Table 1 Standard for comparison for the various indices

| Indices | Contamination factor (CF) | Contamination degree (CD) | Ecological risk (ER) | Ecological risk Index (R') | Pollution load index (PLI) | | Geo-accumulation index (Igeo) | |
|---|---|---|---|---|---|---|---|---|
| Low risk | CF<1 | CD<8 | Er <40 | R'<150 | No pollution | PLI<1 | Uncontamination | Igeo ≤ 0 |
| Moderate risk | 1 ≤ CF<3 | 8 ≤ CD<16 | Er 40 ≤ Er <80 | 150≤ R'<300 | - | - | Uncontaminated to moderately contamination | 0<Igeo ≤ 1 |
| Considerable | 3≤ CF<6 | 16 ≤ CF<32 | 80 ≤ Er<160 | 300≤ R'<600 | Moderate | 1<PLI<2 | Moderate contamination | 1<Igeo B≤2 |
| High risk | - | - | 160 ≤ Er <320 | - | Heavy pollution | 2<PLI<3 | Moderate to heavy contamination | 2<Igeo ≤ 3 |
| Very high | CF ≥ 6 | CD>32 | Er ≥ 320 | R'≥ 600 | Extremely heavy pollution | 3<PLI | Heavy contamination | 3<Igeo ≤ 4 |
| - | - | - | - | - | - | - | Heavy to extremely contamination | 4<Igeo ≤ 5 |
| - | - | - | - | - | - | - | Extremely contaminated | Igeo ≥ 5 |

Note: Geo-accumulation index is by Muller (1969) have been widely applied by Ghaleno et al. (2015), Bhutiani et al. (2017), Todorova et al. (2016), Izah et al. (2017c); Note: CF, CD, ER, R" was developed by Hakanson (1980) and have been widely applied by Bhutiani et al. (2017), Izah et al. (2017d, 2018), Singovszka et al. (2014), Todorova et al. (2016); PLI have been widely applied in environment risk assessment by Tomlinson et al. (1980), Bhutiani et al. (2017), Izah et al. (2017d)