**Table S1 The** **experiment parameter** **of Micro-XRF in *Keichousaurus hui***

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Specimen Number | High voltage(kV) | Anode current(μA) | Width(mm) | Height(mm) | Pixel time(ms/pixel) | Pixel Size(μm) | Total number of pixel | Measure time |
| XNGM WS-31-R22 | 50  | 600 | 62.887  | 35.466  | 10  | 100 | 223295  | 31 min |
| XNGM WS-32-R43 | 50  | 600 | 91.537  | 44.551  | 10  | 100 | 408090  | 56 min |
| GMPKU-P-1154（2） | 50  | 600 | 107.000  | 55.200  | 10  | 100 | 590640  | 1:20 h  |
| GMPKU-P-4316 | 50  | 600 | 152.195  | 65.899  | 10  | 50 | 4011992  | 9:14 h  |
| GMPKU-P-4317 | 50  | 600 | 202.110  | 73.845  | 10  | 50 | 5970034  | 14:02 h |
| GMPKU-P-4318 | 50  | 600 | 242.060  | 91.947  | 10  | 50 | 8902599  | 20:41 h |
| XNGM WS-32-R18 | 50  | 600 | 224.647  | 123.277  | 10  | 100 | 2769318  | 6:21 h |
| The right hindlimb of GMPKU-P-4316 | 50  | 600 | 22.577  | 13.073  | 15  | 25 | 472269  | 1:37 h |
| The left hindlimb of GMPKU-P-4316 | 50  | 600 | 14.576  | 26.621  | 15  | 25 | 620895  | 2:08 h |