**Electronic appendix**

TAB 1. METHODS

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | element | line | reference | measuring time in s | average detection limit in ppm |
| PGM | Pt | Lα | metal | 20 | 1181 |
|  | Pd | Lβ | metal | 20 | 387 |
|  | Rh | Lα | metal | 20 | 317 |
|  | Ru | Lα | metal | 30 | 479 |
|  | Ir | Lα | metal | 60 | 593 |
|  | Os | Mα | metal | 60 | 216 |
| sulfides | Pt | Lα | pentlandite | 190 | 259 |
|  | Pd | Lα/Lβ | pentlandite | 130 | 148 |
|  | Rh | Lα | pentlandite | 60 | 108 |
| silicates/oxides | Pt | Lα | metal | 360 | 199 |
|  | Pd | Lβ | metal | 180 | 108 |
|  | Rh | Lα | metal | 120 | 61 |