

S2. Starch granule morphology and general distribution of types.

| Starch type | General Morphology | Hilum | Extinction cross | Visible diagenetic effects | Other | Occurrence |
|-------------------------------|--|--|--|---|--|---|
| Type 1: polyhedral | Polyhedral, to sub-polyhedral, 18-25µm. Lamellae absent. It has similarities with <i>Cyperus rotundus</i> L. | Clear, central hilum, small fissures from the centre give it an almost stellate aspect. 'Stellate' hilum is absent in modern <i>C. rotundus</i> L. | Distinct, centric, with high degree of polarisation in most cases. It forms 4 arms and extends the length of the granule, slightly enlarging toward granule edges. Similar to modern <i>C. rotundus</i> L. | None | Some granules still lodged within remains of the cellular wall. Some granules still partially embedded in the calculus matrix | Pre-Mesolithic and Meroitic |
| Type 2: large, oval | Oval to sub-triangular, between 20-35 µm, suggesting a degree of diversity. Numerous thin lamellae | Evident under polarized light as a fissure is visible in the central part of the granules | Distinct, centric to eccentric, appears as darker area in the central part of the granule with 4 or more asymmetric arms diverging from the central area. Arms have different width, possibly due to alteration during cooking | Diagenetic effects not present in the Pre-Mesolithic samples, but clearly visible in the Neolithic and Meroitic | Some starch granules occurred in groups of two or three, still lodged within remains of the cellular wall. The granules have similarities with those of the Triticeae Tribe, of the Family Poaceae | Few in pre-Mesolithic, more common in the Neolithic |
| Type 3: smaller, round | Small, round, 5-15µm | Not visible | Similar to type 2 | Diagenetic effect has altered the hilum in the Neolithic samples | Likely to be smaller granule of type 2, as one very similar was seen lodged with <i>type 2</i> , similar to bimodal starches of the Triticeae tribe | Neolithic and Meroitic |