

UC Berkeley Archaeobotanical Laboratory Phase I Qualitative Analysis
Christine A. Hastorf and Maria Bruno
Feb 2005

Phase One Seed Descriptions/Rankings
Qualification.

Rankings based on overall impression of sample to be added to first page of data sheet.

Condition (Based on Hubbard and al Azm's "Preservation")

Condition of epidermis on seeds and seed fragments

- 1 Majority of seeds with epidermis (testa) virtually intact
- 2 Half of seeds with epidermis intact/Half with fragmented epidermis
- 3 Majority of seeds with fragmented epidermis
- 4 Majority of seeds only identifiable by gross morphology
- 5 Clinkered

Quality (Based on Hubbard and al Azm's "Distortion")

Degree of seed distortion (puffing, bubbling)

- 1 Majority items not noticeably distorted.
- 2 Majority slightly distorted, but still identifiable
- 3 Majority grossly distorted; unidentifiable
- 4 Seeds fused together, or melted, or vitrified

Fragmentation

Degree of seed fragmentation- [linked to counts, definition of a counted seed is 50% with embryo.]

- 1 Majority of seeds whole or nearly whole (>75% of seed)
- 2 Half of seeds whole or nearly whole/ Half highly fragmented
- 3 Majority highly fragmented; unidentifiable

Firing Conditions

Degree of heat and oxygen, directness of heat

Dry - cells good shape

- 1 Low heat, reduced, low oxygen (not fully charred)- indirect heat
- 2 High heat, reduced, low oxygen (completely charred but good condition and quality) – high but indirect heat
- 3 High heat oxidized, high oxygen (completely charred, but poor condition and quality seeds)- direct heat with distortion

Wet – look for melting

- 4 Low heat, reduced, low oxygen (not fully charred)- indirect heat but cell structure damaged
- 5 High heat, reduced, low oxygen (completely charred but good condition and quality),
- 6 High heat, oxidized; high oxygen (completely charred, but poor condition and quality seeds)- direct heat, great lesions and distortion