



**NSF International**

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# EVALUATION REPORT

**Send To: C0662443**

Mr. William Bohlen  
Bay County Department of Water and Sewer  
3933 Patterson Road  
Bay City, MI 48706

**Facility: C0662445**

Bay Area Water Treatment Plant  
2701 North Euclid Avenue  
Bay City MI 48706  
United States

<b>Result</b>	<b>COMPLETE</b>	Report Date	01-OCT-2021
Customer Name	Bay County Department of Water and Sewer		
Tested To	NSF/ANSI/CAN 60		
Description	Test Only - Phosphoric Acid 75%   Liquid		
Trade Designation	Test Only - Phosphoric Acid 75%		
Test Type	Test Only		
Job Number	J-00399700		
Project Number	W0697308		
Project Manager	Jennifer Biers		

This report documents the testing of the referenced product to the requirements of NSF/ANSI/CAN Standard 60 (Drinking Water Treatment Chemicals - Health Effects). This standard establishes minimum requirements for chemicals, the chemical contaminants, and impurities that are added to drinking water from drinking water treatment chemicals. Contaminants produced as by-products through reaction of the treatment chemical with a constituent of the drinking water are not covered by this Standard. Reference the "About the Standard" section at the end of this report for additional information about NSF/ANSI/CAN Standard 60 and the products covered under this Standard.

**Thank you for having your product tested by NSF International.**

Please contact your Project Manager if you have any questions or concerns pertaining to this report.

**Report Authorization** 

**Date** 01-OCT-2021

Scott E. Randall - Technical Operations Manager, Water

**General Information**

Standard: NSF/ANSI/CAN 60  
 Chemical Name: Phosphoric Acid  
 Physical Description of Sample: Liquid  
 Tested DCC Number: DA10607  
 Trade Designation/Model Number: Test Only - Phosphoric Acid 75%

**Detected Compounds**

NSF International has completed the testing and toxicological evaluation of the product identified above. These extractants from the test sample, when normalized as requested, are summarized in the table below with their corresponding action levels.

As requested, the enclosed results are for internal use only, and do not constitute certification by NSF International. The actual or implied use of NSF International's name and/or mark in connection with this project is prohibited except with the specific written authorization of NSF International.

Contaminant	Result	Criteria
Fluoride	0.57 ug/L	100 ug/L
Gross Beta Particles	0.0056 pCi/L	15 pCi/L
Copper	0.003 ug/L	130 ug/L
Thallium	0.014 ug/L	0.2 ug/L
Chromium	0.002 ug/L	2 ug/L
Cadmium	0.0066 ug/L	0.5 ug/L
Arsenic	0.13 ug/L	1 ug/L
Antimony	0.0038 ug/L	0.6 ug/L
Lead	0.00085 ug/L	0.5 ug/L

Sample Id: **S-0001850350**  
 Description: Test Only - Phosphoric Acid 75% | Liquid  
 Sampled Date: 20-Sep-2021  
 Received Date: 17-Sep-2021

Tox Normalization Information:		Lab Normalization Information:	
Calculated NF	0.0003	Date exposure completed	20-SEP-2021
Preparation method used	D	Final volume of solution	2 L
MUL	5 mg/L	Mass of material used	31162 mg
Compound Reference Key:	SPAC		

**Normalization Calculation:**

Normalized Result = Test Result (ug/L) \* NF                      Where NF = MUL (mg/L) \*  $\frac{\text{Final Volume Of Solution (L)}}{\text{Mass of Material Used (mg)}}$

- MUL = Maximum Use Level;
- Mass of Material Used = The mass of sample analyzed in the laboratory;
- Final Volume of Solution = The volume of water used to dilute the sample;
- An additional factor may be used to adjust the analytical result to field use conditions to account for product carryover, flushing, or other assumptions stipulated with the use of the product. If an additional factor is used, it is included in the information above.

Testing Parameter	Units	Sample	Control	Result	Norm. Result	Acceptance Criteria(1)	Evaluation Status
<b>Ann Arbor Chemistry Lab</b>							
Gross Alpha and Beta Radioactivity in Drinking Water (Ref: EPA 900.0)							
P1 Gross Alpha	pCi/L	ND(18)	ND(3)	ND(18)	ND(0.0058)		
P1 Gross Beta	pCi/L	17	ND(4)	17	0.0056	15	Pass
Alpha Variance +/-	pCi/L	11	2	10			
Beta Variance +/-	pCi/L	4	2	2			
Date Analyzed	27-SEP-2021						
Metals II in water by ICPMS (Ref: EPA 200.8)							
Arsenic	ug/L	400	ND(1)	400	0.13	1	Pass
Barium	ug/L	ND(5)	ND(1)	ND(5)	ND(0.002)	200	Pass
Beryllium	ug/L	ND(2.5)	ND(0.5)	ND(2.5)	ND(0.00080)	0.4	Pass
Cadmium	ug/L	20	ND(0.2)	20	0.0066	0.5	Pass
Chromium	ug/L	5	ND(1)	5	0.002		
Copper	ug/L	8	ND(1)	8	0.003	130	Pass
Mercury	ug/L	ND(1)	ND(0.2)	ND(1)	ND(0.0003)	0.2	Pass
Lead	ug/L	2.7	ND(0.5)	2.7	0.00085	0.5	Pass
Antimony	ug/L	12	ND(0.5)	12	0.0038	0.6	Pass
Selenium	ug/L	ND(5)	ND(1)	ND(5)	ND(0.002)	5	Pass
Thallium	ug/L	42	ND(0.2)	42	0.014	0.2	Pass
Fluoride (Ref: SM 4500-F-C)							
Fluoride	mg/L	1.8	ND(0.1)	1.8	0.57		
Date Analyzed	20-SEP-2021						
1 - If the acceptance criteria is blank and the evaluation status is "Fail", then the criteria used will be noted on the letter accompanying these results.							

**Job Notes:**

This report replaces previously issued report with serial# FI20210928172210. This report is being re-issued due to correct language in the Test Only summary. No data has been changed. This does not change the overall status of the report.

**Common Terms and Acronyms Used:**

Sample.....	Test result on the submitted product sample after prepared or exposed in accordance with the standard.
Control.....	Test result on a laboratory blank sample analyzed in parallel with the sample.
Result.....	Sample test result minus the Control test result.
Normalized Result...	Result normalized in accordance with the test standard to reflect potential at-the-tap concentrations
ND().....	Result is below the detection level of the analytical procedure as identified in the parenthesis.
DCC Number.....	NSF document control code of the registered formulation of the product tested
ug/L.....	Microgram per liter = 0.001 milligram per liter (mg/L)
SPAC.....	Acceptance criteria of the standard (Single Product Allowable Concentration)

**References to Testing Procedures:**

<u>NSF Reference</u>	<u>Parameter / Test Description</u>
C0842	Gross Alpha and Beta Radioactivity in Drinking Water (Ref: EPA 900.0)
C1183	Metals II in water by ICPMS (Ref: EPA 200.8)
C3170	Fluoride (Ref: SM 4500-F-C)

Test descriptions preceded by an asterisk "\*" indicate that testing has been performed per NSF International requirements but is not within its scope of accreditation.

Unless otherwise indicated, method uncertainties are not applied in any determinations of conformity. Testing utilizes the requested sections of any referenced standards, which may not be the entire standard.

**Dates of Laboratory Activity: 20-SEP-2021 to 28-SEP-2021**

**Testing Laboratories:**

All work performed at:	<div style="display: flex; align-items: center; justify-content: center;"> <div style="width: 100px; border-bottom: 1px solid black; margin-bottom: 2px;"></div> <div style="margin: 0 5px;">→</div> <div style="text-align: center;"> <b>Id</b>  <hr style="width: 50px; margin: 0;"/> NSF_AA </div> </div>	<b>Address</b> <hr style="width: 100%; margin: 0;"/> NSF International 789 N. Dixboro Road Ann Arbor MI 48105
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**About the Standard:**

## NSF/ANSI/CAN Standard 60: Drinking Water Treatment Chemicals - Health Effects

NSF/ANSI/CAN 60 establishes minimum health effects requirements for the chemicals, the chemical contaminants, and the impurities that are directly added to drinking water from drinking water treatment chemicals. It does not establish performance or taste and odor requirements. The standard contains requirements for chemicals that are directly added to water and are intended to be present in the finished water as well as other chemical products that are added to water but are not intended to be present in the finished water. Chemicals covered by this Standard include, but are not limited to, coagulation and flocculation chemicals, softening, precipitation, sequestering, pH adjustment, and corrosion/scale control chemicals, disinfection and oxidation chemicals, miscellaneous treatment chemicals, and miscellaneous water supply chemicals.

The testing performed to this standard is done to estimate the level of contaminants or impurities added to drinking water when the chemical is used at the "Maximum Use Level" under attestation. Prior to testing, information is obtained on the formulation and sources of supply used to manufacture the chemical. This information is then reviewed along with the minimum requirements of the standard to establish the potential contaminants of concern. A representative sample of chemical is obtained for testing. The chemical sample is prepared for analysis through specific methods established in the standard based on the type of chemical and then is analyzed for potential contaminants determined during the formulation review. The laboratory results are normalized to represent potential at-the-tap values and then compared to the "single product allowable concentration" (SPAC) established by the standard. The product is found in compliance with the standard if the normalized value is less than or equal to the allowable concentration.