**Table S 1**. Elemental concentration of all PM2.5 samples Ng’ando (U) and Leshau Pondo (R)

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **LOCATION** | | **CONCENTRATION (ng/m3)** | | | | | | | | | | | | | |
| **NG’ANDO** | | **K** | **Ca** | **Ti** | **V** | **Cr** | **Mn** | **Fe** | **Ni** | **Cu** | **Zn** | **As** | **Rb** | **Ba** | **Pb** |
| U1 | IN | 273 | 8885 | 1582 | 21 | 33 | 915 | 16294 | 5 | 42 | 273 | 1 | 49 | 11 | 45 |
| OUT | 317 | 44 | 8 | 1 | 4 | 4 | 71 | 1 | 13 | 8 | 1 | 0 | 2 | 2 |
| U2 | IN | 456 | 161 | 37 | 0 | 5 | 17 | 322 | 0 | 8 | 20 | 1 | 0 | 0 | 4 |
|  | OUT | 2057 | 3298 | 522 | 3 | 9 | 329 | 5903 | 1 | 10 | 76 | 1 | 12 | 121 | 13 |
| U3 | IN | 218 | 287 | 65 | 1 | 5 | 27 | 526 | 0 | 4 | 15 | 1 | 0 | 29 | 3 |
|  | OUT | 12507 | 21607 | 4140 | 27 | 69 | 2133 | 46230 | 12 | 32 | 517 | 0 | 167 | 1531 | 130 |
| U4 | IN | 251 | 261 | 67 | 4 | 3 | 31 | 648 | 1 | 3 | 13 | 1 | 0 | 0 | 1 |
|  | OUT | 8001 | 12694 | 2220 | 15 | 51 | 1183 | 23998 | 11 | 30 | 476 | 0 | 79 | 724 | 72 |
| U5 | IN | 642 | 110 | 22 | 5 | 3 | 16 | 242 | 0 | 7 | 11 | 1 | 0 | 0 | 1 |
|  | OUT | 1409 | 2249 | 410 | 1 | 8 | 229 | 4655 | 1 | 10 | 68 | 1 | 7 | 42 | 13 |
| U6 | IN | 9731 | 231 | 57 | 0 | 3 | 26 | 493 | 1 | 17 | 37 | 1 | 0 | 0 | 3 |
|  | OUT | 65488 | 28122 | 2184 | 12 | 40 | 1221 | 24416 | 7 | 44 | 548 | 1 | 103 | 712 | 55 |
| U7 | IN | 70055 | 122875 | 13017 | 13 | 224 | 6847 | 152523 | 33 | 90 | 1365 | 0 | 944 | 6367 | 677 |
|  | OUT | 3232 | 211 | 44 | 0 | 1 | 20 | 449 | 0 | 5 | 24 | 1 | 0 | 0 | 2 |
| U8 | IN | 7176 | 9458 | 1320 | 1 | 27 | 764 | 14504 | 2 | 30 | 192 | 1 | 49 | 470 | 20 |
|  | OUT | 886 | 169 | 36 | 0 | 3 | 19 | 346 | 0 | 8 | 28 | 1 | 0 | 0 | 20 |
| U9 | IN | 2056 | 2375 | 324 | 12 | 11 | 179 | 3092 | 0 | 9 | 86 | 1 | 6 | 0 | 8 |
|  | OUT | 612 | 323 | 36 | 1 | 2 | 27 | 479 | 1 | 10 | 38 | 2 | 0 | 0 | 2 |
| U10 | IN | 70127 | 77 | 5 | 0 | 3 | 5 | 140 | 2 | 21 | 51 | 1 | 0 | 0 | 0 |
|  | OUT (DAMAGED) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| U11 | IN | 3898 | 1551 | 248 | 0 | 10 | 130 | 2508 | 1 | 9 | 32 | 1 | 4 | 41 | 6 |
|  | OUT | 884 | 19 | 1 | 1 | 0 | 1 | 36 | 0 | 1 | 1 | 0 | 0 | 0 | 0 |
| U12 | IN | 24605 | 6502 | 532 | 0 | 9 | 259 | 5169 | 0 | 23 | 181 | 1 | 12 | 41 | 17 |
|  | OUT | 28595 | 428 | 52 | 3 | 3 | 48 | 648 | 1 | 92 | 350 | 3 | 0 | 0 | 40 |
| U13 | IN | 8634 | 13378 | 1086 | 5 | 17 | 506 | 10718 | 3 | 24 | 353 | 2 | 34 | 373 | 31 |
|  | OUT (NO SPECTRA) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| U14 | IN | 49396 | 2153 | 104 | 2 | 5 | 58 | 1064 | 0 | 14 | 53 | 1 | 75 | 9 | 8 |
|  | OUT | 27395 | 168 | 6 | 3 | 3 | 12 | 211 | 0 | 11 | 43 | 1 | 18 | 0 | 5 |
| U15 | IN | 2117 | 2286 | 276 | 7 | 11 | 190 | 2844 | 3 | 11 | 184 | 1 | 7 | 52 | 21 |
|  | OUT | 193 | 71 | 15 | 4 | 6 | 3 | 93 | 0 | 4 | 21 | 1 | 0 | 15 | 1 |
| **LESHAU PONDO** | | | | | | | | | | | | | | | |
| R1 | IN | 29062 | 266 | 8 | 0 | 0 | 15 | 130 | 1 | 9 | 121 | 1 | 66 | 0 | 2 |
|  | OUT | 10111 | 3943 | 323 | 0 | 6 | 365 | 2263 | 0 | 8 | 66 | 1 | 27 | 33 | 4 |
| R2 | IN | 3475 | 426 | 54 | 2 | 11 | 48 | 530 | 270 | 128 | 28 | 1 | 0 | 0 | 5 |
|  | OUT | 967 | 378 | 103 | 0 | 1 | 57 | 1117 | 0 | 5 | 18 | 0 | 0 | 2 | 5 |
| R3 | IN | 4223 | 26 | 19 | 0 | 2 | 1 | 68 | 0 | 3 | 11 | 1 | 0 | 0 | 0 |
|  | OUT | 1245 | 403 | 85 | 0 | 2 | 36 | 790 | 0 | 6 | 16 | 0 | 1 | 0 | 4 |
| R4 | IN | 35304 | 76 | 17 | 0 | 2 | 17 | 140 | 0 | 56 | 191 | 9 | 63 | 43 | 214 |
|  | OUT | 2427 | 1753 | 492 | 5 | 5 | 156 | 4028 | 1 | 9 | 48 | 0 | 10 | 45 | 11 |
| R5 | IN | 37263 | 1099 | 174 | 0 | 10 | 276 | 9428 | 0 | 30 | 360 | 2 | 85 | 0 | 5 |
|  | OUT | 112 | 103 | 21 | 0 | 3 | 4 | 169 | 0 | 7 | 7 | 0 | 0 | 0 | 1 |
| R6 | IN | 19734 | 83 | 18 | 0 | 1 | 5 | 102 | 0 | 10 | 36 | 2 | 0 | 0 | 0 |
|  | OUT | 879 | 292 | 134 | 0 | 4 | 38 | 1104 | 0 | 2 | 9 | 1 | 0 | 8 | 1 |
| R7 | IN | 24029 | 119 | 2 | 0 | 0 | 8 | 80 | 1 | 12 | 42 | 1 | 20 | 0 | 3 |
|  | OUT | 1022 | 368 | 225 | 3 | 5 | 96 | 2395 | 0 | 4 | 19 | 0 | 4 | 27 | 4 |
| R8 | IN | 17605 | 656 | 12 | 0 | 0 | 16 | 298 | 0 | 9 | 53 | 1 | 44 | 0 | 4 |
|  | OUT | 1327 | 1029 | 236 | 0 | 2 | 85 | 2065 | 0 | 5 | 19 | 1 | 1 | 13 | 3 |
| R9 | IN | 15283 | 34 | 1 | 0 | 1 | 4 | 41 | 0 | 6 | 35 | 1 | 0 | 0 | 0 |
|  | OUT | 4194 | 1877 | 366 | 5 | 7 | 167 | 3702 | 2 | 8 | 42 | 0 | 10 | 44 | 12 |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Element** |  | **K** | **Ca** | **Ti** | **V** | **Cr** | **Mn** | **Fe** | **Ni** | **Cu** | **Zn** | **As** | **Rb** | **Ba** | **Pb** |
| Limit of detection |  | 1000 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 10 | 20 | 200 | 50 |
| Relative standard deviation |  | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 15 | 15 | 15 | 15 | 20 | 15 |