**Supplementary Material**

**Disinfection tackling the COVID-19 pandemic causes disinfection by-products (DBPs) accumulation and threatens aquatic ecosystems**

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**Table S1.** Geographic location of 110 sampling sites in nine lakes and two rivers of Wuhan, China.

|  |  |  |  |
| --- | --- | --- | --- |
| **Types** | **Sampling sites** | **Sampling number** | **District** |
| Lake | HJH | 12 | Hongshan |
| NH | 10 | Hongshan |
| LZH | 9 | Jiangxia |
| MSH | 8 | Hanyang |
| HGH | 11 | Caidian |
| DH | 12 | Wuchang |
| HH | 8 | Huangpi |
| JYH | 12 | Dongxihu |
| TXH | 11 | Hongshan |
| River | YR | 11 | Across Wuhan |
| HR | 6 | Across Wuhan |

**Table S2.** CHO cytotoxicity and SCGE genotoxicity of each DBPs.

|  |  |  |
| --- | --- | --- |
| **DBPs** | **LC50 (M)** | **Midpoint of tail moment (M)** |
| TCM | 9.62×10-3 | NA |
| TBM | 3.96×10-3 | NA |
| DBCM | 5.36×10-3 | NA |
| BDCM | 1.15×10-2 | NA |
| MCAA | 8.10×10-4 | 4.11×10-4 |
| DCAA | 7.30×10-3 | NA |
| TCAA | 2.40×10-3 | NA |
| TCAN | 1.60×10-4 | 1.01×10-3 |
| BCAN | 8.46×10-6 | 3.24×10-4 |
| TCNM | 5.36×10-4 | 9.34×10-5 |
| NDMA | 4.04×10-6 | NA |
| NMOR | 2.15×10-5 | NA |
| NPYR | 9.99×10-6 | NA |
| NMEA | 1.70×10-5 | NA |
| NDEA | 1.96×10-6 | NA |
| NPIP | 1.53×10-5 | NA |
| NDPA | 2.69×10-5 | NA |
| NDBA | 9.49×10-5 | NA |
| NDphA | 1.76×10-2 | NA |

NOTE: NA represented Not Available

**Table S3.** LC50 or EC50 of each DBPs for fish, daphnid, and green algae.

|  |  |  |  |
| --- | --- | --- | --- |
|  | **LC50** | **LC50** | **EC50** |
|  | **Fish (96 h, mg/L)** | **Daphnid (48 h, mg/L)** | **Green algae (96 h, mg/L)** |
| **TCM** | 264.07 | 143.45 | 89.00 |
| **BDCM** | 301.16 | 164.96 | 105.90 |
| **DBCM** | 318.18 | 175.73 | 116.74 |
| **TBM** | 320.86 | 178.68 | 122.82 |
| **MCAA** | 2561.29 | 189.20 | 0.025 |
| **DCAA** | 2411.78 | 194.28 | 0.032 |
| **TCAA** | 460.34 | 57.71 | 0.03 |
| **TCAN** | 0.87 | 0.46 | 0.046 |
| **BCAN** | 1.27 | 0.61 | 0.058 |
| **TCNM** | 552.48 | 294.57 | 169.17 |
| **NDMA** | 770.51 | 67.58 | 102.31 |
| **NDEA** | 240.40 | 23.64 | 28.55 |
| **NMEA** | 435.95 | 40.48 | 54.74 |
| **NDPA** | 69.35 | 7.64 | 7.36 |
| **NDBA** | 19.08 | 2.36 | 1.81 |
| **NPYR** | 279.34 | 27.11 | 33.60 |
| **NMOR** | 874.78 | 78.65 | 113.37 |
| **NPIP** | 151.50 | 15.57 | 17.23 |
| **NDPhA** | 6.57 | 0.90 | 0.57 |