economics Room Sink	<1	Pass	N/A	Testing Complete
LW02227	In classroom B114	Classroom Sink	<1	Pass	N/A	Testing Complete
LW02228	In classroom B114	Classroom Sink	1.5	Pass	N/A	Testing Complete
LW02230	In kitchen	Kitchen Sink	3.0	Pass	N/A	Testing Complete
LW02231	In kitchen	Kitchen Sink	<1	Pass	N/A	Testing Complete
LW02232	In kitchen	Kitchen Sink	2.1	Pass	N/A	Testing Complete
LW02233	In kitchen	Kitchen Sink	<1	Pass	N/A	Testing Complete

LW02235	In kitchen	Kitchen Sink	<1	Pass	N/A	Testing Complete
LW02236	In kitchen	Kitchen Sink	<1	Pass	N/A	Testing Complete
LW02237	In kitchen	Kitchen Sink	<1	Pass	N/A	Testing Complete
LW02238	In hallway In front of D254	Drinking Fountain	<1	Pass	N/A	Testing Complete
LW02239	In office C245	Classroom Sink	<1	Pass	N/A	Testing Complete
LW02240	In locker room - girls	Drinking Fountain	<1	Pass	N/A	Testing Complete
LW02242	In hallway outside of A200	Drinking Fountain	<1	Pass	N/A	Testing Complete
LW02243	In hallway In front of B223	Drinking Fountain	<1	Pass	N/A	Testing Complete
LW02244	In media center	Classroom Sink	<1	Pass	N/A	Testing Complete
LW02245	In hallway by media center near girls restroom	Drinking Fountain	<1	Pass	N/A	Testing Complete
LW02246	In hallway by media center near boys restroom	Drinking Fountain	<1	Pass	N/A	Testing Complete
LW02248	In office by Biology office	Classroom Sink	3.2	Pass	N/A	Testing Complete
M20001	In media center by media center	Drinking Fountain	<1	Pass	N/A	Testing Complete
M20138	In office C252	Classroom Sink	29.6	Fail	NC	Remediation Action Plan
M20274	In kitchen	Ice Machine	<1	Pass	N/A	Testing Complete
M25782	In office A210 by math	Classroom Sink	1.6	Pass	N/A	Testing Complete
M25799	In resource office by Language office	Classroom Sink	<1	Pass	N/A	Testing Complete
M25812	In office by math ie. prep. office	Classroom Sink	13.6	Fail	NC	Remediation Action Plan

NC - Not Collected (No follow-up sample collected due to COVID-19 (Coronavirus) Stay-at-Home Order.)



**MONTGOMERY COUNTY PUBLIC SCHOOLS LEAD IN DRINKING WATER  
POST-REMEDATION FOLLOW-UP TESTING 2019**

November 13, 2019

**Executive Summary:**  
**Colonel Zadok Magruder High School**  
5939 Muncaster Mill Road,  
Derwood, MD 20855

Round of Testing:	Post-Remediation Follow-up
Sample Date	01/30/2019
# of Outlets Tested:	1
# of Outlets $\geq$ 5 ppb:	1
Low Value (ppb):	8.2
High Value (ppb):	8.2

**Project Status**

**Testing Complete:** Post-remediation follow-up testing completed for the following rooms:

Biology Office – Outlet (LW02249) will have signage affixed.



November 13, 2019

Mr. Brian Mullikin  
Environmental Team Leader  
Montgomery County Public Schools  
8301 Turkey Thicket Drive  
Building A, First Floor  
Gaithersburg, Maryland 20879

Re: Lead in Water Post-Remediation Follow-up Testing Service

Location: Colonel Zadok Magruder High School  
5939 Muncaster Mill Road,  
Derwood, MD 20855

Dear Mr. Mullikin:

Intertek-PSI Inc. is pleased to submit the following report to the Montgomery County Public Schools (MCPS) for completion of post-remediation lead in water testing at Colonel Zadok Magruder High School, located at 5939 Muncaster Mill Road, Derwood, MD 20855.

**Scope of Services:**

One (1) drinking water outlet was remediated at Colonel Zadok Magruder High School due to initial levels that exceeded the lead action level of 5 parts per billion (ppb). Intertek-PSI conducted lead in water post-remediation follow-up testing in accordance with the Maryland Code of Regulations (COMAR) 26.16.07-Lead in Drinking Water – Public and Nonpublic Schools.

Intertek-PSI visited the site on 01/30/2019 to collect post-remediation follow-up samples from 1 outlet that had been replaced. Samples were submitted to a laboratory for lead in water analysis using current US EPA methodology. The laboratory has been certified by the Maryland Department of the Environment to analyze drinking water for lead.

**Results:**

The initial, flush, and post-remediation follow-up results are highlighted in the summary table below:



Barcode ID	Room Number	Location	Notes	Equipment Type	Initial (ppb)	Flush (ppb)	Post-Remediation Follow-up (ppb)	Post-Remediation Follow-up Pass/Fail	Status
LW02249		Biology Office		Faucet	70.0	1.6	8.2	Fail	Post-remediation follow-up testing complete. Outlet will have signage affixed

\*ppb = parts per billion

**Discussion:**

Lead is a naturally occurring element that can be harmful to humans when ingested or inhaled, particularly to children under the age of six. Lead can adversely affect the development of children’s brain potentially leading to detrimental alterations in intelligence and behavior. Lead has been historically used in plumbing, paint and other building materials. Lead is released into the environment from industrial sources and fuel combustion. Lead may also be found in consumer products (imported candy, medicines, toys, dishes, etc.).

Most lead leaches into drinking water from contact with plumbing components such as faucets and valves made of brass or lead-containing solder. The physical and chemical interaction that occurs between the plumbing and water directly contributes to the amount of lead that is released into the water. Although plumbing components installed prior to the 1990’s could contain more lead than newer materials, the amount of lead in the drinking water cannot be predicted by the age of building. The purpose of this regulation is to establish a program to minimize the risk of exposure to lead in drinking water outlets at schools.

Simple steps like keeping your home clean and well-maintained will go a long way in preventing lead exposure. These steps include inspecting and maintaining all painted surfaces to prevent paint deterioration, using only cold water to prepare food and drinks, flushing water outlets used for drinking or food preparation, and cleaning around painted areas where friction can generate dust, such as doors, windows, and drawers. Wipe these areas with a wet sponge or rag to remove paint chips or dust, and wash children's hands, bottles, pacifiers and toys often.

Respectfully Submitted,

**PROFESSIONAL SERVICE INDUSTRIES, INC.**

Nan Lin  
Department Manager, Environmental Services  
[Nan.Lin@intertek.com](mailto:Nan.Lin@intertek.com)





## MONTGOMERY COUNTY PUBLIC SCHOOLS DRINKING WATER TESTING 2018

May 16, 2018

**Executive Summary:**  
**Colonel Zadok A. Magruder High School**  
5989 Muncaster Mill Road,  
Rockville, MD 20855

Round of Testing:	Initial
# of Outlets Tested:	51
# of Outlets $\geq$ 20 ppb:	1
Low Value (ppb):	<1.0
High Value (ppb):	70.0
Follow-Up Testing Required (Samples $\geq$ 20 ppb):	Biology Office (70.0 ppb)

Round of Testing:	Follow-Up – 30 sec draw
# of Outlets Tested:	1

**Project Status**  
**Testing Complete: Remediation Plan**

Biology Office – Replace fixture (LW02249), in addition to supply line and valve located under sink



May 16, 2018

Mr. Brian Mullikin  
Environmental Team Leader  
Montgomery County Public Schools  
8301 Turkey Thicket Drive  
Building A, First Floor  
Gaithersburg, Maryland 20879

Re: Lead in Water Testing Service

Location: Colonel Zadok A. Magruder High School  
5989 Muncaster Mill Road  
Rockville, MD 20855

Dear Mr. Mullikin:

Professional Services Industries (PSI), Inc. is pleased to submit the following report to the Montgomery County Public Schools (MCPS) for completion of initial lead in water testing at Colonel Zadok A. Magruder High School, located at 5989 Muncaster Mill Road, Rockville, MD 20855.

### **Scope of Services:**

PSI conducted lead in water testing at Magruder High School in accordance with the Environmental Protection Agency (EPA) and Maryland House Bill (HB) 270. State regulation established an action level of 20 parts per billion (ppb) to evaluate lead levels in school buildings, a concentration EPA recommends that schools take action to reduce lead below this action level. Maryland requires periodic testing for the presence of lead in drinking water in occupied public and nonpublic school buildings. EPA developed the 3T's (Training, Testing, and Telling) to assist schools in reducing the lead concentrations in their drinking water. More information about 3T's can be found on the EPA website.

PSI visited the site on 3/7/18, 3/8/18, and 3/9/18 to collect samples from 51 drinking water outlets in accordance with current criteria described by the Maryland Department of the Environment (MDE) Draft Lead in Drinking Water—Public and Nonpublic Schools, Title 26, Subtitle 16 Lead, Chapter 07. One 30 second follow-up sample was collected on 4/13/18.

Samples were submitted to a laboratory for lead in water analysis using current US EPA methodology. The laboratory has been certified by the Maryland Department of the Environment to analyze drinking water for lead.

### **Results:**

There was one result of the initial lead in water analysis at or above 20 parts per billion (ppb) and subsequent follow up 30 second results are highlighted in the summary table below:



Barcode ID	Sample Location	Date Collected	Initial Sample Result (ppb)	Date Collected	30 Second Follow Up Sample Result (ppb)
LW02249	Biology Office	3/8/18	70.0	4/13/18	1.6

The initial lead in water sample results (3/8/18) and 30 second follow up results (4/13/18) are shown in Attachment A.

**Discussion:**

Lead is a naturally occurring element that can be harmful to humans when ingested or inhaled, particularly to children under the age of six. Lead can adversely affect the development of children’s brain potentially leading to detrimental alterations in intelligence and behavior. Lead has been historically used in plumbing, paint and other building materials. Lead is released into the environment from industrial sources and fuel combustion. Lead may also be found in consumer products (imported candy, medicines, toys, dishes, etc.).

Most lead leaches into drinking water from contact with plumbing components such as faucets and valves made of brass or lead-containing solder. The physical and chemical interaction that occurs between the plumbing and water directly contributes to the amount of lead that is released into the water. Although plumbing components installed prior to the 1990’s could contain more lead than newer materials, the amount of lead in the drinking water cannot be predicted by the age of building. The purpose of this regulation is to establish a program to minimize the risk of exposure to lead in drinking water outlets at schools.

Simple steps like keeping your home clean and well-maintained will go a long way in preventing lead exposure. These steps include inspecting and maintaining all painted surfaces to prevent paint deterioration, using only cold water to prepare food and drinks, flushing water outlets used for drinking or food preparation, and cleaning around painted areas where friction can generate dust, such as doors, windows, and drawers. Wipe these areas with a wet sponge or rag to remove paint chips or dust, and wash children's hands, bottles, pacifiers and toys often.

Respectfully Submitted,

**PROFESSIONAL SERVICE INDUSTRIES, INC.**

Nand Kaushik, P.E.  
Department Manager, Environmental Services  
[Nand.Kaushik@psiusa.com](mailto:Nand.Kaushik@psiusa.com)

Attachments: A – Lead in Water Test Summary Table

# ATTACHMENT A

## Magruder High School Water Test Summary Table

**Contractor:** Professional Services Industries, Inc.

**Certified Laboratory:** Microbac Laboratories, Inc.

Initial Sample Results for Magruder High School (3/8/18) and (3/9/18)

Barcode ID	Room #	Location	Location Notes	Equipment Type	Results	Pass/Fail	Status
LW01179	D127	Classroom		Faucet	<1.0	Pass	Testing Complete
LW01180		Hallway	In Front of D127	Cooler	<1.0	Pass	Testing Complete
LW01181		Hallway	Outside of Gym	Cooler	<1.0	Pass	Testing Complete
LW01182		Work Room Lab	Between 116 And 117 (bio)	Faucet	4.9	Pass	Testing Complete
LW01184	C120	Work Room		Faucet	<1.0	Pass	Testing Complete
LW01185	A109	Weight Room		Cooler	<1.0	Pass	Testing Complete
LW01186		Hallway	In Front of A106	Cooler	<1.0	Pass	Testing Complete
LW01187		Hallway	Left of B110	Cooler	<1.0	Pass	Testing Complete
LW01188		Work Room Administration		Faucet	<1.0	Pass	Testing Complete
LW01189		Health Room		Faucet	<1.0	Pass	Testing Complete
LW01190		Break Room		Faucet	<1.0	Pass	Testing Complete
LW01191		Hallway	Right of Gym	Cooler	<1.0	Pass	Testing Complete
LW01192		Hallway	Right of Gym	Cooler	<1.0	Pass	Testing Complete
LW01193		Hallway	In Front of B113	Cooler	<1.0	Pass	Testing Complete
LW01194	B113	Home Economics		Faucet	9.2	Pass	Testing Complete
LW01195	B113	Home Economics		Faucet	<1.0	Pass	Testing Complete
LW01196	B113	Home Economics		Faucet	2.8	Pass	Testing Complete
LW02224	B113	Home Economics		Faucet	1.5	Pass	Testing Complete
LW02225	B113	Home Economics		Faucet	<1.0	Pass	Testing Complete
LW02226	B113	Home Economics		Faucet	<1.0	Pass	Testing Complete
LW02227	B115	Child Development		Faucet	1.1	Pass	Testing Complete
LW02228	B115	Child Development		Faucet	2.7	Pass	Testing Complete
LW02229	B114	Child Development		Bubbler - Indoor	8.1	Pass	Testing Complete
LW02230		Kitchen		Faucet	3.8	Pass	Testing Complete
LW02231		Kitchen		Faucet	1.1	Pass	Testing Complete
LW02232		Kitchen		Faucet	3.9	Pass	Testing Complete
LW02233		Kitchen		Faucet	<1.0	Pass	Testing Complete
LW02234		Kitchen		Faucet	7.1	Pass	Testing Complete
LW02235		Kitchen		Faucet	<1.0	Pass	Testing Complete
LW02236		Kitchen		Faucet	1.5	Pass	Testing Complete
LW02237		Kitchen		Faucet	<1.0	Pass	Testing Complete
LW02238		Hallway	In Front of D254	Cooler	<1.0	Pass	Testing Complete
LW02239	C245	Office		Faucet	<1.0	Pass	Testing Complete

Barcode ID	Room #	Location	Location Notes	Equipment Type	Results	Pass/Fail	Status
LW02240		Locker Room - Girls		Faucet	<1.0	Pass	Testing Complete
LW02241	A207	Classroom		Faucet	10.9	Pass	Testing Complete
LW02242		Hallway	Outside of A200	Cooler	<1.0	Pass	Testing Complete
LW02243		Hallway	In Front of B223	Cooler	<1.0	Pass	Testing Complete
LW02244		Media Center		Faucet	<1.0	Pass	Testing Complete
LW02245		Hallway	In Front Of Media Storage	Cooler	<1.0	Pass	Testing Complete
LW02246		Hallway	In Front of Head-in Room	Cooler	<1.0	Pass	Testing Complete
LW02247		Office Science		Faucet	1.6	Pass	Testing Complete
LW02248		Office Biology Office		Faucet	2.2	Pass	Testing Complete
LW02249		Biology Office		Faucet	70.0	Fail	Follow-Up Testing Needed
M04316		Dressing		Faucet	5.0	Pass	Testing Complete
M20001		Media Center		Cooler	<1.0	Pass	Testing Complete
M20138	C252	Office		Faucet	<1.0	Pass	Testing Complete
M20274		Kitchen		Ice Maker	1.9	Pass	Testing Complete
M25782	A210	Office Math		Faucet	2.5	Pass	Testing Complete
M25797	A216	Classroom		Faucet	14.2	Pass	Testing Complete
M25799		Resource Office Language Office		Faucet	<1.0	Pass	Testing Complete
M25812		Math	Prep. Rm Office	Faucet	1.4	Pass	Testing Complete

\*ppb = parts per billion

**Contractor:** Professional Services Industries, Inc.

**Certified Laboratory:** Microbac Laboratories, Inc.

Follow Up Sample Results for Magruder High School (4/13/18)

Barcode ID	Room Number	Location	Equipment Type	Initial draw (2 <sup>nd</sup> ) (PPB)	Initial draw (3 <sup>rd</sup> ) (PPB)	30 Second Draw (PPB)	Status
LW02249		Biology Office	Faucet	65.4	59.8	1.6	Remediation required – replace fixture, in addition to supply line and valve located under sink

\*ppb = parts per billion

Note: Fixture(s) with elevated test results were immediately removed from service. Subsequent 2nd and 3rd round testing was performed on these fixture(s) for further diagnostics for remediation. Because the fixture was shut off after the first test, the subsequent test results may not be representative of an in-use fixture because of stagnant water in the supply line and the operation of shut off valves prior to the tests. All fixtures with elevated test results are to be remediated. After remediation, post remediation testing will be conducted before the fixture is returned to service.