

**Supplementary Table S1.** Twenty-four native and isotopically labeled PFSA compounds used for analyzing PFAS

| Native standard                                  |              |             |          | Internal standard                               |              |
|--------------------------------------------------|--------------|-------------|----------|-------------------------------------------------|--------------|
| Name                                             | Abbreviation | CAS No.     | IS match | Name                                            | Abbreviation |
| Perfluorobutane-1-sulfonic acid                  | PFBS         | 375-73-5    | M3PFBS   | <sup>13</sup> C-4-Perfluoro-n-butanoic acid     | M4PFBA       |
| Perfluoropentanesulfonic acid                    | PFPeS        | 2706-91-4   | M3PFHxS  | <sup>13</sup> C-5-Perfluoro-n-pentanoic acid    | M5PFPeA      |
| Perfluorohexane-1-sulfonic acid                  | PFHxS        | 355-46-4    | M3PFHxS  | <sup>13</sup> C-5-Perfluoro-n-hexanoic acid     | M5PFHxA      |
| Perfluoroheptanesulfonic acid                    | PFHpS        | 375-92-8    | M3PFHxS  | <sup>13</sup> C-4-Perfluoro-n-heptanoic acid    | M4PFHpA      |
| Perfluorooctane-1-sulfonic acid                  | PFOS         | 1763-23-1   | M8PFOS   | <sup>13</sup> C-8-Perfluoro-n-octanoic acid     | M8PFOA       |
| Perfluorononanesulfonic acid                     | PFNS         | 68259-12-1  | M8PFOS   | <sup>13</sup> C-9-Perfluoro-n-nonanoic acid     | M9PFNA       |
| Perfluorodecane-1-sulfonic acid                  | PFDS         | 335-77-3    | M8PFOS   | <sup>13</sup> C-6-Perfluoro-n-decanoic acid     | M6PFDA       |
| 1H,1H,2H,2H-Perfluorohexanesulfonic acid         | 4-2FtS       | 757124-72-4 | M3PFBS   | <sup>13</sup> C-7-Perfluoro-n-undecanoic acid   | M7PFUdA      |
| 1H,1H,2H,2H-Perfluorooctane sulfonic acid        | 6:2 FtS      | 27619-97-2  | M3PFHxS  | <sup>13</sup> C-2-Perfluoro-n-dodecanoic acid   | M2PFDoA      |
| 1H,1H,2H,2H-Perfluorodecanesulfonic acid         | 8:2 FtS      | 39108-34-4  | M8PFOS   | <sup>13</sup> C-2-Perfluoro-n-tridecanoic acid  | M2PFTeDA     |
| Perfluoro-n-butanoic acid                        | PFBA         | 375-22-4    | M4PFBA   | <sup>13</sup> C-3-Perfluoro-1-butanedisulfonate | M3PFBS       |
| Perfluoro-n-pentanoic acid                       | PFPeA        | 2706-90-3   | M5PFPeA  | <sup>13</sup> C-3-Perfluoro-1-hexanedisulfonate | M3PFHxS      |
| Perfluoro-n-hexanoic acid                        | PFHxA        | 307-24-4    | M5PFHxA  | <sup>13</sup> C-8-Perfluoro-1-octanedisulfonate | M8PFOS       |
| Perfluoro-n-heptanoic acid                       | PFHpA        | 375-85-9    | M4PFHpA  |                                                 |              |
| Perfluoro-n-octanoic acid                        | PFOA         | 335-67-1    | M8PFOA   |                                                 |              |
| Perfluoro-n-nonanoic acid                        | PFNA         | 375-95-1    | M9PFNA   |                                                 |              |
| Perfluoro-n-decanoic acid                        | PFDA         | 335-76-2    | M6PFDA   |                                                 |              |
| Perfluoro-n-undecanoic acid                      | PFUnA        | 2058-94-8   | M7PFUdA  |                                                 |              |
| Perfluoro-n-dodecanoic acid                      | PFDoA        | 307-55-1    | M2PFDoA  |                                                 |              |
| Perfluoro-n-tridecanoic acid                     | PFTTrA       | 72629-94-8  | M2PFTeDA |                                                 |              |
| Perfluoro-n-tetradecanoic acid                   | PFTeA        | 376-06-7    | M2PFTeDA |                                                 |              |
| N-ethylperfluoro-1-octanesulfonamidoacetic acid  | N-EtFOSAA    | 2991-50-6   | M8PFOS   |                                                 |              |
| N-methylperfluoro-1-octanesulfonamidoacetic acid | N-MeFOSAA    | 2355-31-9   | M8PFOS   |                                                 |              |
| Perfluorooctane sulfonamide                      | PFOSA        | 754-91-6    | M8PFOS   |                                                 |              |