



## PERFLUOROALKYL AND POLYFLUOROALKYL SUBSTANCES (PFAS) RECOMMENDED MINIMUM LABORATORY ANALYTE LIST

Below is the minimum laboratory PFAS analyte list for analysis of fish, deer, and other animals, drinking water, groundwater, surface water, soil, wastewater effluent, and landfill leachate samples collected by Michigan's Departments of Environment, Great Lakes, and Energy, Health and Human Services, Agriculture and Rural Development, and Natural Resources. The recommended minimum analyte list for groundwater, surface water, and wastewater is the list found under EPA Method 8327. The minimum analyte list for the testing of fish, deer and other animals is marked by the fish icon.

This minimum analyte list was developed based on the potential for these chemicals to be found in Michigan, the availability of the chemical standards used for testing, and the ability of available laboratories to test for these PFAS. This list includes PFAS that can be tested for in drinking water using United States Environmental Protection Agency (USEPA) Method 537.1, which is the only method that should be used when analyzing drinking water samples. Other testing methodology such as isotope dilution may be used to test for PFAS in other media (not drinking water). EPA Method 8327 has undergone multi-lab validation and have been published under the Resource Conservation and Recovery Act (RCRA) program and is used by the EGLE laboratory to test surface water, groundwater, and wastewater.















**NOTE:** Draft EPA Method 1633 is currently undergoing multi-laboratory validation as part of the Clean Water Act (CWA) method approval process. When a final PFAS analytical method for wastewater is published in 40 CFR Part 136, this method will be required for sampling conducted under the CWA, including National Pollutant Discharge Elimination (NPDES) permits. Until EPA Method 1633 is approved, an isotope dilution method (sometimes referred to as Method 537 modified) or ASTM Method D7979 may be used.

This list is not exhaustive of PFAS in Michigan's environment.













The fish icon (🐟) indicates compounds that are also currently being tested in fish tissue by the Department of Health and Human Services Laboratory.

Acronym / Analyte Name	Molecular Formula	CAS Number	Drinking Water Only	EGLE Lab – Groundwater, Surface Water, Wastewater	For Clean Water Act – NPDES (i.e., wastewater, sludge, tissue, soil)	🐟
			USEPA Method 537.1	EPA Method 8327	Draft EPA Method 1633	
<b>PFTeDA</b> Perfluorotetradecanoic acid	C <sub>13</sub> F <sub>27</sub> COOH	376-06-7	X	X	X	🐟
<b>PFTrDA</b> Perfluorotridecanoic acid	C <sub>12</sub> F <sub>25</sub> COOH	72629-94-8	X	X	X	🐟
<b>PFDoA</b> Perfluorododecanoic acid	C <sub>11</sub> F <sub>23</sub> COOH	307-55-1	X	X	X	🐟
<b>PFUnA</b> Perfluoroundecanoic acid	C <sub>10</sub> F <sub>21</sub> COOH	2058-94-8	X	X	X	🐟











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			USEPA Method 537.1	EPA Method 8327	Draft EPA Method 1633	
<b>PFDA</b> Perfluorodecanoic acid	C <sub>9</sub> F <sub>19</sub> COOH	335-76-2	X	X	X	
<b>PFNA</b> Perfluorononanoic acid	C <sub>8</sub> F <sub>17</sub> COOH	375-95-1	X	X	X	
<b>PFOA</b> Perfluorooctanoic acid	C <sub>7</sub> F <sub>15</sub> COOH	335-67-1	X	X	X	
<b>PFHpA</b> Perfluoroheptanoic acid	C <sub>6</sub> F <sub>13</sub> COOH	375-85-9	X	X	X	
<b>PFHxA</b> Perfluorohexanoic acid	C <sub>5</sub> F <sub>11</sub> COOH	307-24-4	X	X	X	
<b>PFPeA</b> Perfluoropentanoic acid	C <sub>4</sub> F <sub>9</sub> COOH	2706-90-3		X	X	
<b>PFBA</b> Perfluorobutanoic acid	C <sub>3</sub> F <sub>7</sub> COOH	375-22-4		X	X	
<b>PFDoS</b> Perfluorododecansulfonic acid	C <sub>10</sub> HF <sub>21</sub> O <sub>3</sub> S	79780-39-5			X	
<b>PFDS</b> Perfluorodecanesulfonic acid	C <sub>10</sub> F <sub>21</sub> SO <sub>3</sub> H	335-77-3		X	X	
<b>PFNS</b> Perfluorononanesulfonic acid	C <sub>9</sub> F <sub>19</sub> SO <sub>3</sub> H	68259-12-1		X	X	
<b>PFOS</b> Perfluorooctanesulfonic acid	C <sub>8</sub> F <sub>17</sub> SO <sub>3</sub> H	1763-23-1	X	X	X	
<b>PFHpS</b> Perfluoroheptanesulfonic acid	C <sub>7</sub> F <sub>15</sub> SO <sub>3</sub> H	375-92-8		X	X	
<b>PFHxS</b> Perfluorohexanesulfonic acid	C <sub>6</sub> F <sub>13</sub> SO <sub>3</sub> H	355-46-4	X	X	X	
<b>PFPeS</b> Perfluoropentanesulfonic acid	C <sub>5</sub> F <sub>11</sub> SO <sub>3</sub> H	2706-91-4		X	X	
<b>PFBS</b> Perfluorobutanesulfonic acid	C <sub>4</sub> F <sub>9</sub> SO <sub>3</sub> H	375-73-5	X	X	X	

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<b>PFOSA</b> Perfluorooctanesulfonamide	C <sub>8</sub> F <sub>17</sub> SO <sub>2</sub> NH <sub>2</sub>	754-91-6		X	X	
<b>8:2 FTS</b> Fluorotelomer sulfonic acid 8:2	C <sub>8</sub> F <sub>17</sub> CH <sub>2</sub> CH <sub>2</sub> SO <sub>3</sub>	39108-34-4		X	X	
<b>6:2 FTS</b> Fluorotelomer sulfonic acid 6:2	C <sub>6</sub> F <sub>13</sub> CH <sub>2</sub> CH <sub>2</sub> SO <sub>3</sub>	27619-97-2		X	X	
<b>4:2 FTS</b> Fluorotelomer sulfonic acid 4:2	C <sub>4</sub> F <sub>9</sub> CH <sub>2</sub> CH <sub>2</sub> SO <sub>3</sub>	757124-72-4		X	X	
<b>NEtFOSAA</b> 2-(N-Ethylperfluorooctanesulfonamido)acetic acid	C <sub>8</sub> F <sub>17</sub> SO <sub>2</sub> N(C <sub>2</sub> H <sub>5</sub> ) CH <sub>2</sub> COOH	2991-50-6	X	X	X	
<b>NMeFOSAA</b> 2-(N-Methylperfluorooctanesulfonamido)acetic acid	C <sub>8</sub> F <sub>17</sub> SO <sub>2</sub> N(CH <sub>3</sub> ) CHCOOH	2355-31-9	X	X	X	
<b>NMeFOSA</b> N-methyl perfluorooctanesulfonamide	C <sub>9</sub> H <sub>4</sub> F <sub>17</sub> NO <sub>2</sub> S	31506-32-8			X	
<b>NEtFOSA</b> N-ethyl perfluorooctanesulfonamide	C <sub>10</sub> H <sub>6</sub> F <sub>17</sub> NO <sub>2</sub> S	4151-50-2			X	
<b>NMeFOSE</b> N-methyl perfluorooctanesulfonamidoethanol	C <sub>11</sub> H <sub>8</sub> F <sub>17</sub> NO <sub>3</sub> S	24448-09-7			X	
<b>NEtFOSE</b> N-ethyl perfluorooctanesulfonamidoethanol	C <sub>12</sub> H <sub>10</sub> F <sub>17</sub> NO <sub>3</sub> S	1691-99-2			X	
<b>HFPO-DA</b> Hexafluoropropylene oxide dimer acid	C <sub>6</sub> HF <sub>11</sub> O <sub>3</sub>	13252-13-6	X	X	X	
<b>11Cl-PF3OUdS</b> 11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	C <sub>10</sub> HF <sub>20</sub> ClSO <sub>4</sub>	763051-92-9	X	X	X	
<b>9Cl-PF3ONS</b> 9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid	C <sub>8</sub> HF <sub>16</sub> ClSO <sub>4</sub>	756426-58-1	X	X	X	
<b>ADONA</b> 4,8-dioxa-3H-perfluorononanoic acid	C <sub>7</sub> H <sub>2</sub> F <sub>12</sub> O <sub>4</sub>	919005-14-4	X	X	X	
<b>PFPrS</b> Perfluoropropanesulfoonic acid	C <sub>3</sub> HF <sub>7</sub> O <sub>3</sub> S	423-41-6				

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<b>NFDHA</b> Nonafluoro-3,6-dioxaheptanoic acid	C <sub>5</sub> HF <sub>9</sub> O <sub>4</sub>	151772-58-6			X	
<b>PFEESA</b> Perfluoro(2-ethoxyethane)sulfonic acid	C <sub>4</sub> HF <sub>9</sub> O <sub>4</sub> S	113507-82-7			X	
<b>PFMPA</b> Perfluoro-3-methoxypropanoic acid	C <sub>4</sub> HF <sub>7</sub> O <sub>3</sub>	377-73-1			X	
<b>PFMBA</b> Perfluoro-4-methoxybutanoic acid	C <sub>5</sub> HF <sub>9</sub> O <sub>3</sub>	863090-89-5			X	
<b>3:3 FTCA</b> 2H,2H,3H,3H-Perfluorohexanoic acid	C <sub>6</sub> H <sub>5</sub> F <sub>7</sub> O <sub>2</sub>	356-02-5			X	
<b>5:3 FTCA</b> 2H,2H,3H,3H-Perfluorooctanoic acid	C <sub>8</sub> H <sub>5</sub> F <sub>11</sub> O <sub>2</sub>	914637-49-3			X	
<b>7:3 FTCA</b> 2H,2H,3H,3H-Perfluorodecanoic acid	C <sub>10</sub> H <sub>5</sub> F <sub>15</sub> O <sub>2</sub>	812-70-4			X	
<b>PFECHS</b> Perfluoro-4-ethylcyclohexanesulfonic Acid	C <sub>8</sub> HF <sub>15</sub> O <sub>3</sub> S	133201-07-7		X		
<b>PFBSA</b> Perfluorobutylsulfonamide	C <sub>4</sub> H <sub>2</sub> F <sub>9</sub> NO <sub>2</sub> S	30334-69-1		X		
<b>PFHxSA</b> Perfluorohexanesulfonamide	C <sub>6</sub> H <sub>2</sub> F <sub>13</sub> NO <sub>2</sub> S	41997-13-1		X		

## Laboratories Providing PFAS Analytical Services

*(The list that turns up in the search results from the following links does not constitute an endorsement of those firms on the list, nor is it a statement against any firm not on the list. Additionally, the capacity of the labs to provide services consistent with EGLE's recommendations above has not been verified and these details should be addressed prior to contracting with the laboratories below.)*

The National Environmental Laboratory Accreditation Management System has a list of laboratories approved under various certification programs using US EPA Method 537.1 for PFAS in drinking water, type in 537.1 in the Method box: <https://lams.nelac-institute.org/Search>.

Another list of PFAS Drinking Water laboratories may be accessed at: [PFAS Response - Laboratories Offering Home Testing \(michigan.gov\)](#)

The United States Department of Defense, Environmental Laboratory Accreditation Program (US DoD ELAP) maintains a list of labs for the determination of PFAS in various environmental media other than drinking water on the Defense Environmental Network Information Exchange (DENIX) server:

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<http://www.denix.osd.mil/edqw/accreditation/accreditedlabs/>

## Contact Information

Questions regarding PFAS in general, contact:

**MDHHS General Information**

(517) 373-3740

**EGLE Environmental Assistance Center**

(800) 662-9278

Questions regarding laboratory information, contact:

**MDHHS Chemistry & Toxicology Division**

(517) 335-9490

**EGLE Drinking Water Analysis Laboratory**

(517) 335-8184