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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| S2. FITTED BACKGROUND DATA AND CALCULATED COEFFICIENTS | | | | | | | | | | | | | | |
| Dist  (mm) | Be  (9) | Mg  (25) | S  (34) | K  (39) | Sc  (45) | Ti  (49) | V  (51) | Zn  (66) | Ga  (69) | Ge  (72) | Sr  (86) | Y  (89) | Nb  (93) | Sn  (118) |
| **Fitted Data (ppm) 1** | | | | | | | | | | | | | | |
| 0 | 14.00 | -2.10 | 411.06 | 115.89 | 0.22 | 25.02 | 0.02 | 5.99 | 188.20 | 5.90 | 63.31 | 0.22 | 4.73 | 16.55 |
| 5.0 | 13.72 | 107.55 | 675.01 | 96.06 | 0.20 | 26.62 | 0.05 | 9.89 | 195.44 | 6.90 | 73.10 | 0.22 | 4.86 | 16.90 |
| 15.0 | 11.91 | 159.51 | 430.47 | 86.73 | 0.86 | 90.34 | 0.31 | 22.07 | 175.28 | 6.40 | 141.44 | 0.35 | 8.52 | 17.81 |
| 25.0 | 9.63 | 185.30 | 389.62 | 79.96 | 0.69 | 79.35 | 0.36 | 16.78 | 159.86 | 7.55 | 201.21 | 0.45 | 10.36 | 17.31 |
| 35.0 | 11.14 | 288.30 | 421.15 | 45.70 | 1.35 | 95.81 | 0.52 | 15.98 | 172.10 | 6.62 | 240.54 | 0.47 | 16.99 | 20.49 |
| 45.0 | 9.94 | 131.18 | 596.86 | 49.66 | 1.80 | 97.88 | 0.73 | 16.67 | 168.47 | 6.08 | 256.99 | 0.46 | 20.61 | 22.10 |
| 55.0 | 10.09 | 321.91 | 809.25 | 39.54 | 2.61 | 111.87 | 0.94 | 17.16 | 155.20 | 5.78 | 255.31 | 1.14 | 22.55 | 23.92 |
| 65.0 | 11.23 | 1290.45 | 334.68 | 55.23 | 4.81 | 237.53 | 1.53 | 30.42 | 142.09 | 6.34 | 247.08 | 0.49 | 17.84 | 24.38 |
| 75.0 | 7.95 | 1823.78 | 425.59 | 60.74 | 15.11 | 515.42 | 2.54 | 48.04 | 136.91 | 5.64 | 270.57 | 0.26 | 13.06 | 24.94 |
| 85.0 | 5.08 | 2009.32 | 311.53 | 67.15 | 35.27 | 461.90 | 3.79 | 43.56 | 173.64 | 4.66 | 352.20 | 0.14 | 8.49 | 28.07 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Coefficients1** | | | | | | | | | | | | | | |
| *a* | -8.19  x10-7 | -3.94  x10-4 | 4.15  x10-5 | -8.59  x10-6 | 3.92  x10-6 | -9.44  x10-5 | 3.79  x108 | -1.20  x10-5 | 1.89  x10-5 | -7.2  x10-7 | 4.22  x10-5 | 6.11  x10-8 | 2.64  x10-6 | 9.82  x10-7 |
| *b* | 8.00  x10-5 | 7.20  x10-2 | -1.06  x10-2 | 1.54  x10-3 | -4.73  x10-4 | 1.76  x10-2 | 5.78  x106 | 2.26  x10-3 | -3.06  x10-3 | 1.28  x10-4 | -6.26  x10-3 | -1.62  x10-5 | -5.83  x10-4 | -1.87  x10-4 |
| *c* | 1.60  x10-4 | -3.71 | 7.50  x10-1 | -6.45  x10-2 | 1.78  x10-2 | -9.47  x10-1 | -5.97  x104 | -1.29  x10-1 | 1.56  x10-1 | -7.78  x10-3 | 2.31  x10-1 | 1.05  x10-3 | 3.45  x10-2 | 1.18  x10-2 |
| *d* | -1.82  x10-1 | 6.14  x101 | -1.54  x101 | -8.52  x10-1 | -1.75  x10-1 | 1.71  x101 | 2.55  x10-2 | 2.54 | -3.18 | 1.60  x10-1 | 2.75 | -1.07  x10-2 | -2.82  x10-1 | -1.35  x10-1 |
| *e* | 1.42  x101 | -3.76  x101 | 5.32  x102 | 1.10  x102 | 3.93  x10-1 | 4.84 | 5.07  x103 | 4.85 | 1.95  x102 | 6.05 | 6.19  x101 | 2.49  x10-1 | 5.12 | 1.69  x101 |
| *1.* Calculated averages of 10 mm segments from analytical traverse. *2.* Fitted to *f* = *ax*4 + *bx*3 + *cx*2 + *dx* + *e* | | | | | | | | | | | | | | |

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| SUPPLEMENTARY DATA 2. (CON’T) | | | | | | | | | |  |  |  |  |  |
| Dist  (mm) | Sb  (121) | La  (139) | Ce  (140) | Pr  (141) | Nd  (146) | Ta  (181) | Pb  (208) | Bi  (209) | Th  (232) |  |  |  |  |  |
| **Fitted Data (ppm)** | | | | | | | | | |  |  |  |  |  |
| 0 | 2.19 | 75.94 | 116.36 | 6.84 | 10.27 | 3.57 | 4049.75 | 230.56 | 0.21 |  |  |  |  |  |
| 5.0 | 2.62 | 74.40 | 114.46 | 6.82 | 10.33 | 3.99 | 4529.52 | 257.95 | 0.21 |  |  |  |  |  |
| 15.0 | 2.76 | 35.49 | 59.68 | 3.98 | 6.37 | 5.31 | 4739.58 | 255.04 | 0.49 |  |  |  |  |  |
| 25.0 | 3.08 | 13.00 | 29.04 | 2.52 | 5.42 | 3.98 | 4772.91 | 262.09 | 0.55 |  |  |  |  |  |
| 35.0 | 3.37 | 9.55 | 21.96 | 1.98 | 4.50 | 4.16 | 3460.50 | 216.59 | 0.81 |  |  |  |  |  |
| 45.0 | 3.67 | 6.83 | 14.27 | 1.23 | 3.03 | 4.10 | 2492.75 | 188.37 | 0.94 |  |  |  |  |  |
| 55.0 | 3.73 | 7.33 | 15.34 | 1.33 | 3.38 | 4.11 | 1811.76 | 154.62 | 1.17 |  |  |  |  |  |
| 65.0 | 4.37 | 8.48 | 19.27 | 1.64 | 4.05 | 4.65 | 1367.04 | 140.62 | 1.03 |  |  |  |  |  |
| 75.0 | 15.00 | 14.73 | 35.40 | 3.50 | 10.25 | 1.02 | 1260.12 | 104.80 | 0.30 |  |  |  |  |  |
| 85.0 | 35.00 | 26.71 | 59.54 | 5.69 | 14.19 | 0.64 | 1419.71 | 125.36 | 0.15 |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Coefficients1** | | | | | | | | | |  |  |  |  |  |
| *a* | 4.51  x10-6 | 4.99  x10-7 | 4.32  x10-7 | 7.58  x10-8 | 7.64  x10-8 | -5.62  x10-7 | -2.63  x10-4 | 3.04  x10-8 | 8.71  x10-8 |  |  |  |  |  |
| *b* | -5.63  x10-4 | -2.64  x10-4 | -1.71  x10-4 | 3.06  x10-7 | 3.74  x10-5 | 8.69  x10-5 | 7.81  x10-2 | 1.09  x10-3 | -2.28  x10-5 |  |  |  |  |  |
| *c* | 2.11  x10-2 | 5.25  x10-2 | 5.62  x10-2 | 1.56  x10-3 | -1.15  x10-3 | -5.06  x10-3 | -6.82 | -1.56  x10-1 | 1.40  x10-3 |  |  |  |  |  |
| *d* | -2.06  x10-1 | -3.54 | -4.63 | -2.06  x10-1 | -1.93  x10-1 | 1.15  x10-1 | 1.45  x102 | 3.95 | -7.60  x10-3 |  |  |  |  |  |
| *e* | 2.53 | 7.99  x101 | 1.21  x102 | 7.08 | 1.05  x101 | 3.71 | 4.06  x103 | 2.36  x102 | 2.33  x10-1 |  |  |  |  |  |
| *1.* Calculated averages of 10 mm segments from analytical traverse. *2.* Fitted to *f* = *ax*4 + *bx*3 + *cx*2 + *dx* + *e* | | | | | | | | | |  |  |  |  |  |