**Supplementary Material**

**Table S2. Large Volume Micro-CT**. Settings used for scanning of the dentition in situ in the dentoalveolar complex of the human skulls from the St Mary’s Cemetery individuals, using the Nikon XT H 225 ST Micro-CT system. In choosing the scanning settings, the transmitted signal intensity and source power settings were considered according to guidelines (Wearne et al 2022, du Plessis et al. 2017).

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Skeletal region**  **LV Micro-CT scanned** | **St Mary’s**  ID | **Pixel**  **size**  (µm) | **Source voltage**  (kV) | **Source**  **Current (**µA) | **Source**  **Power**  (W) | **Rotation step** | **Exposure time**  (seconds) | **Filter**  **Type** | **Filter thickness**  (mm) | **X-ray projections** | **Total acquisition time**  (hours/minutes) |
| **Skull** | **SMB 73** | 60 | 190 | 220 | 41 | 360º | 1.42 | Sn | 0.1 | 3000 | 1 hr 10 mins |
|  | **SMB 52B** | 60 | 190 | 220 | 41 | 360º | 1.42 | Sn | 0.1 | 3000 | 1 hr 10 mins |
| **Cranium only** | **SMB 82** | 40 | 190 | 210 | 40 | 360º | 1.42 | Sn | 0.1 | 3000 | 1 hr 10 mins |
|  | **SMB 66B** | 50 | 190 | 220 | 41 | 360º | 1.42 | Sn | 0.1 | 3000 | 1 hr 10 mins |
|  | **SMB 58** | 35 | 190 | 184 | 35 | 360º | 1.42 | Sn | 0.1 | 3000 | 1 hr 10 mins |
|  | **SMB 4A** | 55 | 190 | 220 | 41 | 360º | 1.42 | Sn | 0.1 | 3000 | 1 hr 10 mins |
| **Mandible only** | **SMB 82** | 18 | 190 | 68 | 12.9 | 360º | 2 | Al | 0.5 | 3000 | 1 hr 40 mins |
|  | **SMB 73** | 13 | 190 | 68 | 12.9 | 360º | 2 | Al | 0.5 | 3000 | 1 hr 40 mins |
|  | **SMB 66B** | 13 | 190 | 68 | 12.9 | 360º | 2 | Al | 0.5 | 3000 | 1 hr 40 mins |
|  | **SMB 58** | 21 | 190 | 95 | 18 | 360º | 2 | Al | 0.5 | 3000 | 1 hr 40 mins |
|  | **SMB 52B** | 22 | 190 | 68 | 12.9 | 360º | 2 | Al | 0.5 | 3000 | 1 hr 40 mins |
|  | **SMB 4A** | 20 | 190 | 68 | 12.9 | 360º | 2 | Al | 0.5 | 3000 | 1 hr 40 mins |

**References:**

**du Plessis**, A., Broeckhoven, C., Guelpa, A., le Roux, S.G., 2017. Laboratory x-ray micro-computed tomography: a user guideline for biological samples, Gigascience 6, 1-11.

**Wearne**, L.S., Rapagna, S., Taylor, M., Perilli, E., 2022. Micro-CT scan optimisation for mechanical loading of tibia with titanium tibial tray: A digital volume correlation zero strain error analysis, Journal of the mechanical behavior of biomedical materials 134, 105336-105336.