**Table S5. Comparison with other pre-processing methods**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Pre-processing | Method Sample Volume (mL) | Solvent Volume (mL) | Time Required (min) | Material Preparation Time (min) | References |
| Solid phase extraction | 500 | 30 | 150~210 | / | (GUO Xin-Yan, 2015) |
| Solid phase extraction | 500 | 26 | 110~260 | / | (WANG Ya-Na, 2020) |
| Ionic liquid solvent flotation | 6 | 99 | 60 | / | (WANG Liang, 2009) |
| Molecularly imprinted | 75 | 1 | 75 | 80 | (ZENG Guo-Long, 2020) |
| Magnetic solid phase extraction | 100 | 10 | 25 | / | (GUO Ming, 2016) |
| Dispersive liquid-liquid microextraction | 10 | 0.93 | 10 | 30 | (SERESHTI H 2020) |
| PPy-PSS /IT-SPME | 0.1 | 2.3 | 8 | 10 | This method |

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