**Distribution characteristics of per- and polyfluoroalkyl substances (PFASs) in human urines of acrylic fiber plant and chemical plant**

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NO. OF TABLES: 3

**Table S1**

Summary of the demographic characteristics for workers

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Source of samples | Matrix | Age group | female | | male | |
| Age: mean(range) | Number | Age: mean(range) | Number |
| Acrylic fiber plant | urine | ≤10a | 7.5(5-10) | 2 | 7.6(5-10) | 11 |
|  |  | 11-20 | 14(11-17) | 2 | 16(12-20) | 15 |
|  | 21-30 | 26.8（21-30） | 25 | 28（22-30） | 75 |
|  | ≥31 | 31.3(31-32) | 4 | 32.6(31-39) | 31 |
| Chemical plant | urine | ≤40b | 30.6(27-40) | 12 | 33.2(27-39） | 16 |
|  |  | 41-50 | 46.6(41-50) | 20 | 47.2(41-50) | 39 |
|  | ≥51 | 52.3(51-55) | 4 | 57.5(51-56) | 49 |
| Total |  |  |  | 69 |  | 236 |

a This figure represents the total working age of the workers

b This number represents the age of the workers

**Table S2**

The details for the MRM parameter.

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Compounds | Precursor ion (m/z) | Qualitative and quantitative ions (m/z) | declustering potential  (DP/(V)) | | Entrance potential  (EP/(V)) | | Collision energy  (CE/(V)） | | Collision  exit potential (CXP/(V)) | |
| PFBA | 213 | 169 | -60 | -12 | | -16 | | -10 | |
| PFPeA | 263 | 219 | -40 | -12 | | -12 | | -10 | |
| PFHxA | 313 | 269 | -40 | -12 | | -12 | | -10 | |
| PFHpA | 363 | 319 | -40 | -12 | | -13 | | -10 | |
| PFOA | 413 | 369 | -40 | -12 | | -14 | | -10 | |
| PFNA | 463 | 419 | -40 | -12 | | -15 | | -10 | |
| PFDA | 513 | 469 | -40 | -12 | | -16 | | -10 | |
| PFUdA | 563 | 519 | -40 | -12 | | -17 | | -10 | |
| PFDoA | 613 | 569 | -40 | -12 | | -17 | | -10 | |
| PFTrDA | 663 | 619 | -40 | -12 | | -20 | | -10 | |
| PFTeDA | 713 | 669 | -40 | -12 | | -20 | | -10 | |
| PFBS | 299 | 99 | -40 | -12 | | -37 | | -10 | |
| PFHxS | 399 | 99 | -60 | -12 | | -73 | | -10 | |
| PFHpS | 449 | 99 | -60 | -12 | | -90 | | -10 | |
| PFOS | 499 | 99 | -60 | -12 | | -90 | | -10 | |
| PFDS | 599 | 99 | -40 | -12 | | -105 | | -10 | |

**Table S3** The details for the standard curve of PFASs.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Compounds | Internal  Standard | Regression equation | R2 | LOD\* （S/N=3:1） | linear range（ug/L） |
| PFBA | MPFBA（13C4） | Y=1.4e3x+1.56e4 | 0.9907 | 0.938 | 0.2-100 |
| PFPeA | MPFHxA（13C2） | Y=4.61e3x+5.21e3 | 0.9917 | 0.041 | 0.2-100 |
| PFHxA | MPFHxA（13C2） | Y=1.25e5x+1.86e4 | 0.9985 | 0.124 | 0.2-100 |
| PFHpA | MPFOA（13C4） | Y=6.18e4x+4.74e4 | 0.9985 | 0.179 | 0.2-100 |
| PFOA | MPFOA（13C4） | Y=3.53e5x+2.62e4 | 0.9996 | 0.067 | 0.2-100 |
| PFNA | MPFNA（13C5） | Y=2.07e3x+3.09e3 | 0.9991 | 0.400 | 0.2-100 |
| PFDA | MPFDA（13C2） | Y=5.41e3x+2.02e3 | 0.9999 | 0.571 | 0.2-100 |
| PFUdA | MPFUdA（13C2） | Y=5.41e4x+1.52e4 | 0.9956 | 0.103 | 0.2-100 |
| PFDoA | MPFDoA（13C2） | Y=1.44e4x+3.37e4 | 0.9946 | 0.019 | 0.2-100 |
| PFTrDA | MPFDoA（13C2） | Y=8.72e3x+1.49e3 | 0.9999 | 0.012 | 0.2-100 |
| PFTeDA | MPFDoA（13C2） | Y=1.61e3x+1.24e3 | 0.9998 | 0.026 | 0.2-100 |
| PFODA | MPFDoA（13C2） | Y=9.13e4x+1.15e5 | 0.9989 | 0.019 | 0.2-100 |
| PFBS | MPFHxS（18O2） | Y=6.92e3x+2.59e3 | 0.9999 | 0.045 | 0.2-100 |
| PFHxS | MPFHxS（18O2） | Y=1.66e3x+410 | 0.9996 | 0.545 | 0.2-100 |
| PFHpS | MPFHxS（18O2） | Y=696x+636 | 0.9996 | 0.667 | 0.2-100 |
| PFOS | MPFOS（13C4） | Y=1.18e5x+1.31e4 | 0.9979 | 0.079 | 0.2-100 |
| PFDS | MPFOS（13C4） | Y=5.85e3x+802 | 0.9999 | 0.091 | 0.2-100 |

\*LOD = Limit of detection