

PFAS (Per- and Polyfluoroalkyl Substances) in Bottled Water

In 2022, Massachusetts Department of Public Health (MDPH) conducted a pilot surveillance program on PFAS in bottled water sold in Massachusetts. **All bottled water test results met state and federal drinking water standards for PFAS.**

PFAS are a group of fluorinated organic chemicals that are used in many consumer products (e.g., non-stick cookware, textiles, and paper food packaging) and some fire-fighting foams. PFAS are persistent in the environment and may cause adverse human health effects. For more information about PFAS, see [PFAS in drinking water](#).

PFAS in Bottled Water Pilot Program

In 2022, MDPH's Food Protection Program (FPP) completed the first phase of a bottled water PFAS sampling pilot program. In coordination with local boards of health, FPP purchased bottled water from retail stores throughout Massachusetts. FPP collected 287 bottled water samples representing 9 brands from out-of-state bottling plants.

In 2023, FPP completed the second phase of the bottled water testing program by collecting samples during routine inspections of in-state bottling plants. FPP collected 30 bottled water samples representing 3 brands from in-state bottling plants.

All bottled water samples collected in 2022 and 2023 were shipped to a commercial laboratory and analyzed for 18 PFAS using an [EPA approved method \(537.1\)](#).

Results of PFAS Testing in Bottled Water

All bottled water test results met the Massachusetts Department of Environmental Protection's (MassDEP's) drinking water standard and the U.S. Environmental Protection Agency's (EPA's) proposed draft drinking water standard. In Massachusetts, MassDEP has established a maximum contaminant level (MCL; which is an enforceable standard) for six PFAS (PFAS6) that is safe for daily exposure, for a lifetime. EPA has also proposed an MCL for six other PFAS. For the latest information on drinking water standards see [MassDEP's PFAS site](#).

No samples had quantifiable levels of PFAS (>2 ppt for most PFAS). Laboratory results can be seen in Tables 1 and 2. Table 1 shows the results of the PFAS6 and Table 2 shows the results of the remaining 12 PFAS. PFAS were detected but not quantifiable in a few samples. If a contaminant is detected but not quantifiable, this means that the instrument could detect the presence of the contaminant, but the concentration of the contaminant was below the level that the laboratory's instrument can accurately and precisely quantify (> 2 ppt for most PFAS).

Table 1 - All tests of bottled water were below the Massachusetts Department of Environmental Protection drinking water standard's maximum contaminant level of 20 parts per trillion (ppt) for the sum of the concentrations of six PFAS.

Brands Tested in 2022	Max PPT in 10 bottles						Total PFAS6
	PFDA	PFHpA	PFHxS	PFNA	PFOA	PFOS	
Acadia Spring Water	ND	ND	ND	ND	ND	ND	ND
Acqua Panna Natural Spring Water	ND	ND	ND	ND	ND	ND	ND
Aquafina	ND	ND	ND	ND	ND	ND	ND
Aquafina (16.9 oz)	ND	ND	ND	ND	ND	ND	ND
Big Y Alkaline	ND	ND	ND	ND	ND	ND	ND
Big Y Spring Water (16.9 oz)	ND	ND	ND	ND	ND	ND	ND
Body Armor Alkaline	ND	ND	ND	ND	ND	ND	ND
Bowl & Basket Spring Water	ND	ND	ND	ND	ND	ND	ND
Boxed Water is Better	ND	ND	0.638	ND	ND	ND	0.64
CORE Hydration	ND	ND	0.54	ND	ND	ND	0.54
Crystal Geyser Natural Alpine	ND	ND	ND	ND	ND	ND	ND
Dasani	ND	ND	ND	ND	ND	ND	ND
Essentia Ionized Hydration	ND	ND	0.468	ND	ND	ND	0.47
Eternal Spring Water	ND	ND	0.625	ND	ND	ND	0.63
Evian Spring Water	ND	ND	ND	ND	ND	ND	ND
FIJI	ND	ND	0.552	ND	ND	ND	0.55
Gerber Pure	ND	ND	ND	ND	ND	ND	ND
Great Value Purified DW	ND	ND	ND	ND	ND	ND	ND
Just Water	ND	ND	0.479	ND	ND	ND	0.48
KEWL Alkaline	ND	ND	0.902	ND	ND	ND	0.90
LifeWtr (23.7 oz)	ND	ND	ND	ND	ND	ND	ND
LifeWtr pH Balanced	ND	ND	ND	ND	ND	ND	ND
Nestle Pure Life	ND	ND	ND	ND	ND	ND	ND
Poland Spring	ND	ND	0.683	ND	0.666	ND	1.35
PurAqua Purified Water	ND	ND	0.51	ND	ND	ND	0.51
PurAqua Spring Water	ND	ND	ND	ND	ND	ND	ND
Sam's Purified	ND	ND	ND	ND	ND	ND	ND
SmartWater	ND	ND	0.502	ND	ND	ND	0.50
TJ Alkaline Water	ND	ND	0.468	ND	ND	ND	0.47
TJ Natural Spr Wtr	ND	ND	0.483	ND	ND	ND	0.48
WF 365 Spring Water	ND	ND	0.47	ND	ND	ND	0.47
WF Italian Mineral Wtr (7 bottles)	ND	ND	0.582	ND	ND	ND	0.58
Brands Tested in 2023							
Aquafina (16.9 oz)	ND	ND	ND	ND	ND	ND	ND
Big Y Spring Water (16.9 oz)	ND	ND	ND	ND	ND	ND	ND
LifeWtr (23.7 oz)	ND	ND	ND	ND	ND	ND	ND


ND = Non-detect

█ = Detected, Not Quantifiable

Table 2 - No bottled water tested had measurable levels of PFAS (> 2 ppt)

Max PPT in 10 bottles

Brands Tested in 2022	11Cl-PF3OUds	9Cl-PF3ONS	HFPO-DA (GenX)	NaDONA	NEtFOSAA	NMeFOSAA	PFBS	PFDoA	PFHxA	PFTreA	PFTriA	PFuNA
Acadia Spring Water	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acqua Panna Natural Spring Water	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aquafina	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Big Y Alkaline	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Body Armor Alkaline	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bowl & Basket Spring Water	ND	ND	ND	ND	1.13	1.05	ND	ND	ND	ND	ND	ND
Boxed Water is Better	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CORE Hydration	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Crystal Geyser Natural Alpine	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dasani	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Essentia Ionized Hydration	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Eternal Spring Water	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Evian Spring Water	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
FIJI	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Gerber Pure	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Great Value Purified DW	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Just Water	ND	ND	ND	ND	ND	ND	0.901	ND	ND	ND	ND	ND
KEWL Alkaline	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
LifeWtr pH Balanced	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nestle Pure Life	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Poland Spring	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PurAqua Purified Water	ND	ND	ND	ND	ND	ND	1.29	ND	ND	ND	ND	ND
PurAqua Spring Water	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Sam's Purified	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
SmartWater	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TJ Alkaline Water	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TJ Natural Spr Wtr	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
WF 365 Spring Water	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
WF Italian Mineral Wtr	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Brands Tested in 2023												
Aquafina (16.9 oz)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Big Y Spring Water (16.9 oz)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
LifeWtr (23.7 oz)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

ND = Non-detect
 = Detected, Not Quantifiable