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| **Pollution indicators** | **Calculation** | **classification** |
| **Enrichment factor (EF)** | EF=(M/Fe) sample/(M/Fe) backgroundM represents the metal concentration in the sediment and in the background. The background levels of the recorded metals reported for sedimentary rocks were considered as the background values of these elements (Turekian and Wedepohl, 1961) | EF < 1 no enrichmentEF < 3 minor enrichmentEF=3–5 moderate enrichmentEF=5–10 moderately severe enrichmentEF=10–25 severe enrichmentEF=25–50 very severe enrichmentEF > 50 extremely severe enrichment (after Birch, 2003) |
| **Geoaccumulation Index (Igeo)** | Igeo=Log2 (Cn/(1.5×Bn))where Cn is the measured concentration of metal (n) in the sediments, Bn is the geochemical background concentration of the metal (n) in shale, and 1.5 is introduced to minimise the effects of possible variations in the background values | Igeo <0 unpolluted0 < Igeo <1 unpolluted to moderately polluted1 < Igeo <2 moderately polluted 2 < Igeo <3 moderately to strongly polluted 3 < Igeo > 4 strongly polluted4 < Igeo <5 strongly to very strongly pollutedIgeo >5 very strongly polluted conditions (after Muüller, 1981)  |
| **Contamination Factor (CF)** | Cf=Co/Cbwhere Co is the is the measured concentration of metal in sample and Cb is the normal background value of the metal | Cf < 1 low contamination factor1≤Cf <3 moderate contamination factor3≤Cf < 6 considerable contamination factorCf≥6 very high contamination factor(after Hökanson, 1980) |