Table 3: Speciation of As, Fe and Pb in PM10 samples before and after incubation in original Gamble’s solution

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Sample | | SH15 | | PP | | CMW | |
| Untreated | 24 hrs in Gamble's solution | Untreated | 24 hrs in Gamble's solution | Untreated | 24 hrs in Gamble's solution |
| **Lead (Pb)** | Mineral sorbed Pb | 59 | 59 | 64 | 63 | 48 | 43 |
| Tert. Pb phosphate | 27 |  |  | 7 |  |  |
| Hydroxy pyromorphite (Pb5(PO4)3OH ) | 10 |  |  |  |  |  |
| Pb Hydroxyapatite |  |  |  | 8 |  |  |
| Litherage (PbO) | 4 |  |  |  |  |  |
| Plumbojarosite (PbFe3+6(SO4)4(OH)12) |  |  | 9 |  |  |  |
| Leadhillite (Pb4SO4(CO3)2(OH)2) |  |  |  | 22 |  |  |
| Organic bound Pb |  | 41 | 28 |  | 52 | 57 |
| **Arsenic (As)** | Arsenopyrite (FeAsS) |  |  | 10 |  |  |  |
| As (III) sorbed |  |  | 15 |  |  |  |
| As(V) Sorbed | 77 |  | 50 |  | 75 | 67 |
| Jarosite-As(V) |  |  |  |  | 14 | 14 |
| Scorodyte (FeAsO4·2H2O) | 19 | 35 | 12 | 15 | 10 | 20 |
| Beudantite (PbFe3(OH)6SO4AsO4) | 5 |  | 16 |  |  |  |
| **Iron (Fe)** | Ferryhydrite | 59 | 30 | no data | 18 | 61 | 59 |
| Geothite | 10 | 17 | 25 |  |  |
| Lepidocrocite |  |  | 15 | 6 | 10 |
| Hematite | 6 |  | 6 | 8 | 7 |
| Magnetite | 13 | 6 | 10 | 12 | 11 |
| Fe metal |  |  |  | 10 | 9 |
| Organic bound Fe |  | 20 | 14 | 3 | 4 |
| Scorodyte | 3 |  |  |  |  |
| Clay | 9 | 27 | 11 |  |  |