**List of Supplemental Figure Captions**

**Fig. S1.** Location map of 11 sampling sites in the costal region of the South China Sea

**Fig. S2.** Concentration profiles of individual PFAS components in all samples

**List of Supplemental Table Captions**

**Table S1.** Specific sample information of locations, categories and quantity

**Table S2.** Concentration range, ∑PFAS and frequency of detected PFASs in all samples

**Table S3.** Concentration range, ∑PFAS and frequency of detected PFASs in samples collected from 3 provinces



**Fig. S1.** Location map of 11 samplng sites in the costal region of the South China Sea



**Fig. S2.** Concentration profiles of individual PFAS components in all samples

**Table S1.** Specific sample information of locations, categories and quantity

|  |  |  |
| --- | --- | --- |
| Sampling locations | Sample categories | Sampling year |
| Province | City | Fish | Shellfish | Crustacean | 2014 | 2015 | 2016 |
| Guangdong | Guangzhou | 53 | 25 | 11 | 25 | 17 | 27 |
| Zhuhai | 49 | 29 | 11 | 27 | 21 | 21 |
| Shenzhen | 42 | 27 | 10 | 31 | 18 | 24 |
| Huizhou | 26 | 24 | 7 | 14 | 7 | 10 |
| Shantou | 42 | 24 | 13 | 23 | 12 | 24 |
| Shanwei | 27 | 77 | 6 | 15 | 88 | 47 |
| Zhanjiang | 24 | 34 | 8 | 56 | 81 | 29 |
| Guangxi | Beihai | 42 | 64 | 9 | 34 | 53 | 28 |
| Fangchenggang | 13 | 26 | 8 | 22 | 7 | 11 |
| Hainan | Haikou | 15 | 29 | 5 | 10 | 8 | 10 |
| Sanya | 26 | 12 | 6 | 12 | 10 | 22 |
| Total | 359 | 391 | 94 | 269 | 305 | 270 |

**Table S2.** Concentration range, ∑PFAS and frequency of detected PFASs in all samples

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| PFAS components | Detection concentration rage (μg/kg) | Mean concentration (μg/kg) | Medium concentration (μg/kg) | ∑PFAS (μg/kg)\* | Frequency (%) |
| PFBA | 0.01-6.07 | 0.72 | 0.43 | 410.93 | 62.44 |
| PFPeA | 0.01-2.40 | 0.14 | 0.06 | 18.11 | 15.99 |
| PFHxA | 0.02-13.15 | 0.78 | 0.32 | 177.28 | 24.89 |
| PFHpA | 0.01-0.31 | 0.04 | 0.02 | 2.19 | 6.17 |
| PFOA | 0.01-1.80 | 0.09 | 0.04 | 52.22 | 65.86 |
| PFNA | 0.01-8.07 | 0.35 | 0.05 | 152.87 | 47.47 |
| PFDA | 0.01-1.62 | 0.10 | 0.05 | 37.71 | 43.06 |
| PFUdA | 0.01-2.65 | 0.18 | 0.09 | 77.09 | 46.92 |
| PFDoA | 0.01-0.94 | 0.08 | 0.04 | 19.49 | 28.19 |
| PFTrDA | 0.01-1.97 | 0.18 | 0.09 | 46.40 | 28.30 |
| PFTeDA | 0.01-0.30 | 0.05 | 0.04 | 5.90 | 12.11 |
| PFBS | 0.01-3.89 | 0.11 | 0.06 | 54.89 | 37.22 |
| PFHxS | 0.02-0.13 | 0.07 | 0.06 | 1.42 | 2.31 |
| PFHpS | 0.01-0.13 | 0.03 | 0.02 | 2.42 | 10.68 |
| PFOS | 0.01-20.96 | 0.75 | 0.22 | 484.51 | 72.40 |
| PFOSA | 0.01-15.84 | 0.19 | 0.08 | 119.37 | 67.95 |

**\***: Total concentration value of individual PFAS component in all detected samples

**Table S3.** Concentration range, ∑PFAS and frequency of detected PFASs in samples collected from 3 provinces

|  |  |  |  |
| --- | --- | --- | --- |
| PFAS components | Guangdong | Guangxi | Hainan |
| Mean value (μg/kg) | Medium value (μg/kg) | Frequency (%) | Mean value (μg/kg) | Medium value (μg/kg) | Frequency (%) | Mean value (μg/kg) | Medium value (μg/kg) | Frequency (%) |
| PFBA | 0.68 | 0.39 | 62.10 | 0.76 | 0.47 | 70.72 | 1.11 | 0.62 | 41.85 |
| PFPeA | 0.13 | 0.06 | 14.95 | 0.28 | 0.18 | 17.95 | 0.06 | 0.04 | 17.93 |
| PFHxA | 0.86 | 0.30 | 23.57 | 0.54 | 0.32 | 24.57 | 0.74 | 0.19 | 37.18 |
| PFHpA | 0.02 | 0.02 | 5.86 | 0.04 | 0.03 | 2.21 | 0.02 | 0.01 | 17.95 |
| PFOA | 0.09 | 0.05 | 73.94 | 0.09 | 0.03 | 43.09 | 0.06 | 0.04 | 58.97 |
| PFNA | 0.20 | 0.04 | 44.22 | 0.88 | 0.25 | 55.80 | 0.15 | 0.06 | 55.97 |
| PFDA | 0.11 | 0.05 | 44.68 | 0.06 | 0.04 | 28.73 | 0.07 | 0.06 | 62.82 |
| PFUdA | 0.18 | 0.08 | 50.39 | 0.15 | 0.09 | 29.28 | 0.20 | 0.16 | 58.97 |
| PFDoA | 0.09 | 0.04 | 28.97 | 0.05 | 0.03 | 16.57 | 0.05 | 0.04 | 48.72 |
| PFTrDA | 0.09 | 0.05 | 14.36 | 0.23 | 0.13 | 48.72 | 0.15 | 0.10 | 48.64 |
| PFTeDA | 0.06 | 0.04 | 14.18 | 0.06 | 0.05 | 1.10 | 0.04 | 0.02 | 20.51 |
| PFBS | 0.11 | 0.03 | 35.90 | 0.26 | 0.03 | 41.99 | 0.34 | 0.11 | 37.18 |
| PFHxS | 0.05 | 0.04 | 0.77 | — | — | — | 0.07 | 0.06 | 20.51 |
| PFHpS | 0.03 | 0.02 | 11.86 | 0.02 | 0.01 | 8.29 | 0.01 | 0.01 | 6.41 |
| PFOS | 0.77 | 0.19 | 78.43 | 0.74 | 0.27 | 41.43 | 0.57 | 0.33 | 84.62 |
| PFOSA | 0.16 | 0.07 | 66.26 | 0.34 | 0.08 | 62.98 | 0.14 | 0.07 | 93.59 |

—: No detection concentrations for PFHxS of samples in Guangxi