# POTTERY PRODUCTION, DISTRIBUTION AND CONSUMPTION IN EARLY MINOAN WEST CRETE: AN ANALYTICAL PERSPECTIVE

Volume II: Appendices, Figures and Plates

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# APPENDICES

# APPENDIXI

# CATALOGUE OF SAMPLES

# **DEBLA**

- 00/1 Externally thickened rim and body sherd of pedestalled bowl, black burnished with applied ridge under rim, EM I
- 00/2 Externally thickened rim and body sherd of pedestalled bowl, red-black mottling on exterior, (Warren and Tzedakis 1974: fig. 18), EM I
- 00/3 Base and beginning of foot of chalice/large stemmed goblet, black mottled, slipped and burnished, EM I.
- 00/4 Body sherd of incised pyxis, black burnished with parallel vertical incisions, (Warren and Tzedakis 1974: Pl. 56a top right), EM IIA.
- 00/5 Shoulder and beginning of rim of incised pyxis, with four horizontal lines below ledge rim, (Warren and Tzedakis 1974: Pl. 55d bottom right), EM I-IIA.
- 00/6 Ledge rim and body sherd of cylindrical incised pyxis, black burnished, with four horizontal lines below ledge rim and herringbone pattern, (Warren and Tzedakis 1974: Pl. 56 top right), EM I-IIA.
- 00/7 Body sherd of cylindrical incised pyxis, black burnished with herringbone, (Warren and Tzedakis 1974: Pl. 55d top right), EM I-IIA.
- 00/8 Body sherd of globular incised pyxis, black burnished with hatched triangles and banding, (Warren and Tzedakis 1974: fig. 20, Pl. 56a, low centre), EM I-IIA.
- 00/9 Base or lid of incised pyxis, black burnished, EM I-IIA.
- 00/10 Lid of pyxis with incised concentric circles, black burnished, (Warren and Tzedakis 1974: Pl. 56a top left).
- 00/11 Body sherd of incised pyxis, with herringbone (no sign of burnishing), (Warren and Tzedakis 1974: Pl. 55d top left).

- 00/12 Body sherd of incised pyxis, with alternating hatched triangles, red slipped, (Warren and Tzedakis 1974: Pl. 55, bottom centre).
- 00/13 Body sherd of incised pyxis, with alternating hatched triangles, red slipped.
- 00/14 Body sherd of jug with large inclusions, red slipped.
- 00/15 Handle of jug with pellet, red slipped.
- 00/16 Foot of tripod vessel (probably pyxis), red slipped, (Warren and Tzedakis 1974: Fig. 18, right).
- 00/17 Pedestalled foot of sauceboat, black slipped.
- 00/18 Pedestalled foot of sauceboat, black slipped.
- 00/19 Body sherd of sauceboat, thin walled, black slipped.
- 00/20 Body sherd of jar/lekanis, red slipped.
- 00/21 Thickened rim and body sherd of open bowl, red slipped, (Warren and Tzedakis 1974: Fig. 18, Pl. 52c, top centre)
- 00/22 Body sherd of scored jug with slight applied elongated pellet on shoulder, (Warren and Tzedakis 1974: Pl. 53b top left)
- 00/23 Jar, H2 64 (Warren and Tzedakis 1974: Pl. 53b, low left)
- 00/24 Jug body sherd, scored, red slipped
- 00/25 Jug body sherd, scored, red slipped
- 00/26 Base of scored jug with pellet feet
- 00/27 Jug body sherd, scored.
- 00/28 Thickened rim of large open bowl with horizontal scoring, (Warren and Tzedakis 1974: Fig. 18, Pl. 53d top)
- 00/29 Pierced handle of small bowl, (Warren and Tzedakis 1974: Fig. 18 left, Pl. 53d, low right)
- 00/30 Slightly outurned rim of deep bowl, red slipped
- 00/31 Body sherds of calcite tempered open bowl

- 00/32 Low body and start of pedestalled foot of sauceboat, grey fabric, black slipped (Urfirnis style).
- 00/33 Body sherd and start of base of pedestalled bowl, red slipped
- 00/34 Body sherd and start of base of large open bowl with undulating rim, red slipped.
- 00/35 Body sherd of pithos, red slipped with vegetal voids
- 00/36 Body sherd of jug, scored
- 00/37 Pedestalled foot from sauceboat, black slipped
- 00/38 Body sherd from large pithos with a hole on the body, scored ware
- 00/39 Body sherd from jug, scored ware
- 00/40 Body sherd from shoulder of jug, scored ware
- 00/41 Body sherd from jug, with cross-hatched decoration, red slipped
- 00/42 Body sherd from incised pyxis, black slipped, herringbone decoration
- 00/43 Body sherd from jug, with cross-hatched decoration, red slipped
- 00/44 Body sherd from incised pyxis, black slipped, herringbone decoration

# **MITATOULIA**

- (all EM I, unless stated)
- 00/1 Large pithos fragment, chaff tempered, orange fabric, organic matter voids.
- 00/2 Outurned rim of basin, coarse fabric, mica inclusions, orange fabric.
- 00/3 Very large body sherd of pithos, wall thickness 4 cm, horizontal applied bands with stamped herringbone pattern (Kerbschnitt).
- 00/4 Body sherd from coarse large open bowl, slipped and burnished interior.
- 00/5 Conical pedestalled foot of bowl or lower section of chalice, red-black burnished.
- 00/6 Body sherd from small bowl, black slipped exterior
- 00/7 Rim of deep coarse bowl, black slipped exterior
- 00/8 Tall collar neck of pithoid jar, orange fabric, unpainted.
- 00/9 Small bowl rim, dgbw, with applied pellet lug.
- 00/10 Body sherd of jar/lekane with scoring.
- 00/11 Body sherd of incised pyxis, black burnished.
- 00/12 Join and foot of pedestalled goblet, dgbw.
- 00/13 Join and start of pedestalled base of chalice with incised bands below join, dgbw.
- 00/14 Rim of small bowl/jar with scoring on exterior.
- 00/15 Body sherd of red slipped and burnished pyxis with incised decoration of one band and stripes of hatched triangles.
- 00/16 Join and start of pedestalled foot of chalice with six incised bands around the join, dgbw.
- 00/17 Large goblet flaring pedestalled base with perforation, coarse, calcite tempered.
- 00/18 Base of coarse pedestalled goblet, EM IIA

- 00/19 Join and start of pedestalled base of chalice, with incised horizontal bands below join, originally dgbw but fugitive.
- 00/20 Handle (of small jug?), dgbw, EM I-IIA
- 00/21 Fragment of pedestalled conical base, dgbw.
- 00/22 Rim from bowl, red slipped and burnished.
- 00/23 Body sherd of pithoid jar with raised band, red slipped and burnished.
- 00/24 Body sherd of small bowl, red slipped and burnished interior and exterior
- 00/25 Join and start of pedestalled conical base of pedestalled goblet/chalice
- 00/26 Body sherd from bowl, red slipped
- 00/27 Rim of bowl or pyxis, red slipped.
- 00/28 Full profile of large open bowl, scored exterior.
- 00/29 Handle and neck of jug, red slipped, EB II/ EM II.
- 00/30 Vertical handle from deep bowl, dgbw.
- 00/31 Shoulder and start of neck from pithos or pithoid jar with rope decoration, red slipped, with incised raised band below neck.

# **CHANIA TOWN**

- 00/1 Slightly incurving rim of shallow open bowl, red slipped and burnished on interior, EM I-II
- 00/2 Slightly incurving rim of shallow open bowl, red slipped and burnished on interior and exterior EM II
- 00/3 Body sherd of goblet, brown slipped and burnished, EM IIB
- 00/4 Body sherd of deep bowl, brown slipped and burnished, EM I-II
- 00/5 Body sherd of jug, red-brown slipped and burnished on exterior EM I-IIA.
- 00/6 Body sherd of shallow bowl, red-brown slipped and burnished on interior, black burnished on exterior EM I-IIA.
- 00/7 Jar base, brown-black slipped and burnished on interior, EM I-IIA
- 00/8 Outcurving rim of bowl, black slipped and burnished, EM II.
- 00/9 Body sherd of thick walled pedestalled bowl, dgbw, black slipped and burnished, EM I-IIA.
- 00/10 Body sherd of goblet/bowl, dgbw, black slipped and burnished, EM I-IIA
- 00/11 Lid, black slipped and burnished, EM I-IIA
- 00/12 Body sherd of closed vessel with black burnish on exterior, EM I-IIA
- 00/13 Footed goblet, red black slipped, EM IIB-MM I
- 00/14 Footed goblet, red black slipped with potter's mark under base, EM IIB-MM I
- 00/15 Low pedestalled footed goblet base with black slipped exterior, late EM IIA or EM IIB
- 00/16 Ring base of saucer, dark slip fugitive on exterior, EM IIA.
- 00/17 Body sherd of jug/spouted jar, incised separated herringbone/rows of diagonal slashes, black slipped, EM IIA.
- 00/18 Outcurving rim and body sherd of small bowl, EM II.
- 00/19 Saucer, EM IIA.

- 00/20 Saucer, EM IIA
- 00/21 Saucer, black slipped on interior, EM IIA.
- 00/22 Ring base of saucer/sauceboat, red/black slipped and burnished on interior and exterior, EM IIA.
- 00/23 Incurving rim and body sherd of shallow bowl, black slipped, EM IIA.
- 00/24 Body sherd of jug/jar, black mottled, EM II
- 00/25 Rim of cup/goblet with red-black mottling on interior and exterior, EM II.
- 00/26 Body sherd of goblet, thick walled, red slipped on interior, red brown mottled on exterior, EM IIB
- 00/27 Body sherd of jar, coarse ware, with three painted red bands, EM I-IIA
- 00/28 Shallow bowl with outurned rim, red slipped on interior and exterior, EM IIA-IIB.
- 00/29 Shallow bowl with inturned rim, red slipped on interior and exterior, EM IIB
- 00/30 Body sherd of large jar, red slipped and burnished on exterior, EM II
- 00/31 Body sherd of goblet, red slipped on interior and exterior, EM IIB
- 00/32 Body sherd of thin-walled sauceboat, orange-black mottled on exterior, EM IIB
- 00/33 Body sherd of sauceboat, orange-black fine mottling
- 00/34 Body sherd of fine sauceboat, orange-black mottled on exterior
- 00/35 Body sherd of sauceboat/goblet, orange-black mottled on exterior,
- 00/36 Outurned rim of shallow bowl, calcite tempered, EM IIB or later
- 00/37 Rim of straight-sided deep bowl
- 00/38 Rim of bowl with S-profile, late?
- 00/39 Large shallow bowl with everted and internally thickened rim, EM IIB-MM I.
- 00/40 Large shallow bowl with internally thickened and outcurving rim, EM IIB
- 00/41 Horizontal handle from deep bowl/cooking pot, calcite tempered, EM II
- 00/42 Horizontal pushed-through handle from large jar, fine calcite fabric, EM II

- 00/43 Collar-necked jar with thick creamy calcareous slip and tempered with fine calcite, EB II
- 00/44 Shallow bowl with pellet lug, grooving on interior of rim, creamy slip and fine calcite temper, EM II(B) LP
- 00/45 Base of deep bowl, mottled on interior, calcareous slip and red paint on exterior, late EM IIA-IIB.
- 00/46 Base of baking plate with high walls, EM IIB
- 00/47 Rim of deep bowl/jar with incurving profile, scored exterior, coarse calcite tempered, cooking pot ware
- 00/48 Body sherd of pithos in coarse ware fabric and scored exterior EM I-II
- 00/49 Body sherd of thin walled jug/jar, red slipped and burnished on exterior, fine calcite fabric, EM II

# PLATYVOLA CAVE

- 00/1 Rim of pedestalled bowl, black slipped and burnished on interior and exterior, applied horizontal ridge below rim on exterior, EM I
- 00/2 Pedestalled bowl with burnished and red-black mottled on exterior, EM I.
- 00/3 Carinated bowl Neolithic?
- 00/4 Fragment of bowl of pedestalled goblet/chalice, red slipped on interior and exterior, with scribble pattern burnish, EM I.
- 00/5 Body sherd from incised globular pyxis with reddish brown slip on exterior and hatched decoration, EM I-IIA
- 00/6 Body sherd from globular pyxis with black slip applied on buff ground, four parallel horizontal incisions EM IIA.
- 00/7 Body sherd from jug, thin-walled, reddish brown to black exterior, slipped and burnished, EM IIA.
- 00/8 Neck and shoulder of jug, red slipped and burnished on exterior, applied pellet on shoulder below spout. The inside of neck is scored, EM IIA
- 00/9 Narrow and tall neck, shoulder and handle join from long vertical neck jug.

  The exterior is red slipped, the fabric under slip being orange, EM II.
- 00/10 Outurning rim of bowl, dgbw, black slipped on interior and exterior, EM IIA
- 00/11 Bowl base and beginning of pedestalled foot of sauceboat, brown-black slipped on interior and exterior, uneven firing on interior of base (brown imprint), EM IIA.
- 00/12 Outurning rim and body sherd of open deep bowl. Heavy vertical scoring on exterior, red slip on interior and top of rim, EM I.
- 00/13 Shoulder and start of neck of large collared jar, vertical handle on shoulder, vertical scoring on exterior, EM I.
- 00/14 Upper body sherd of jug, with scoring on exterior, EM I.
- 00/15 Body sherd of jug/jar, coarse schist inclusions, red-brown slip and scoring on exterior, EM I-IIA.

- 00/16 Lower body and start of base of bowl, red slip and scoring on exterior, red slipped and smoothed interior, large angular calcite temper, EM I-IIA.
- 00/17 Collar of collar- necked jar, almost two-stage neck, externally has thick calcareous slip, with black slip wiped over. Fine calcite tempered fabric.

  Calcareous slip extends to interior of collar neck. EM II.
- 00/18 Collar of collar- necked jar, thick calcareous slip over red fine calcite fabric.

  Painted bands below rim on the interior and exterior, bands on the join between neck and body, EM II (or later).
- 00/19 Collar neck with outcurving rim, fine calcite fabric, thick calcareous slip, traces of black slip on exterior, EM II.
- 00/20 Body sherd of large thin walled jar, lower part of vessel infilled red slip red painted cross-hatching, EM I-IIA.

#### **PSATHI**

- 00/1 Rim and body sherd of footed goblet, black monochrome exterior, painted line on inside of rim, EM II.
- 00/2 Body and join sherd of sauceboat, red black mottled exterior, EM IIA
- 00/3 Body sherd of sauceboat, red black mottled exterior, EM IIA
- 00/4 Body sherd of large sauceboat, red black mottled exterior, brown to black monochrome wash on interior, EM IIA.
- 00/5 Base of sauceboat, red monochrome, EM IIA
- 00/6 Body sherd of goblet, fugitive red and black mottling on exterior, late EM IIA-IIB
- 00/7 Lower body and joined pedestalled base of sauceboat. Brown-black slipped and burnished surface on exterior, EM IIA.
- 00/8 Rim and body sherd of sauceboat, reddish-brown/black mottling on interior and exterior, EM IIA.
- 00/9 Body sherd of sauceboat, red black mottling on exterior, EM IIA
- 00/10 Body sherd of bowl or sauceboat, reddish brown monochrome exterior, reddish-brown to black mottled interior. EM IIA
- 00/11 Body sherd of jug/jar, mottled black exterior, EM II (A?).
- 00/12 Rim of thin-walled small Urfirnis sauceboat with applied pellet on rim exterior, lustrous black slip, EM IIA.
- 00/13 Rim of deep bowl with internal thickening. Vertical lug handle attached to rim. Black monochrome EM II (B?)
- 00/14 Shallow bowl with internally thickened rim, red monochrome on inside and outside, EM IIB.
- 00/15 Shallow bowl rim with incised line at interior and exterior of rim. Red monochrome slip inside and outside EM IIB (?)
- 00/16 Saucer with internally thickened rim, black monochrome inside, EM IIA

- 00/17 Saucer with internally thickened rim, rough finish externally, incised line on top of rim, EM IIA.
- 00/18 Saucer with internally thickened rim, grove incised on rim, externally rough finish, internally fugitive black monochrome EM IIA.
- 00/19 Jug neck with cutaway spout and large pellet eye. D-o-l black linear decoration, EM II?
- 00/20 Jug neck with cutaway spout, pellet eye, monochrome black exterior, black paint extends over the rim to the interior, EM II
- 00/21 Jug neck and spout with d-o-l banding. EM IIA
- 00/22 Jug handle, incised to give impression of composite handle. Black monochrome painted, EM II
- 00/23 Spout from long-spouted jar, d-o-l (red) linear painted parallel stripes along length of spout. Applied pellet eye, EM II
- 00/24 Spout from long-spouted jar with applied pellet eye. Reddish brown to black slipped exterior, red slip extends over rim to interior of spout, EM IIB.
- 00/25 Rim of spout from jug with applied pellet eye. Monochrome black exterior, black paint extends over the rim to the interior, EM II.
- 00/26 Rim of spout from jug with applied pellet eye. Fugitive monochrome slipped exterior, EM II.
- 00/27 Spout from large long-spouted jar with applied pellet eyes, no slip visible, very worn, EM IIB.
- 00/28 Spout from long-spouted jar with applied pellet eye. Fugitive d-o-1 reddish brown linear decoration, EM II.
- 00/29 Lower body sherd of jug, black slipped exterior
- 00/30 Strap handle of an askos which tapers in the middle, "metallising" with incised herringbone divided by vertical incisions. Black monochrome, EM IIA.
- 00/31 Carinated jar with outurned rim, strap handle from shoulder. Red monochrome slip on exterior extends over the interior of rim, EM II

- 00/32 Jar shoulder and outurned rim, black monochrome exterior, perforation for side spout, EM IIB-LP (?)
- 00/33 Jar rim base, black monochrome slipped exterior, EM IIA
- 00/34 Jar rim base, black paint under side of base and incision around foot of base, EM IIA.
- 00/35 Incised body sherd of pyxis with horizontal and diagonal parallel incisions.

  No sign of slip or paint, EM IIA
- 00/36 Cooking pot ware body sherd, with scored exterior, probably from deep bowl, EM IIA

# KASTELLI

- 00/1 Externally thickened rim from pedestalled bowl, black burnished, EB I.
- 00/2 Internally thickened rim from pedestalled bowl, red slipped and burnished, EB I.
- 00/3 Rim tapering on the interior of shallow bowl, black burnished, EB I
- 00/4 Body sherd from bowl, red slipped and burnished, EB I.
- 00/5 Pedestalled foot of jar, black burnished, EM I
- 00/6 Body sherd of open vessel, red-brown slipped and burnished on interior and exterior, EB I.
- 00/7 Body sherd of open vessel, red-brown slipped and burnished on interior and exterior, EB I.
- 00/8 Rim of chalice/shallow bowl, red-brown slipped and burnished on interior and exterior, EB I.
- 00/9 Shallow bowl with slightly outurned rim, red slipped and burnished highly/scribble burnished, EM IIA
- 00/10 Externally thickened rim of small bowl, red fabric, scribble burnished, EM IIA
- 00/11 Body sherd open vessel, red scribble burnished on exterior, EB I(?), EM I-IIA.
- 00/12 Internally thickened rim from small bowl, red burnished and slightly mottled on interior and exterior, EM II
- 00/13 Lid with cylindrical handle, black burnished, EM I-IIA
- 00/14 Lid with cylindrical handle, black burnished, EM I-IIA
- 00/15 Jar base, black burnished or dgbw, EB I/ EM I-IIA
- 00/16 Rim of fine ware deep bowl, dgbw/but like grey, burnished on interior and exterior, EM IIA.
- 00/17 Body sherd from open shape (bowl), dgbw, EM IIA
- 00/18 Body sherd from open shape (bowl), dgbw, EM IIA

- 00/19-34: Body sherds from scored ware (wiped and washed). All jugs or jars with collar neck, red or black slipped, EM I-IIA
- 00/35 Deep bowl rim, hard red fabric, almost vertical wall.
- 00/36 Deep bowl rim originally with burnished surface. EB I
- 00/37 Baking plate rim shaped into lug, EB II.
- 00/38 Deep bowl rim, calcite tempered, EB II.
- 00/39 Baking plate rim, joined to body, calcite tempered.
- 00/40 Rim of deep bowl, calcite tempered with diagonal scoring on exterior
- 00/41 Rim of jar without collar, calcite-tempered with diagonal scoring on exterior, EB II.
- 00/42 Closed shape with slightly outurned rim, calcite tempered, burnished on interior, EM I-IIA.
- 00/43 Outurned rim of basin, grog tempered, scoring on exterior, EM IIA.
- 00/44 Outurned rim of large jar, calcite tempered, diagonal scoring on exterior.

  Must be T-shaped (MBA).
- 00/45 Body sherd from jug/jar, calcite tempered, scored, EM IIA.
- 00/46 Rim of thin-walled slightly globular jar, calcite tempered, with small vertical lug at start of shoulder, EM I-IIA.
- 00/47 Base of baking pan/plate, calcite tempered, EM I-IIA.
- 00/48 Base of baking pan/plate, calcite tempered, EM I-IIA.
- 00/49 Base of baking pan/plate, schist tempered, EM I-IIA.
- 00/50 Base and body join of flat-based jar/deep bowl, schist tempered, EM I-IIA.
- 00/51 Pedestalled foot of deep bowl, calcite tempered, EB II.
- 00/52 Body sherd of jug with herringbone incision, grey-buff fabric
- 00/53 Pedestalled foot of goblet, red/black slipped, late EM IIA
- 00/54 Pedestalled foot of goblet, red/black slipped

- 00/55 Rim of thin-walled goblet or sauceboat, mottling on interior and exterior, high fired.
- 00/56 Rim of thin-walled goblet or sauceboat, mottling on interior and exterior, high fired, softer fabric than above
- 00/57 Body sherd from goblet, mottling on interior and exterior, high fired.
- 00/58 Body sherd from goblet with pronounced mottling
- 00/59 Flat base of saucer, black slipped, Helladic-style.
- 00/60 Pedestalled foot of sauceboat, EM II
- 00/61 Pedestalled foot of sauceboat, EM II
- 00/62 Body sherd of jar/jug, black slipped with applied cordon band
- 00/63 Saucer with inturned rim, mottled and slipped on interior
- 00/64 Saucer with inturned rim, lug on exterior of rim, grove and incised line on top of rim, slip on interior, plain on exterior
- 00/65 Semi-coarse saucer with upturned rim and incised line around, mottled, slipped on interior.
- 00/66 Saucer with inturned rim, lug on exterior of rim, grove and incised line on top of rim, slip on interior
- 00/67 Spout of jug or sauceboat, black slipped on exterior
- 00/68 Neck, rim and handle of jug, red/black slipped, semi-coarse fabric
- 00/69 Spout of cutaway jug or sauceboat, black slipped on exterior, white-buff fabric
- 00/70 Body sherd from jug/jar, red-black mottled on exterior
- 00/71 Jug with herringbone incision on shoulder, black slipped.
- 00/72 Jug with herringbone incision on shoulder, black slipped.
- 00/73 Body sherd of jug, black slipped
- 00/74 Spout of sauceboat in pink fabric, with calcareous slip
- 00/75 Body sherd of jug/jar, black slipped on exterior

- 00/76 Large ledge rim jar, black slipped, coarser than above
- 00/77 Askos with flat metalising handle, black slipped
- 00/78 Externally thickened rim of spouted jar with flat metalising handle and herringbone incision on shoulder, EM IIB.
- 00/79 Outurned rim of spouted jar with flat metalising handle, EM IIB
- 00/80 Pellet eye spout of big spouted jar, black slipped, EM IIB
- 00/81 Ring base of saucer, red-brown slipped on interior, buff fabric with mudstone
- 00/82 Ring base of saucer, slipped on exterior, fabric with mudstone
- 00/83 Body sherd of saucer, red/black mottled
- 00/84 Body sherd of shallow goblet, red/black mottled
- 00/85 Inturned rim of saucer, black slipped on interior and exterior
- 00/86 Body sherd of jar, red/black mottled, EM IIB
- 00/87 Semi coarse large shallow bowl with thickened rim and groove around interior, burnished on interior, EM IIB.
- 00/88 Flat base of bowl, coarse fabric with small calcite, black slipped on exterior, EB I
- 00/89 Internally and externally thickened rim of deep bowl, red slipped; T-shaped rim, EM II MM.
- 00/90 Rim of pedestalled bowl, red slipped, EM I-II
- 00/91 Rim of pedestalled bowl, red slipped, EM I-II
- 00/92 Body sherd of pithos with ridge and pellet, calcite tempered, red slipped on exterior, EM II or later
- 00/93 Inturned rim of semi-coarse saucer, red slipped, calcite tempered
- 00/94 Rounded rim of pedestalled bowl, red slipped on interior and exterior and burnished, EM I.
- 00/95 Body sherd of pithos with two horizontal applied ridges and thick creamy slip on exterior, calcite tempered, EM IIA.

- 00/96 Body sherd of large flaring bowl, with buff slip on exterior and light burnish on interior, EM IIA
- 00/97 Body sherd of small jug/jar thick creamy calcareous slip on exterior, EM II
- 00/98 Body sherd of jar, thick creamy calcareous slip on exterior, calcite tempered, EM IIA
- 00/99 Outurned rim of deep bowl, pellet on rim, red slip on interior and exterior, EM IIB
- 00/100 Body sherd of fine-walled jug with thick creamy calcareous slip on exterior, red wash over calcareous slip, black-on-light painted traces, calcite tempered, EM II
- 00/101 Internally thickened rim of shallow bowl, with red band underneath on interior and exterior, EM IIA2- IIB
- 00/102 Large shallow bowl with thickened rim, slightly outurned profile, thick creamy slip with red painted bands on interior of rim, painted on the other side, d-o-l, EM IIB MM
- 00/103 Pedestalled footed base of large open jar with red-brown slip on exterior EM
- 00/104 Pedestalled foot of footed goblet/sauceboat with red slip on exterior, EM IIA
- 00/105 Outurned rim of side-spouted hole-mouthed jar, red-black mottled slip, hard buff fabric, EM IIB.
- 00/106 Cutaway spout of jug with pellet eye, red slipped, EM II.
- 00/107 Body shoulder and neck of side-spouted jar with incised decoration one on carination, one on body, red slipped on exterior, slip extends over rim, EM IIB.
- 00/108 Body sherd of large askos with applied ridge, red slip above, EM IIA
- 00/109 Tapered strap handle of open shape, red slipped on interior and exterior, EM IIA.
- 00/110 Neck and handle of jug with cutaway spout, pellet eye and red slipped on exterior, EM IIA.

- 00/111 Rim and body sherd of goblet, red-brown to black mottled on interior and exterior, EM IIB
- 00/112 Flat base of jar, red slipped on exterior and base, EM II.
- 00/113 Rim and shoulder of small carinated pyxis, red slipped on exterior, EM IIA
- 00/114 Inturned rim of saucer, red slipped on interior and exterior, EM II
- 00/115 Inturned rim and body sherd of saucer, red-brown slipped on interior and exterior, EM II
- 00/116 Body sherd of closed vessel with red-brown slip on exterior, EM IIA
- 00/117 Base of small jug with red-brown slip and burnish on exterior, EM IIA
- 00/118 Body sherd of jug/pyxis with red slip on exterior, EM IIA
- 00/119 Deep bowl with T-shaped rim, thickened internally and externally, redbrown to black slipped, EM IIA
- 00/120 Tapering rim of large shallow bowl, EM IIA
- 00/121 Body sherd of large jar/pithos externally wiped/scored, EM II
- 00/122 Body sherd of large jar, thin-walled, thick white slip on exterior, burnished with traces of black painted decoration
- 00/123 Horizontal pushed-through handle of large jar
- 00/124 Body sherd of jar with traces of red slip on interior and exterior, calcitetempered.
- 00/125 Body sherd of jar, coarse fabric, schist inclusions
- 00/126 Externally thickened rim of large jar/pithos with traces of handle and applied band under rim, EM IIA
- 00/127 Body sherd of pithos with plastic rope decoration and finger impression, EM II.
- 00/128 Body sherd of pithos with applied ridge, small calcite fabric
- 00/129 T-shaped rim of jar, calcite tempered
- 00/130 Thickened rim of jar, schist tempered

- 00/131 Externally and internally thickened rim and body sherd of jar without collar, calcite tempered
- 00/132 Outurned rim and body sherd of open jar (MBA?)
- 00/133 Slightly inturned and externally thickener rim and body sherd of large open vessel, wiped on interior and exterior, black slip on top of rim on interior, EB II
- 00/134 Body sherd of large semi-coarse jug, orange-buff clay with schist inclusions.

  Red painted vertical stripes from one shoulder and base of neck, EM I

  00/135 Baking plate, fine calcite tempered fabric, EM II.
- 00/137 Rim and body sherd of goblet/cup, straight-sided and thin-walled, red slipped on interior and exterior, EM IIB.

Note: there is no sample 00/136

# **NOPIGEIA**

- All EM IIA unless stated
- 00/1 Hearth rim with triangular impressed patterns and kerbschnitt, perforated wall.

  Schist quartz and calcite temper
- 00/2 Hearth rim with triangular impressed pattern and incised line around rim.

  Mudstone or phyllite temper (Karantzali 1997: Fig. 11 middle row, left).
- 00/3 Hearth without decoration. Pink to grey fabric with chaff temper.
- 00/4 Hearth rim, mudstone phyllite temper, impressed triangular pattern around rim and incised kerbschnitt line. Mudstone or phyllite in soft orange fabric. (Karantzali 1997: Figure 11 middle row, right).
- 00/5 Baking plate rim with phyllite and schist temper-pierced.
- 00/6 Baking plate rim with schist and phyllite temper.
- 00/7 Baking plate rim, calcite tempered.
- 00/8 Baking pan rim and beginning of base, calcite tempered.
- 00/9 Baking plate rim, phyllite tempered.
- 00/10 Baking plate base and beginning of body.
- 00/11 Baking plate
- 00/12 Baking plate, phyllite tempered.
- 00/13 Baking plate, turned exterior.
- 00/14 Flaring rim of deep bowl, EM II-MM.
- 00/15 Open jar/deep bowl rim with slightly convex profile, phyllite tempered
- 00/16 Deep bowl, cooking pot rim, straight profile, horizontal scoring, (Karantzali 1997: Plate 20B, lower left), EB II could be later.
- 00/17 Low neck of collared jar, EM II-MM.
- 00/18 Rim of coarse shallow basin with everted rim. Calcite tempered, EM II-MM.
- 00/19 CPW, deep bowl, with globular profile and diagonal scoring underneath rim, (Karantzali 1997: Plate 20B upper right).

- 00/20 CPW, deep bowl/open jar with rounded profile, phyllite temper.
- 00/21 Deep bowl, in calcite tempered fabric with thickened rim inside and out.
- 00/22 CPW body sherd with phyllite and calcite
- 00/23 Tripod leg in phyllite fabric, MM?
- 00/24 Tripod leg, phyllite fabric, MM?
- 00/25 Pithos with vertically pierced lug and scoring of the body, maroon phyllite temper, EM I-IIA.
- 00/26 Pithos body sherd with applied ridges, calcareous slip EB II later.
- 00/27 Small storage jar with slightly everted rim, two applied bands below rim. Burial pithos, EB II, (Karantzali 1997: Figure 13).
- 00/28 Pithos body sherd with maroon phyllite temper, heavy scoring on exterior, EM I-IIA.
- 00/29 Pithos body sherd with curved appliqué rope pattern (Karantzali 1997: Plate 20C). EB II.
- 00/30 Collar neck of jar, wide mouthed, black slipped, EB II or later
- 00/31 Pithoid jar/basin with externally thickened rim, finger impressions. Pink to grey soft fabric, (Karantzali 1997: Plate 20D lower right), EB II.
- 00/32 Large jar/pithos, quartz and calcite temper, interior red slipped and burnished. Rope band beneath externally thickened rim. EB II.
- 00/33 Large open jar, maroon mudstone/phyllite in pink fabric, finger impressions on band below rim, (Karantzali 1997: Plate 20E, lower left).
- 00/34 Pithos body sherd with applied cordons, one with finger impressions, soft pink fabric. EB II.
- 00/35 Open jar with externally thickened rim, red slipped interior, EB II or later.
- 00/36 Open jar with internally and externally thickened rim, quartz and calcite temper, EB II.
- 00/37 Basin with externally thickened rim. Maroon mudstone phyllite in pink fabric, EB II.

- 00/38 Jug/jar body sherd, with applied cordon diagonal scoring beneath cordon, hard thin walls with mica, EB II.
- 00/39 Collar neck from transport jar, grey fabric, EB II.
- 00/40 Collar neck from small transport jar. Grey fabric with calcareous inclusions, originally calcareous slipped. EB II.
- 00/41 Pithoid jar body sherd, three concentric curved applied ridges, phyllite temper.
- 00/42 Large jug neck, red slipped and burnished, (Karantzali 1997: Figure 10, no.43).
- 00/43 Jug/jar body sherd in scored ware, EM I-IIA.
- 00/44 Body sherd of jug, scored exterior, EM II.
- 00/45 Body sherd of fine jug. Thick white slip, wiped on exterior. Pink orange fabric with grey interior, EM I-IIA.
- 00/46 Jug base with pellet foot in buff fabric, EM IIA.
- 00/47 Large shallow bowl with slightly flaring profile, internally thickened rim, in buff to orange fabric with quartz and calcite. EB II.
- 00/48 Shallow bowl with ridging on exterior, phyllite fabric. EM II or later.
- 00/49 Deep bowl in coarse grey firing fabric, diagonal scoring as with cooking vessels but this is jar fabric. EB II.
- 00/50 Pedestalled chalice join with two horizontal grooves at join, vertical pattern burnishing on foot. EM I, (Karantzali 1997: Figure 4, no.5).
- 00/51 Pedestalled chalice join with two horizontal grooves at join, EM I, (Karantzali 1997: Figure 4, no.5).
- 00/52 Pedestalled goblet/chalice foot. DGBW. EM I
- 00/53 Pedestalled foot of sauceboat? DGBW. EM IIA.
- 00/54 DGBW body sherd of closed shape. EM I-IIA.
- 00/55 DGBW sherd of chalice. EM I.
- 00/56 Body sherd of black slipped bowl. EB II.

- 00/57 Bowl with flat base, dgbw/ black slipped and highly burnished on interior only, calcite tempered. EB II.
- 00/58 Body sherd of black slipped jar on pink soft fabric. EB II
- 00/59 Coarse jar, externally red slipped and wiped, maroon phyllite temper. EB II (or later?).
- 00/60 Large bowl with T-shaped rim profile, red slipped on interior and top of rim. Soft buff fabric, EM IIA.
- 00/61 Jug body sherd with red slipped and burnished exterior.
- 00/62 Bowl body sherd, internally red burnished, externally red-black mottled Urfirnis finish. EM IIA
- 00/63 Double barrelled handle from askos, black slipped
- 00/64 Jug handle with diagonal slashes to imitate twisted handle, (Karantzali 1997: Plate 22A, 3<sup>rd</sup> from right).
- 00/65 Sauceboat foot, over fired.
- 00/66 Jug shoulder with incised herringbone black slip, firing grey (Karantzali 1997: Figure 10, 41 Plate 22B).
- 00/67 Sauceboat foot and join, red black slipped over grey fabric.
- 00/68 Sauceboat foot and join, black slipped over grey fabric, (Karantzali 1997: Figure 4,1).
- 00/69 Ring base of saucer in pink fabric.
- 00/70 Ring base of saucer in pink to grey fabric.
- 00/71 Pedestalled foot of sauceboat, grey fabric.
- 00/72 Spout of sauceboat, grey-buff fabric, black slipped, (Karantzali 1997: Figure 10,44).
- 00/73 Arched handle of fine sauceboat in pink-grey fabric.
- 00/74 Rim of sauceboat, with applied band below rim. Fine grey to orange fabric.
- 00/75 Pedestalled base of sauceboat. Fine grey fabric, black slipped externally, (Karantzali 1997: Figure 4, 7).

- 00/76 Large open jar/deep bowl with slashed horizontal bands on fine orange fabric.
- 00/77 Vertically pierced lug on body sherd from pyxis, pink fabric with phyllite, EM II.
- 00/78 Body sherd and shoulder of large jar with external ledge rim, impressions on exterior, fine orange fabric, (Karantzali 1997: Figure 9, 36). EB II.
- 00/79 Jar/large pyxis? Horizontally pierced lug, calcite tempered.
- 00/80 Large incised jar, decoration with incised herringbone and incised alternating hatched triangles. Grey coarse fabric, (Karantzali 1997: Plate 21A).

# **STAVROMENOS**

- 00/1 Body sherd of large bowl, red burnished on exterior, red-brown burnished on interior, EM I-II.
- 00/2 Flat base of jug with pellet foot, red-brown slipped and burnished, EM IIA.
- 00/3 Body sherd of jug/jar, black slipped, EM IIA
- 00/4 Jug/jar with carinated rounded base, black slipped and burnished exterior, EM IIA
- 00/5 Base and beginning of wall of bowl, dgbw, EM I-IIA
- 00/6 Body sherd of bowl/goblet, dgbw, EM I-IIA
- 00/7 Baking plate, angular calcite-tempered, in buff matrix, EM I-IIA
- 00/8 Deep bowl/open jar/baking plate rim, schist tempered, EM I-II
- 00/9 Body sherd of jar, angular calcite-tempered, reduced interior, brown exterior, with wiping and wash, EM I
- 00/10 Body sherds of jug/jar, semi-coarse sandy fabric, red slipped on exterior with wiped surface, EM I
- 00/11 Deep bowl with globular profile and T-shaped rim, angular calcite-tempered, uncertain date (EM II-III/MM I)
- 00/12 Body sherds of jug, red slipped and burnished on exterior, EM IIA
- 00/13 Neck of large jug with cutaway spout and two pellet eyes which are chaff tempered, red slipped and burnished on exterior, EM IIA
- 00/14 Pronounced base of jar, with applied ridge above base and diagonal incision, red slipped and burnished on exterior, EM IIB-MMI.
- 00/15 Rim sherd of shallow bowl with flaring profile, red slipped and burnished on exterior and interior, EM IIB
- 00/16 Rim and body sherd of carinated goblet, EM IIA
- 00/17 Fine collar neck of goblet with outurned rim, EM IIA
- 00/18 Pedestalled foot of carinated goblet with red slip on inside foot, EM IIA
- 00/19 Bowl/jug base or join of large pedestal, red slipped and burnished, EM IIA

- 00/20 Side spout of spouted jar with pellet eye, red slipped and burnished, EM IIA
- 00/21 Neck and spout of cutaway spouted jug with pellet eye, black slipped and burnished, EM II.
- 00/22 Collar neck of jar with outurned rim, painted orange semi-coarse fabric, red slipped and burnished? no surface preserved, EM IIA
- 00/23 Shallow bowl with incurving profile, soft orange fabric, red slipped and burnished on interior, EM II.
- 00/24 Pedestalled fruitstand, red slipped and burnished on interior and exterior, slightly inturned rim, EM IIA.
- 00/25 Body sherd of jug/jar, thin walled, with thick creamy calcareous slip, EM II
- 00/26 Inturned rim of large open bowl, moulding on exterior, outurned spout, large angular calcite tempered, EM IIA.
- 00/27 Neck, rim and handle attachment of jug, very high fired, EM IIA
- 00/28 Basin, coarse ware, external moulding on upper body, brown slipped on interior and on top of flattened rim, EM II
- 00/29 Shallow bowl, EM IIA
- 00/30 Slightly everted rim of plate, red-brown slipped and burnished on interior and slightly on exterior with red painted band along rim with a groove, EM II.
- 00/31 Rim of shallow bowl with smoothed interior and diagonal wiping on exterior, EM II
- 00/32 Saucer/shallow bowl with internally thickened and inturned rim, externally pared, red brown slipped and burnished on exterior, EM IIA.
- 00/33 Semi-coarse ware jug with calcareous slip, and black-brown painted decoration, EM IIA-B
- 00/34 Jug with fine calcareous fabric, red-brown d-o-l painted linear decoration (or slip), EMIIA
- 00/35 Neck of large jug, d-o-l, fine fabric, EM IIB
- 00/36 Jar, coarse ware, with chaff and grog temper, thick slip on exterior, EM I-II.

- 00/37 Coarse ware jar with chaff temper, red-brown slipped exterior, incised herring-bone pattern, EM II.
- 00/38 Body sherd of bowl, externally black slipped and burnished, internally and externally red-brown slipped and burnished, EM IIA.
- 00/39 Body sherd of thin-walled jar, brown fabric with sand temper, EM II
- 00/40 Body sherd of jug, reddish-brown slipped and burnished on exterior, EM IIA.

# **ELEUTHERNA**

- 00/1 Cooking pot ware body sherd, red schist temper, with scoring/wiping on exterior, EM II (?)
- 00/2 Rim of pedestalled bowl with externally thickened rim (thickening below rim), red slipped and burnished, EM I.
- 00/3 Pithos body sherd, chaff- and grog tempered, scored exterior, EM I.
- 00/4 Rim of pedestalled bowl, thickened band below rim, grey fabric, EM I.
- 00/5 Semi-coarse jug neck, red slipped on exterior, EM I-IIA.
- 00/6 Dgbw lid rim with applied pellet foot, EM I-IIA.
- 00/7 Chalice rim in grey fabric, worn dgbw (?), EM I.
- 00/8 Cooking pot ware body sherd, outurned rim, red slipped on exterior, EM IIA.
- 00/9 Body sherd of dgbw chalice bowl. EM I.
- 00/10 Cooking pot ware body sherd, externally wiped, EM IIA
- 00/11 Rim of pedestalled bowl, thickened bands below rim on interior and exterior, red slipped and burnished, EM I.
- 00/12 Externally thickened rim of pedestalled bowl, reduced exterior, chaff temper, EM I.
- 00/13 Body sherd of open thin-walled vessel, red slipped and burnished on interior and exterior, EM IIA.
- 00/14 Jug neck in grey fabric, originally black slipped (?), EM IIA.
- 00/15 Deep bowl rim, buff to orange sand tempered fabric, T-shaped profile, red painted line underneath rim on exterior, red painted band underneath rim on interior, EM IIA-B.
- 00/16 Externally thickened rim of pedestalled bowl, orange fabric with schist, EM I.
- 00/17 Slightly flaring rim of deep bowl, cooking pot ware.
- 00/18 Body sherd of jar, red schist fabric, thick calcareous slip on exterior, EM IIA.
- 00/19 Goblet rim, fine orange fabric, red slipped on exterior, EM IIA

- 00/20 Body sherd of jar or pedestalled foot of large pedestalled bowl, dgbw, EM I-IIA
- 00/21 Base and lower body of jug/jar in semi coarse fabric, red-orange slipped exterior, EM I-IIA
- 00/22 Body sherd of open shape, fine orange-buff fabric with red slipped exterior, EM IIA.
- 00/23 Dgbw body sherd from chalice, EM I.
- 00/24 Body sherd of jug in soft fine fabric, red slipped and burnished on exterior, EM II(A).
- 00/25 Body sherd of jug/jar, coarse calcite-tempered fabric, scoring on exterior, EM I-IIA.
- 00/26 Shallow bowl rim, with internal thickening, red slipped exterior, EM IIA (-IIB?)
- 00/27 Bowl and pedestalled join of carinated goblet/sauceboat, fine orange fabric with slip on interior and exterior, EM IIA.
- 00/28 Buff semi-coarse jug neck with painted dark-on-light banding, EM I-IIA.
- 00/29 Rim of goblet/bowl, rim slightly outurned, EM IIA.
- 00/30 Shoulder and neck join of coarse jug, red slipped and wiped exterior, handle attachment visible with chaff temper, EM I-IIA.
- 00/31 Base and lower body of coarse dark burnished bowl, EM I
- 00/32 Base and lower body of coarse jar, chaff-tempered, red slipped and burnished exterior, EM I
- 00/33 Rim of pedestalled bowl, with internal and external thickening, chafftempered, red slipped, EM I.
- 00/34 Rim of pedestalled bowl in grey fabric, EM I.
- 00/35 Rounded rim of chalice, black interior, brown exterior, EM I.
- 00/36 Baking plate rim, smooth interior, slight thickening on exterior, EM I (- IIA?)
- 00/37 Rim of baking plate, red-brown semi coarse fabric, EM I-IIA.

- 00/38 Rim of baking plate, red slipped on interior and upper exterior, EM I IIA
- 00/39 Rim of deep bowl in coarse red fabric, slightly thickened exterior, start of diagonal scoring on exterior, EM I-IIA.
- 00/40 Rim of pedestalled bowl, internally and externally thickened, the latter below rim, brown slipped and burnished (dgbw?), EM I?
- 00/41 Rim of pedestalled bowl with applied band below rim, top rim and interior is black to brown slipped and burnished, EM I.
- 00/42 Body sherd going up to shoulder of dark-on-light painted jug, black fan pattern, EM IIA.
- 00/43 Shoulder and start of neck of large semi-coarse jug/jar, black painted bands around neck, EM IIA
- 00/44 Rim of pedestalled bowl, red slipped on interior and exterior and wiped, applied band/external thickening below rim, EM I.
- 00/45 Part of rim and handle of semi-coarse jug, join of rim and handle is indented, originally dgbw, EM I.
- 00/46 Body sherd of large jug/jar, red slipped exterior, EM IIA
- 00/47 Dgbw body sherd of jug/jar or pedestalled foot, EM I-IIA
- 00/48 Baking plate rim, red orange schist tempered fabric, EM I-IIA.
- 00/49 Dgbw pedestalled bowl, finished on interior and exterior, on exterior there are three concentric applied bands, EM I.
- 00/50 Large basin/bowl in angular calcite tempered fabric, externally pattern scoring, EM I-IIA.

# APPENDIX II

## PETROGRAPHIC DESCRIPTIONS

## A. MITATOULIA FABRICS

**A1** 

FABRIC TYPE: Red with grog and white mica

# Samples

Subgroup (a)

MIT 00/2, 3, 5, 6, 7, 8, 10, 22, 23, 24, 26, 28, 29

KST 00/31

Subgroup (b)

MIT 00/ 12, 14, 25, 30

#### Microstructure

Few to very few meso and macro vughs, very few macro planar voids, rare mega vughs. In some cases planar voids and non-plastics (especially the micas) are oriented parallel to vessel margins. In their majority, though, voids and non-plastics are randomly oriented. The tcf's are occasionally surrounded by voids.

#### Groundmass

Homogeneous throughout the section. In a few samples (especially for subgroup b), the core is darker than the margins. The colour varies from grey-brown to orange-brown in PPL (x40) and from dark grey brown to orange and red brown in XPL. The micromass ranges from optically active to moderately active.

#### Inclusions

32

c:f:v 10 = ca. 10:85:5 to 20:77:3

Coarse Fraction: 4.68 - 0.1 mm long diameter

Fine Fraction: < 0.1 mm long diameter

Fine matrix with medium and coarse-sized inclusions (tcf's included). The coarse fraction has a size range from pebbles to very fine sand. The fine fraction is of very fine sand and below. Both fractions are poorly sorted. The packing of the coarse fraction is close- to double-spaced. That of the fine fraction is single- to double-spaced. It is matrix supported (wackestone texture).

## **Coarse Fraction**

Dominant to common: white mica laths

Common to frequent: monocrystalline quartz, equant or elongate, a-sa to sr with straight and

occasionally undulose extinction. Size: 1.0 - 0.1 mm long diameter.

biotite mica laths

<u>Few</u>: quartzite, composed of quartz grains and white mica, equant to

slightly elongate, sa. Some fragments grade into quartzite-schist. Size:

2.0 - 0.15 mm long diameter.

phyllite, ranging in colour from orange brown to dark brown and silvery in XPL, elongate, composed of quartz, biotite and white mica, and ion some cases chlorite and opaques (illmenite) are present. A few fragments are in intergrowth with quartzite. Size: 4.68 - 0.15 mm

long diameter.

Rare: biotite fragments

schist, elongate; Size: 0.3 - 0.15 mm long diameter.

<u>Very rare</u>: alkali feldspar, elongate, displaying simple twinning.

plagioclase feldspar

chert, equant. Size: 0.4 - 0.15 mm long diameter

Very rare to absent: micrite, sr.

chalcedonic quartz. Size: 1.0 - 0.15 mm long diameter

Boundaries of the coarse fraction: clear to merging.

#### Fine Fraction

Dominant to frequent: monocrystalline quartz

Common: white mica laths

Few: biotite mica laths

Very few: phyllite fragments

biotite fragments

Rare: epidote

chert

Very rare to absent: tourmaline (seen in MIT 00/29)

#### **Textural Concentration Features**

There are few to common tcf's of the following types:

a) greenish brown to brown in XPL, sa, with quartz and mica inclusions, discordant with the micromass, with clear to merging boundaries

b) orange red to dark red in XPL, sr with compact appearance, occasionally with quartz and mica inclusions, discordant with the micromass (clay concentrations/pellets)

c) grog fragments, dark brown in XPL, a-sa, with inclusions of quartz, mica, phyllite, quartzite. They are discordant with the micromass. Their boundaries are sharp to merging in some cases surrounded by voids.

Size: 1.8-0.2 mm long diameter

There is also evidence for clay mixing with clay striations and porphyroclasts.

**A2** 

FABRIC TYPE: Red with grog and organic temper

Samples

MIT 00/4, 13, 15, 31

DEB 00/35

Microstructure

Few meso to macro vughs, few to common macro and mega planar voids in most cases

oriented parallel to vessel margins. In some samples the non-plastics (especially the micas) are

also oriented parallel to vessels margins. There is evidence for organic tempering.

Groundmass

Homogeneous throughout the section. The colour is orange brown in PPL (x40) and brown to

dark red-brown in XPL. The micromass is optically active to moderately active.

Inclusions

c:f:v 10 = ca. 10:83:7

Coarse Fraction: 2.5 - 0.1 mm long diameter

Fine Fraction: < 0.1 mm long diameter

Fine to very fine matrix. The coarse fraction (textural concentration features included) has a

size range of very coarse to very fine sand (with some granules). The fine fraction is of very

fine sand and below. The coarse fraction is poorly sorted, the fine fraction is moderately to

well sorted. The packing of the coarse fraction is close (rarely)- to open-spaced, that of the

fine fraction is single- to open-spaced. It is matrix supported (wackestone texture).

### **Coarse Fraction**

Dominant to frequent: white mica laths, often displaying parallel orientation to vessel

margins

Few to common: monocrystalline quartz, equant or elongate, a-sa. Some grains display

high positive relief, some undulose extinction. Their size is medium

to small, mode: 0.2 mm. Size: 1.0 - 0.1 mm long diameter

Few: quartzite, equant, sa. Size: 1.25 - 0.25 mm long diameter

Very few: biotite mica laths

phyllite composed of biotite mica and quartz, elongate, fine grained, occasionally with opaques (illmenite). Size: 0.25 - 0.55 mm long

diameter

small-sized schist. Size: 0.75 - 0.5 mm long diameter mm long

diameter.

polycrystalline quartz, equant to elongate, size: 1.25 - 0.30 mm long

diameter

Very rare: chert fragments, equant, sr. Size: ca. 0.15 mm long diameter

alkali feldspar, elongated displaying simple twinning. Size: 0.25 mm

long diameter (seen in MIT 00/15)

Boundaries of the coarse fraction: clear to merging

### Fine Fraction

<u>Common</u>: monocrystalline quartz

Common to frequent: white mica laths

Very few: biotite fragments, equant, sa

biotite mica laths

Very rare: phyllite fragments

alkali feldspar in MIT 00/4

## **Textural Concentration Features**

Few with clear to merging (and most of times diffuse) boundaries. There rare three types:

- a) greenish-brown in XPL, sa, with quartz and white mica and occasionally with metamorphic rock inclusions. They are discordant with the micromass.
- b) orange brown to red brown in XPL, sr, with small- sized quartz and white mica laths, almost concordant with the micromass.
- c) grog fragments, dark brown to black in XPL, with inclusions of quartz and white mica, a-sa. They are discordant with the micromass.

Most of the tcf's are surrounded by voids. The size varies from 2.5 to < 0.1 mm long diameter.

**A3** 

FABRIC TYPE: Phyllite and white mica

Samples

MIT 00/17

Microstructure

Few meso and macro vughs and planar voids, close- to single-spaced, randomly oriented.

Non-plastics are randomly oriented too.

Groundmass

Homogeneous throughout the section. The margins are slightly brighter than the core. The

colour is orange-brown in PPL (x40) and dark red brown (margins) to brown in XPL. The

micromass ranges from optically active at the margins to moderately active at the core.

Inclusions

c:f:v 10 = ca. 40:56:4

Coarse Fraction: 1.7 - 0.15 mm long diameter

Fine Fraction: < 0.15 mm long diameter

Quite fine micaceous matrix with coarse inclusions (tcf's included). The size of the coarse

fraction ranges from very coarse to very fine sand, that of the fine fraction from very fine sand

and below. Both fractions are poorly sorted. The packing of both fractions is close-spaced and

it is matrix supported (wackestone texture).

## **Coarse Fraction**

Dominant:

white mica laths

Frequent:

low-grade metamorphic rock fragments; phyllite: a) brown or golden brown in XPL, elongated fine to very fine-grained with biotite mica and very few and small opaques (illmenite). Occasionally in "intergrowth" with quartzite. Some fragments display folding of the schistosity. Size: 1.5 - 0.2 mm long diameter, b) highly chloritised biotite, greenish-brown in XPL with quartzite and some

amphibole?, altered. Size: 1.0 - 0.3 mm long diameter.

quartzite: composed entirely of quartz, equant or elongate, occasionally with white mica laths (quartzite schist). Size: 1.35 - 0.25 mm long diameter.

Common:

monocrystalline quartz, equant to elongate, a-sa, with straight extinction. Size:

1.25 - 0.15 mm long diameter.

Very rare:

chert, fine-grained, equant, a. Size: 1.6 - 0.25 mm long diameter.

Boundaries of the coarse fraction: clear to merging

### **Fine Fraction**

Dominant:

white mica laths

Frequent:

monocrystalline quartz

Very few:

metamorphic rock fragments

Very rare:

clinozoisite

epidote

### **Textural Concentration Features**

Few tcf's, dark red in XPL, equant, some without inclusions, some with quartz and white mica laths. They are discordant with the micromass. Size: 1.7 - 0.15 mm long diameter.

**B. NOPIGEIA FABRICS** 

**B**1

FABRIC TYPE: Coarse phyllite

Samples

NOP 00/5, 9, 10, 12, 17, 19

Microstructure

Few to very few meso and macro vughs and few vesicles. Rare mega vughs. Voids and non-

plastics are randomly oriented. In very few cases the voids are filled with secondary calcite.

Groundmass

Homogeneous throughout the section. The colour ranges from orange-brown to brown in XPL

(x40) and from dark brown to dark red brown and dark grey brown in XPL. The micromass

ranges from optically active to moderately active.

Inclusions

c:f:v 10 = ca. 35:58:7 to 40:55:5

Coarse Fraction: 3.9 - 0.1 mm long diameter

Fine Fraction: < 0.1 mm long diameter

Fine matrix with coarse, medium, and small-sized inclusions. Bimodal grain-size distribution.

The size of the coarse fraction ranges from granules to fine sand, that of the fine fraction is of

fine sand and below. Both fractions are poorly sorted. The packing of the coarse fraction is

close- to single spaced, that of the fine fraction is close- to open-spaced. It is matrix supported

(wackestone texture).

### **Coarse Fraction**

<u>Dominant to frequent</u>: metamorphic rock fragments; there are different types of phyllite: a)

golden brown to purple in XPL, elongate, fine-grained, composed of

biotite mica, occasionally with some chlorite and white mica, b)

orange to silvery in XPL, elongate, composed of biotite mica and

quartzite. Some fragments contain opaques (illmenite). In many cases

phyllites occur "in intergrowth" with quartzite. Occasionally they display small-scale folding of the schistosity. Size: 3.9 - 0.2 mm long

diameter

quartzite: composed entirely of quartz, equant or elongate, a-sa, sometimes with biotite mica. In some cases there seem to be

quartzite-schists. Size: 3.9 - 0.25 mm long diameter.

slate: bright yellow in XPL, very fine-grained, equant, composed of

quartz and biotite mica. Size: 0.5 - 0.2 mm long diameter

Common to frequent: monocrystalline quartz with straight or undulose extinction, a-sa,

some fragments with high optical density. Size: 1.5 - 0.1 mm long

diameter.

Very few: chert, equant, sr-sa. Size: 0.5 - 0.1 mm long diameter

biotite mica laths

Very few to rare: biotite fragments, equant to rectangular, some altered into chlorite.

Size: 0.25 – 0.2 mm long diameter

Rare to absent: sandstone, composed of poorly sorted quartz grains in a clay matrix.

Size: 1.25-0.35 mm long diameter

Very rare to absent: plagioclase feldspar. Size: 0.5-0.2 mm long diameter (seen in NOP

00/5)

alkali feldspar, Size: 0.3 mm long diameter (seen in NOP 00/5)

chalcedonic quartz. Size: 0.5-0.25 mm long diameter

amphibole, elongate, sa. Size: 0.78 mm long diameter (seen in NOP

00/19)

Boundaries of the coarse fraction: clear to merging

**Fine Fraction** 

Frequent: monocrystalline quartz

Frequent to common: biotite mica laths

<u>Few</u>: metamorphic rock fragments

Very few to rare: biotite fragments

chert

Rare: epidote

<u>Very rare to absent</u>: tourmaline? (seen in NOP 00/17)

# **Textural Concentration Features**

Very few to rare. They are dark red brown in XPL, equant, sr, medium to small-sized, in most cases compact in appearance (clay pelletrs). The larger fragments have inclusions of quartz and biotite mica. Mode: 0.25 mm, size: 1.25 - < 0.1 mm long diameter. They are discordant with the micromass.

FABRIC TYPE: Coarse quartz-rich with metamorphic rocks

Samples

Subgroup a (low fired)

NOP 00/ 1, 6, 11, 13, 20, 30, 32, 35

Subgroup b (high-fired)

NOP 00/3, 24, 29, 39, 40, 80

Microstructure

Very few meso and macro vughs and planar voids randomly oriented. In some cases planar

voids are oriented parallel to vessel margins. The non-plastics are randomly oriented. There is

evidence of tempering with organic matter. Some voids are filled with secondary calcite.

Groundmass

Homogeneous throughout the section. In very few cases the core is darker than the margins.

For group A the colour ranges from orange brown to brown in PPL (x40) and from red brown

to dark brown in XPL. The micromass is optically active. For group B the colour is grey

brown in PPL (x40) and dark red brown to almost black in XPL. The micromass is optically

inactive.

Inclusions

c:f:v 10 = ca. 30:67:3 to 15:80:5

Coarse Fraction: 2.75 - 0.1 mm long diameter

Fine Fraction: < 0.1 mm long diameter

The matrix is fine with coarse and medium-sized inclusions. The size of the coarse fraction ranges from granules to very fine sand, the fine fraction is of very fine sand and below. Both fractions are poorly sorted. The packing of the coarse inclusions is close- to single-spaced, that of the fine ones is close- to double-spaced. It is matrix supported (wackestone texture).

#### Coarse Fraction

Frequent: monocrystalline quartz with straight or undulose extinction, a-sa,

some fragments display high optical density. Size: 2.45 - 0.1 mm

long diameter.

Frequent to common: metamorphic rock fragments. There are different types of phyllite: a)

dark brown in XPL, elongate, fine grained, composed mainly of biotite mica. Occasionally there are laths of white mica and some fragments contain opaques (illmenite), b) yellow-orange in XPL,

elongate composed of biotite mica and chlorite laths, c) phyllitequartzite "in intergrowth". Some fragments display small-scale

folding of the schistosity. Size: 2.75 - 0.2 mm long diameter

schist: rare fragments, mainly in group B, elongate, composed of

quartz. Size: 2.4-0.3 mm long diameter

slate: very fine grained, bright yellow in XPL, elongate, composed of

quartz and biotite mica. Size: 1.25 - 0.15 mm long diameter

quartzite: consisting entirely of quartz, a-sa, equant or elongate (occasionally there are quartzite schists with mica laths). Size: 1.5 -

0.2 mm long diameter.

Few: chert, equant, sa-sr. Some fragments seem to grade into mudstone.

Size: 1.5 – 0.3 mm long diameter

Very few to rare: biotite mica laths (underrepresented in group B due to high firing)

Rare to absent: siltstone, dark brown to black in XPL, composed of quartz and biotite

mica. Size: 1.5 - 0.5 mm long diameter

micrite composed of microcrystalline limestone, a-sa, equant or elongate (seen in NOP 00/20). Size: 0.6 - 0.25 mm long diameter

chalcedonic quartz, equant, sa. Size: 0.8-0.4 mm long diameter

Very rare:

biotite fragments, mode: 0.2 mm long diameter

alkali feldspar, size: 0.15 mm long diameter (seen in NOP 00/20)

epidote

Very rare to absent:

sandstone, equant, composed of poorly sorted quartz grains and

biotite mica in a fine clay matrix. Size: 1.25 mm long diameter (seen

in NOP 00/3).

titanite (sphene) (seen in NOP 00/40)

Boundaries of the coarse fraction: clear to merging

# Fine Fraction

Dominant to frequent: monocrystalline quartz

Frequent to common: biotite mica laths

Very few:

phyllite fragments

biotite fragments

Rare:

chert

Very rare to absent:

epidote

kyanite? (seen in NOP 00/30)

## **Textural Concentration Features**

Few to very few for group A, very few to rare for group B. They are dark red brown in XPL, equant or elongate, sr-sa, with clear to merging boundaries (most likely clay pellets). Some display compact appearance, others have small inclusions of quartz and biotite mica laths, rarely of chert. They are discordant with the micromass. Size: 2.0 - 0.1 mm long diameter.

There is evidence of clay mixing in the form of clay porphyroclasts and "swirls" of clay.

FABRIC TYPE: Medium quartz-rich with metamorphic rocks

Samples

NOP 00/27, 51, 52, 54, 77, 79

Microstructure

Rare meso and macro vughs, very few to rare meso and macro planar voids; the latter are in

NOP 00/77 oriented parallel to vessel margins. In all the other samples, voids and non-

plastics are randomly oriented.

Groundmass

Homogeneous throughout the section. In some cases the core is slightly darker than the

margins. The colour ranges from grey brown to orange brown in PPL (x40) and from dark

brown to grey brown in XPL. The micromass ranges from optically active to moderately

active.

**Inclusions** 

c:f:v 10 = ca. 20:77:3

Coarse Fraction: 1.25 - 0.1 mm long diameter

Fine Fraction: < 0.1 mm long diameter

**Coarse Fraction** 

Dominant:

monocrystalline quartz, with straight extinction, small to medium-

sized fragments, a-sa, mode = 0.15 mm long diameter. Size: 0.75-0.1

mm long diameter

Frequent:

biotite mica laths

Frequent to few:

metamorphic rock fragments: phyllite, elongate, yellowish brown to dark brown in colour (XPL), composed of biotite mica, white mica and quartz, occasionally there are opaques too (illmenite). Some fragments are in intergrowth with quartzite or schist. Size: 1.25-0.1

mm long diameter.

schist: rare fragments, composed of quartz, mode = 0.15 mm long

diameter

quartzite, equant, a-sa, composed of quartz fragments, sometimes with biotite and/or white mica laths. Some fragments are quartzite-

schists. Size: 1.0-0.1 mm long diameter

Few:

white mica laths

Very few:

biotite fragments, sometimes chloritsed, equant, mode = 0.1 mm long

diameter

Rare:

chert, equant, some fragments grade into mudstone, mode: 0.1 mm

long diameter. Size: 1.25-0.1 mm long diameter

Very rare to absent:

chalcedonic quartz. Size: 0.6 mm long diameter

alkali feldspar, displaying simple twinning

plagioclase feldspar

Boundaries of the coarse fraction: clear to merging

### Fine Fraction

Dominant:

monocrystalline quartz

Frequent:

biotite mica laths

Common:

white mica laths

metamorphic rock fragments, phyllite and quartzite

Very few:

biotite fragments

Rare:

chert

Very rare to absent:

tourmaline (seen in NOP 00/77)

## **Textural Concentration Features**

There are very few to few tcf's, orange brown to dark red in XPL. They have a quite compact appearance, sometimes they contain inclusions of quartz and biotite mica, others do not contain any inclusions at all (clay pellets). They are discordant with the micromass and their boundaries are clear to merging. Size: 0.75-< 0.1 mm long diameter.

FABRIC TYPE: Coarse phyllite with micrite/sand and fossils

Samples

NOP 00/15, 23, 36, 41, 47, 48

Microstructure

Few to rare meso and macro vughs, very few meso and mega planar voids and channels

single- to double-spaced. In sample NOP 00/15 the voids are oriented parallel to vessel

margins but this is not due to chaff-tempering. In general, voids and non-plastics are randomly

oriented. Coarse grains are in many occasions surrounded by voids, the latter being filled with

secondary calcite.

Groundmass

Homogeneous throughout the section. The colour ranges from orange-brown to brown in PPL

(x40) and from brown to dark brown in XPL. The micromass is optically active, except for

NOP 00/47 where it is moderately active.

Inclusions

c:f:v 10 = ca. 30:67:3 to 45:52:3

Coarse Fraction: 3.9 - 0.15 mm long diameter

Fine Fraction: < 0.15 mm long diameter

Fine matrix with very coarse to medium-sized inclusions. The size of the coarse fraction

ranges from granules to fine sand. That of the fine fraction is of very fine sand and below.

Both fractions are poorly sorted. The packing of both fractions is close- to single-spaced. It is

matrix supported (wackestone texture).

### Coarse Fraction

Dominant to frequent: metamorphic rock fragments; phyllite: a) brown or golden brown in XPL, elongate, composed of biotite mica and some white mica, b) greenish in XPL when there is more white mica and possibly chlorite, elongate and fine-grained. Both types display occasionally folding of the schistosity and are found in intergrowth with quartzite. Sometimes they contain opaques (illmenite). Size: 3.9 - 0.15 mm long diameter. quartzite: composed entirely of quartz or with biotite and white mica, ranging from fine-grained to coarser, a-sa, sometimes in intergrowth with chert, equant or elongate. Sometimes there is quartzite-schist. Size: 2.7 - 0.2 mm long diameter.

Common:

biotite mica laths

Few:

fossils (foraminifera)

white mica laths

Few to common:

monocrystalline quartz, equant, a-sa, with straight extinction; some grains display high optical density. Mode: 0.2 mm. Size: 1.25 - 0.15 mm long diameter.

micrite/sand fragments, equant or elongate, sr-sa, very fine-grained. In some cases they contain fossils and calcite, representative of the original rock. Size: 2.0 - 0.2 mm long diameter.

calcite, equant or elongate, a-sa, composed of microcrystalline limestone. Size: 1.25 - 0.15 mm long diameter

Very few to rare:

chert, equant (very few elongate fragments), a-sa, fine or coarsegrained, the former grading into mudstone. Size: 1.85 - 0.3 mm long diameter.

Very rare:

biotite fragments, occasionally chloritised

chlorite fragment. Size: 0.5 mm long diameter (seen in NOP 00/41).

Boundaries of the coarse fraction: clear to merging

### **Fine Fraction**

Frequent: biotite mica laths

Frequent to dominant: monocrystalline quartz

Few: phyllite fragments

white mica laths

Few to common: micrite

calcite

Few to absent: fossils

Rare: biotite fragments

chert

Very rare: epidote

plagioclase feldspar (seen in NOP 00/47)

## **Textural Concentration Features**

Very few to rare, small-sized, they must be clay pellets. They are dark red or dark brown in XPL, without inclusions or with small inclusions of quartz and biotite mica. They are discordant with the micromass and they have clear to merging boundaries. Size: 1.0 - 0.15 mm long diameter.

FABRIC TYPE: Semi-coarse with micrite/sand

Samples

NOP 00/ 18, 21, 22, 38, 50, 57

Microstructure

Very few to few meso and macro vughs, rare mega vughs and planar voids, all randomly

oriented. The non-plastics are randomly oriented too.

Groundmass

In most samples homogeneous throughout the section. For NOP 00/22 the core is darker than

the margins. The colour is orange-brown to brown in PPL (x40) and brown to dark brown in

XPL. The micromass is optically active.

Inclusions

c:f:v 10 = ca. 25:72:3 to 15:82:3

Coarse Fraction: 2.3 - 0.1 mm long diameter (one grain 4.0 mm)

Fine Fraction: < 0.1 mm

Fine matrix with medium-sized to coarse inclusions. The coarse fraction has the size of very

coarse to very fine sand (there are some granules too). The fine fraction is of very fine sand

and below. The coarse and fine fraction are both poorly sorted. The packing of the coarse

inclusions varies between single- to double-spaced, the fine fraction is single- to open-spaced.

It is matrix supported (wackestone texture).

#### Coarse Fraction

Dominant to frequent: micrite composed of microcrystalline limestone. Coarse and medium-

sized grains, equant or elongate, sa-sr. The size and shape of the fragments indicates clay mixing with clay from a marly deposit rather

than sand-tempering. Size: 3.9 - 0.1 mm long diameter

Frequent to common: monocrystalline quartz, equant, sa. Size: 0.75 - 0.1 mm long diameter

Frequent to few: calcite fragments, a-sa and a few dolomites, identifiable by the

zoning. Size: 2.0 - 0.1 mm long diameter

metamorphic rock fragments: phyllite, elongate occurring in the following types: a) yellowish brown to brown composed of biotite mica and quartz, b) silvery composed of white mica, in some cases in intergrowth with schist (phyllite-schist). Some grains contain opaques (illmenite) or display small scale folding of the schistosity. Size: 1.25-

0.1 mm long diameter

schist, elongate, composed of quartz and white mica, occasionally

with opaques (illmenite). Size: 1.0-0.2 mm long diameter

quartzite, composed of quartz and biotite or white mica, sometimes

grading into quartzite-schist. Size: 1.25-0.2 mm long diameter

Very few: chert, equant or elongate, in some cases grading into mudstone, a-sa.

Size: 0.85 - 0.1 mm long diameter

Rare: chalcedonic quartz. Size: 1.25-0.25 mm long diameter

Very rare: biotite grading into chlorite (seen in NOP 00/22)

fossils (seen in NOP 00/22)

Boundaries of the coarse fraction: clear to merging

## **Fine Fraction**

Dominant: biotite mica laths

Frequent to common: monocrystalline quartz, equant with straight extinction

micrite/sand

Common:

metamorphic rock fragments

calcite

Very few:

chert, equant, sr

biotite fragments (sometimes chloritised)

Very rare:

epidote

## **Textural Concentration Features**

There are very few, to rare tcf's of two types:

a) orange brown to dark red/dark brown in XPL, most of them with inclusions of monocrystalline quartz and biotite mica laths or with no inclusions and compact appearance, sr-sa. They have clear to merging boundaries and in some cases high optical density. They are discordant with the micromass.

b) greenish brown in XPL, with inclusions of biotite mica and quartz. They are discordant with the micromass.

Size: 0.75-0.1 mm long diameter

FABRIC TYPE: Semi-coarse with siltstone

Samples

NOP 00/2, 4, 25, 26, 28, 33, 37, 43, 49, 59

Microstructure

Very few to few meso and macro vughs and very few planar voids. There are sections with

rare voids, only some vesicles. Vughs and non-plastics are randomly oriented, planar voids,

when present, seem oriented parallel to vessel margins. The coarse inclusions are in some

cases surrounded by voids filled with secondary calcite.

Groundmass

Homogeneous throughout the section. The colour is orange-brown to brown in PPL (x40) and

vellowish-greenish brown to grey brown in XPL. The micromass is optically active to

moderately active.

**Inclusions** 

c:f:v 10 = ca. 20:76:4-30:67:3

Coarse Fraction: 4.0 - 0.1 mm long diameter

Fine Fraction: < 0.1 mm

Very fine matrix with coarse inclusions. Bimodal grain size distribution. The size of the coarse

fraction ranges between very coarse sand/granules to very fine sand. That of the fine fraction

is of very fine sand and below. The coarse fraction is poorly sorted, the fine fraction is well

sorted. The packing of the coarse inclusions ranges from close to double-spaced and it is

matrix supported (wackestone texture).

### Coarse Fraction

Predominant: biotite mica laths

<u>Dominant</u>: monocrystalline quartz, equant, sa-sr, mode = 0.15 mm long diameter.

Size: 1.25-0.1 mm long diameter

Dominant to frequent: siltstone fragments with sharp to clear and rarely merging boundaries.

They have are, equant or elongate, a-sa, most of times discordant with the micromass. They display textural and colour variation, some being, fine-grained, others containing coarser grains. The inclusions are mainly quartz, biotite mica and chert. The colour varies from dark brown/black to orange-red in XPL. Occasionally they are surrounded by voids filled with secondary calcite - because of differential thermal expansion between the host ceramic and the siltstone. Size: 4.0-0.5

mm long diameter

Common to few: chert, equant or slightly elongate, wr-sr, fine or coarse grained,

composed of monocrystalline quartz, occasionally in intergrowth with chalcedonic quartz (NOP 00/2). The well-rounded fragments are bedded chert? Some fragments grade into mudstone. Size: 0.75-0.1

mm long diameter

Rare: micrite fragments composed of microcrystalline limestone

quartzite. Size: 1.75-0.30 mm long diameter

phyllite and schist composed of biotite mica and quartz. Size: 1.5-0.25

mm long diameter

Very rare: fossils (foraminifera)

alkali feldspar

Boundaries of the coarse fraction: clear to merging

### **Fine Fraction**

Predominant: biotite mica laths

<u>Dominant</u>: monocrystalline quartz, equant, sa-sr

Frequent to common: siltstone fragments

Few: chert fragments

Very few: biotite/chlorite fragments

Rare: quartzite

white mica laths

phyllite fragments

Very rare: Fe-oxides?

epidote

# **Textural Concentration Features**

There are no tcf's in this fabric

FABRIC TYPE: Fine with pellets and grog

Samples

NOP 00/ 16, 42, 44, 55, 56, 58, 60, 61, 62

Microstructure

Very few to rare meso and macro vughs, few to very few meso and macro planar voids. The

vughs are randomly oriented, the planar voids show in some cases preferred orientation

parallel to vessel margins. The non-plastics are randomly oriented and in some cases are

surrounded by voids.

Groundmass

Homogeneous throughout the section. In some cases the core is slightly darker than the

margins. The colour is orange brown to brown in PPL (x40) and orange to red-brown in XPL.

The micromass is optically active.

Inclusions

c:f:v 10 = ca. 5: 92:2 to 15:82:3

Coarse Fraction: 2.0 - 0.1 mm long diameter

Fine Fraction: < 0.1 mm long diameter

Very fine matrix with medium and small-sized inclusions. Bimodal grain size distribution. The

coarse fraction has a size range of very coarse to very fine sand, the fine fraction is of very

fine sand and below. The coarse inclusions are poorly-sorted, the fine ones are moderately

well sorted. The packing of the coarse fraction is close to open-spaced, that of the fine fraction

is close-spaced. It is matrix supported (wackestone texture).

### Coarse Fraction

monocrystalline quartz, with straight and occasionally undulose extinction. Dominant:

Some fragments display high optical density, mode = 0.2 mm long diameter.

Size: 1.0 - 0.1 mm long diameter

Frequent:

biotite mica laths

Few:

metamorphic rock fragments; phyllite, yellow brown in XPL, composed of

biotite mica, quartz and occasionally opaques (illmenite). Size: 0.75-0.1 mm

long diameter

quartzite, equant, composed of quartz grains. Size: 1.0-0.1 mm long diameter

Very few:

white mica laths

Rare:

chert, equant, sr, mode = 0.15 mm long diameter. Size: 0.2-0.1 mm long

diameter

biotite fragments

Very rare:

chalcedonic quartz. Size: 1.0-0.15 mm long diameter

## **Fine Fraction**

Predominant: biotite mica laths

Dominant:

monocrystalline quartz

Few:

white mica laths

Very few:

chert fragments

metamorphic rock fragments

Rare:

biotite fragments

Very rare:

epidote

### **Textural Concentration Features**

There are frequent to common tcf's, equant to slightly elongate with clear to merging boundaries. They are discordant with the micromass and occur in the following types:

- a) red brown to almost black in XPL, sa-sr without any inclusions or with inclusions of biotite mica and quartz (clay pellets).
- b) greenish brown in XPL, sa, with inclusions of biotite mica and quartz
- c) grog fragments, a-sa, dark brown in XPL with inclusions of biotite mica and quartz

Size: 2.0 - < 0.1 mm long diameter

FABRIC TYPE: Calcite-tempered

**Samples** 

NOP 00/7,8

Microstructure

Very few meso and macro vughs, rare planar voids. Voids and non-plastics are randomly

oriented. Some voids are filled with secondary calcite.

Groundmass

Homogeneous throughout the section. In sample NOP 00/8 the core is slightly darker than the

margins. The colour is red brown to brown in PPL (x40) and red brown to dark brown in XPL.

The micromass is optically active.

Inclusions

c:f:v 10 = ca. 12:85:3

Coarse Fraction: 2.34 - 0.1 mm long diameter

Fine Fraction: < 0.1 mm long diameter

Fine matrix with coarse to medium-sized inclusion. The coarse fraction has a size range of

granules to very fine sand, the fine fraction is of fine sand and below. Both the coarse and fine

fractions are poorly-sorted. The packing of the coarse inclusions is close to double-spaced, that

of the fine fraction is close to open-spaced. It is matrix supported (wackestone texture).

**Coarse Fraction** 

Frequent:

monocrystalline quartz, with straight extinction, equant or elongate, a-

sa. Size: 0.78-0.1 mm long diameter

Common:

biotite mica laths

Common to very few: calcite and dolomite fragments, composed of microcrystalline

limestone, equant, a-sa. Size: 1.25-0.1 mm long diameter

Few:

metamorphic rock fragments; quartzite, equant, a-sa, composed of

quartz and white mica, in some cases grading into chert. Size: 1.95-

0.1 mm long diameter

phyllite (very few fragments), composed of quartz, biotite mica sometimes white mica and opaques (illmenite). Some fragments display small-scale folding of the schistosity. Size: 1.17-0.2 mm long

diameter.

Very few:

chert, equant, fine-grained. Size: 0.75-0.1 mm long diameter

Rare:

white mica laths

## **Fine Fraction**

Dominant:

monocrystalline quartz

Frequent:

biotite mica laths

Few:

calcite fragments

Very few:

chert

Rare:

metamorphic rock fragments

#### **Textural Concentration Features**

There are very few tcf's, orange-red to bright red in XPL. Some are quite compact in appearance and contain no inclusions, others contain quartz grains, biotite mica and chert (clay pellets). They are discordant with the micromass and they have clear to merging boundaries. One of the pellets contains well-rounded chert grains, which are related to similar features from the siltstone fabric.

FABRIC TYPE: Chert-rich

Samples

NOP 00/ 14, 31, 34

Microstructure

Few meso and macro vughs, few planar voids, rare mega vughs, single- to double-spaced.

Large non-plastics are surrounded by voids. Voids and non-plastics are randomly oriented.

Groundmass

Homogeneous throughout the section. The colour is brown in PPL (x40) and greyish brown to

dark brown in XPL. The micromass ranges from optically active to inactive.

Inclusions

c:f:v 10 = ca. 15:80:5

Coarse Fraction: 3.0 - 0.1 mm long diameter

Fine Fraction: < 0.1 mm long diameter

Very fine matrix with coarse and medium-sized inclusions. The size of the coarse fraction

ranges from granules to very fine sand, that of the fine fraction is of very fine sand and below.

Both fractions are poorly sorted. The packing of the coarse and the fine fraction is close- to

single-spaced. It is matrix supported (wackestone texture).

**Coarse Fraction** 

Dominant:

biotite mica laths

Frequent: monocrystalline quartz, small fragments, a-sa, equant or elongate,

with straight extinction, mode: 0.2 mm. Size: 0.5 - 0.1 mm long

diameter

Common: chert, large fragments, some finer-grained, grading into mudstone,

equant or elongate, sr-a, occasionally in intergrowth with quartzite.

Size: 3.0 - 0.15 mm long diameter.

Few: metamorphic rock fragments; quartzite (primarily): composed entirely

of quartz, very few fragments with phyllite, some with opaques

(illmenite). Size: 1.25 - 0.1 mm long diameter.

phyllite: dark brown or golden brown in XPL, composed of biotite and white mica. In some cases there is chlorite. Size: 1.0 - 0.15 mm

long diameter.

Very few: white mica laths

siltstone fragments, dark brown in XPL, equant, fine-grained, composed of small grains of quartz, biotite mica laths and

occasionally chert. Size: 1.25-0.5 mm long diameter

Rare: chalcedonic quartz. Size: 0.5-0.2 mm long diameter

<u>Very rare</u>: micrite, composed of microcrystalline limestone, elongate. Size: 0.75

- 0.25 mm long diameter.

Boundaries of the coarse fraction: clear to merging

Fine Fraction

Dominant: monocrystalline quartz

biotite mica

Few: chert

metamorphic rock fragments

biotite fragments

Very few: white mica

Rare:

epidote

# **Textural Concentration Features**

Few, red-brown to red brown in XPL, without inclusions or with inclusions of quartz, chert and biotite mica, a-sr. They are discordant with the micromass and their boundaries are clear to merging. Size: 1.2 - 0.1 mm long diameter

**C1** 

FABRIC TYPE: Red with quartz, grog and metamorphic rocks

Samples

Subgroup a: Coarse

DEB 00/2, 9, 11

Subgroup b: Semi-coarse

DEB 00/1, 3, 5, 6, 7, 8, 10, 12, 13, 14, 15, 16, 20, 21, 22, 23, 26, 27, 28, 30, 33, 34, 38, 39,

40, 41, 42, 43, 44

Microstructure

Few to very few macro vughs and planar voids, rare mega vughs. In most cases the vughs and

voids are randomly oriented, in a few sections planar voids are oriented parallel to vessel

margins. The non-plastics are randomly oriented.

Groundmass

Homogeneous throughout the section. The colour ranges from orange-brown to grey brown in

PPL (x40) and from red-brown to dark red-brown and dark brown in XPL. The micromass

ranges from optically active to moderately active.

**Inclusions** 

c:f:v 10 = ca. 20:76:4 to 35:62:3

Coarse Fraction: 2.75 - 0.1 mm long diameter

Fine Fraction: < 0.1 mm long diameter

Very fine matrix with medium to coarse-sized inclusions (tcf's included). The coarse fraction

ranges from very coarse to very fine sand (there are some granules too). The fine fraction is of

very fine sand and below. The coarse and fine fractions are both poorly-sorted. The packing of the coarse inclusions is single- to double-spaced, the fine fraction is single- to open-spaced. It is matrix supported (wackestone texture).

#### **Coarse Fraction**

Dominant: monocrystalline quartz, equant with straight or undulose extinction, a-

sa, mode: 0.2 mm. Size: 2.0 - 0.1 mm long diameter. Some grains

display high optical density.

Frequent: biotite mica laths

Frequent to common: metamorphic rock fragments; phyllite occurs in two types: a)

yellowish brown to dark brown, composed of biotite mica, quartz and in some cases white mica, b) silvery, composed of white mica with high interference colours, c) phyllite-schist, elongate, composed of

quartz and biotite mica. Size: 1.5 - 0.2 mm long diameter.

The phyllite fragments occasionally contain opaques (illmenite) and

display folding of the schistosity

slate fragments, very fine-grained. Size: 1.4 – 0.15 mm long diameter

quartzite, equant or elongate, fine or coarser-grained, composed of quartz and occasionally white mica laths. In some cases it grades into

quartzite-schist. Size: 2.25-0.1 mm long diameter.

Few: white mica laths

Very few: biotite/chlorite fragments, equant, mode: 0.25 mm

Rare: chert, equant, sr. Size: 0.4-0.15 mm long diameter

Rare to absent: tourmaline, mode = 0.1 mm long diameter

Very rare to absent: alkali feldspar. Size: 0.5-0.15 mm long diameter

chalcedonic quartz. Size: 0.85-0.5 mm long diameter

amphibole (?), altered. Size: 0.5-0.1 mm long diameter

plagioclase feldspar

clinopyroxene

Boundaries of the coarse fraction: sharp to merging

**Fine Fraction** 

Dominant:

biotite mica laths

Frequent:

monocrystalline quartz

Few:

biotite fragments

white mica laths

Very few:

metamorphic rock fragments

Very rare:

chert

tourmaline

epidote

**Textural Concentration Features** 

Common to frequent, textural concentration features and grog are the principal constituents of this fabric along with quartz and some metamorphic rock fragments. There are three types:

a) orange-red to bright red in XPL, sa-sr, some with high optical density, they contain inclusions of biotite mica and quartz, the smaller fragments do not contain any inclusions (clay pellets). In some samples the clay pellets are optically active – indication of a primary deposit. They are discordant with the micromass and have clear to merging boundaries.

b) brown to dark brown in XPL, a-sa, with inclusions of biotite mica, quartz, chert, phyllite for the coarser fragments. They are discordant with the micromass and have clear to merging boundaries

Size: 2.75 - < 0.1 mm long diameter

c) grog fragments, dark brown in XPL, a, with inclusions of biotite mica, quartz, chert, phyllite. They are discordant with the micromass and the boundaries are sharp to merging. Size: 2.0 - < 0.1 mm long diameter.

There are indications of clay mixing such as clay striations and porphyroclasts.

**C2** 

FABRIC TYPE: Fine red with quartz and grog

Samples

DEB 00/4, 24, 25

KST 00/ 52

Comments

This is a low-fired fine red fabric composed of small quartz fragments, biotite mica, grog and rarely some metamorphic rock fragments. Because of its composition and texture it can be considered the fine version of fabric C1, and therefore there is no need to be described separately. Despite its non-distinctive composition, its origin it must be related to the red

deposits of the north coast.

The vessels derive mainly from Debla and there is one from Kastelli. The shapes represented

are two red slipped jugs in scored ware, one black burnished incised pyxis and the Kastelli

vessel is an incised jug. The technology of manufacture is similar to fabric C1 and it of interest

that scored jugs occur in both fabrics. Could the difference in the coarseness be indicative of chronological difference? One of the samples (DEB 00/24) preserves traces of the slip which

stretches along the surface of the vessels and follows the curves created from scoring. This

leaves no doubts about the technique applied, i.e. that scoring preceded the application of slip.

As to the presence in this group of the sample from Chania it is not possible to decide on

mineralogical terms whether it shares the same origin as the Debla vessels or it is just

compositional similarity. However, it is interesting that jugs share the same fabric

independently from surface treatment, whereas this fabric provides also a link between incised

jugs and pyxides.

## D. CHANIA FABRICS

D1.

FABRIC TYPE: Very fine to semi-coarse with fossils

# **Samples**

Subgroup (ai) Very fine

KST 00/54, 55, 56, 57, 59, 60, 61, 63, 64, 66, 68a, 69, 70, 73, 74, 76, 77, 79, 82, 83, 84, 86, 104, 137

CHT 00/ 17, 19, 24, 25, 26, 32, 33, 34

PLT 00/11

# Subgroup (aii) Semi-coarse

KST 00/ 16, 53, 62, 67, 71, 72, 78, 80

CHT 00/14, 35

# Subgroup (b)

NOP 00/ 45, 46, 53, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 78 DEB 00/ 17, 18, 19, 32, 37

## Microstructure

Very few to rare meso vughs and planar voids, rare to very rare macro vughs and planar voids with no preferred orientation. Single to open-spaced. In some cases they are surrounded by secondary calcite.

Groundmass

Homogeneous throughout the section. The colour varies according to firing temperature and

atmosphere: for higher-fired samples it is brown in PPL (X40) to red or dark brown; for

oxidising atmosphere and lower-fired samples it is orange brown to red/dark red brown. The

micromass ranges from optically active to inactive.

**Inclusions** 

c:f:v 10 = ca. 15:83:2 to 20:78:2

Coarse Fraction: 1.90 - 0.1 mm long diameter

Fine Fraction: < 0.1 mm long diameter

Fine fabric with very fine matrix. The coarse fraction has a grain size of very coarse to very

fine sand, the fine fraction has some coarse silt grains but the rest is fine silt and below.

Bimodal grain-size distribution. The coarse grains are single to open-spaced, the fine ones are

close to single-spaced. Both coarse and fine inclusions are poorly sorted. The packing is

matrix supported (wackestone texture).

**Coarse Fraction** 

Dominant to frequent: monocrystalline quartz, in some cases with undulose extinction,

equant (mode = 0.20 mm) to elongate, a-sa. Size: 0.75-0.1 mm long

diameter

Frequent:

biotite-mica laths

Common to few: ·

chert, fine to very fine grained, equant to elongate, a-sr. Size: 1.90-0.2

mm long diameter

Common to very few: fossils (foraminifera) in many cases identifiable by their casts which

might be filled with secondary calcite.

Few:

quartzite occasionally with evidence of shearing, equant to elongate,

a-sa. Size: 1.50-0.25 mm long diameter

micrite, composed of microcrystalline limestone, equant to elongate,

wr-r. Size: 1.6-0.1 mm long diameter

Very few to few: siltstone, orange brown to dark brown in XPL, either fine grained or

coarser, composed of poorly-sorted quartz and biotite mica laths,

elongate, sa-sr. Size: 1.5 - 0.5 mm long diameter

Rare: polycrystalline quartz, equant to slightly elongate, sr, in some cases

grading into chert or quartzite. Size = 1.0 - 0.15 mm long diameter.

metamorphic rock fragments: phyllite composed of quartz, biotite

mica laths and schist. Size: 1.25-0.30 mm long diameter

<u>Very rare to absent:</u> chalcedonic quartz. Size: 0.75 - 0.55 mm long diameter

sandstone composed of poorly sorted quartz in a fine clay matrix.

Size: 0.85 mm long diameter (seen in CHT 00/33)

serpentine(?), yellowish/greenish brown in XPL, altered, equant, sr.

Size: 0.24 mm long diameter (seen in DEB 00/17)

Boundaries of the coarse fraction: clear to merging, frequently filled with secondary calcite.

### **Fine Fraction**

Frequent: monocrystalline quartz

Common: biotite mica laths

Few: micrite

Very few to few: chert

Rare: epidote

metamorphic rock fragments (phyllite)

biotite fragments

fossils

Very rare: plagioclase feldspar

biotite fragments degrading into chlorite

## **Textural Concentration Features**

Very few to few, equant, wr-r. Size: 0.20 - 0.05 mm long diameter. Their colour is orange to red brown in PPL, orange brown to bright red or almost black in XPL. In some cases they have no inclusions (clay pellets) or they might contain poorly-sorted quartz grains and/or biotite mica laths (mudstone). Size: 0.8 - 0.15 mm long diameter. Frequently they are surrounded by voids, which are filled with secondary calcite. They are not concordant with the micromass.

D2.

FABRIC TYPE: Fine to semi-coarse with fossils and micrite

**Samples** 

KST 00/ 9, 10, 58, 85, 103, 105, 107, 109, 111, 113, 114, 115, 116, 117, 118

CHT 00/13, 15, 16, 20, 21, 22, 28, 31

PST 00/4, 8, 9, 10, 11, 12, 14, 28, 30

Microstructure

Mainly meso and a few macro vughs, rare planar voids and very rare mega vughs, single to

open-spaced. They are randomly oriented

Groundmass

Homogeneous throughout the section. The colour presents variation according to differential

firing temperature and atmosphere: orange-brown to dark red-brown in PPL (X40) and dark

grey-brown to dark red-brown in XPL. In some samples the core is darker than the margins.

The micromass ranges from optically active to inactive.

**Inclusions** 

c:f:v 10 = ca. 15:82:3

Coarse Fraction: 2.0 - 0.1 mm long diameter

Fine Fraction: < 0.1 mm

Fine to medium fabric with very fine matrix. The coarse fraction has a grain size of very

coarse to very fine sand, the fine one of very fine sand and below. The coarse fraction is single

to double-spaced, the fine fraction is close to single-spaced. The coarse inclusions are poorly

sorted, the fine ones moderately well sorted. Bimodal grain size distribution. In a few samples

the packing seems grain-supported with interstitial matrix (packstone texture). In most

samples it is matrix supported (wackestone texture).

## **Coarse Fraction**

<u>Dominant to frequent</u>: monocrystalline quartz with straight extinction, equant, a-sa. Size:

1.5-0.1 mm long diameter (mode: 0.2 mm).

Frequent: biotite mica laths

Frequent to very rare: fossils (foraminifera)

Frequent to very few: micrite, composed of microcrystalline limestone, wr-r. Size: 1.0-0.1

mm long diameter

Few: quartzite, equant to elongate, a-sa. Size: 2.0-0.3 mm long diameter

Very few: chert, equant to elongate, a-sa. Size: 1.75-0.15 mm long diameter

polycrystalline quartz, equant, sa, in some cases grading into chert.

Mode = 0.5 mm long diameter.

Very few to rare: metamorphic rock fragments (phyllite and schist), elongate. Size for

phyllite: 0.4-0.15 mm long diameter, size for schist: 1.25-0.2 mm.

Rare: calcite, a. Size: 0.2-0.1 mm long diameter

white mica laths

Rare to absent: siltstone, brown in XPL, slightly elongate, sa-sr. Size: 1.75 - 0.2 mm

long diameter (seen in PST 00/28)

Very rare: epidote

chlorite pseudomorphs/biotite degrading into chlorite

tourmaline (seen in KST 00/116)

plagioclase feldspar (seen in CHT 00/16)

Very rare to absent: shell fragments

Boundaries of the coarse fraction: clear to merging

### **Fine Fraction**

<u>Frequent</u>: monocrystalline quartz

biotite mica laths

Common to few:

limestone/micrite fragments

Few:

epidote

Very few:

biotite

Rare:

white mica laths

chert, sr

fossils (foraminifera)

Very rare:

titanite (sphene) (seen in PST 00/14)

chlorite pseudomorphs (seen in PST 00/14 and CHT 00/28)

iron oxides (?)

### **Textural Concentration Features**

There are very few to rare tcf's, they are bright red to dark red/almost black in XPL, sa-sr, in some cases with higher optical density. The smaller grains are equant, the larger slightly elongate. Size: 1.75-0.15 mm (mudstone and clay pellets). Most of the grains contain inclusions of monocrystalline quartz and biotite mica laths, others do not contain any inclusions. They are discordant with the micromass and the boundaries are clear to merging, occasionally surrounded by voids filled with secondary calcite.

In a few samples there are indications of clay mixing in the form of clay striations (CHT 00/24) or fragments of the original sediment (PST 00/8).

FABRIC TYPE: Fine with fossils and grog

Samples

KST 00/22, 24, 27, 30

Microstructure

Rare to very rare meso vughs, double to open-spaced, randomly oriented.

Groundmass

Homogeneous throughout the section. The colour is orange-brown to grey brown in PPL (x40)

and grey brown to very dark brown in XPL. In samples KST 00/24, 27 the core is slightly

darker than the margins. The micromass ranges from optically active to inactive.

Inclusions

c:f:v 10 = ca. 40:58:2 to 50:48:2

Coarse Fraction: 2.0 - 0.1 mm long diameter

Fine Fraction: < 0.1 mm long diameter

Fine fabric with very fine matrix. The coarse fraction has a grain size of very coarse to very

fine sand, the fine one of very fine sand and below. The coarse and fine fraction are close to

single-spaced. The coarse inclusions are poorly sorted. Bimodal grain size distribution. In

some samples the packing seems grain-supported with interstitial matrix (packstone texture).

In the others it is matrix supported (wackestone texture).

**Coarse Fraction** 

Dominant to very few: micrite, composed of microcrystalline limestone, equant, sr-wr. Size:

1.56 - 0.1 mm long diameter

Frequent: monocrystalline quartz with straight extinction, small fragments,

equant to slightly elongate, a-sa, mode = 0.78 mm long diameter. Size:

0.3 - 0.1 mm long diameter

biotite mica laths

Frequent to rare fossils in most cases identifiable by their casts which is filled with

secondary calcite

Common to rare: phyllite, yellowish brown to brown, composed of biotite mica and

quartz, mode = 0.5 mm long diameter

Few to rare: siltstone fragments, elongate, dark brown to black with inclusions of

biotite mica, quartz and phyllite. Size: 1.75 - 0.25 mm long diameter

<u>Very few:</u> calcite, equant, a. Size: 0.5-0.78 mm long diameter

Rare: chert, equant, sr, very small fragments, mode = 0.1 mm long diameter.

Size: 0.5-0.1 mm long diameter

Very rare to absent: shell fragments

epidote, equant, mode = 0.2 mm long diameter

quartzite/schist, equant to slightly elongate

alkali feldspar. Size: 0.75 mm long diameter

Boundaries of the coarse fraction: clear to merging.

**Fine Fraction** 

Dominant: micrite

Frequent: monocrystalline quartz

<u>Common</u>: biotite mica laths

Rare: calcite

chert

Very rare: epidote

## **Textural Concentration Features**

Few to rare tcf's ranging in colour from red brown to dark brown almost black in XPL. They are sa-sr, either without any inclusions or containing inclusions of biotite mica and quartz. Size: 1.56 - 0.15 mm long diameter. There are also grog fragments, very angular surrounded by voids due to differential expansion during firing between the host matrix and the grog. They are all discordant with the micromass with clear to merging boundaries. Size: 2.0 - 0.15 mm long diameter.

D4.

FABRIC TYPE: Sand-tempered with fossils

Samples

KST 00/11, 46, 48, 87, 88, 90, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 123, 128, 131,

132, 135

CHT 00/38, 39, 40, 42, 43, 44, 45, 49

PLT 00/17, 18, 19

Microstructure ·

Meso and macro yughs and rare planar voids (mainly in sections of bowls - coincidence?). The

former randomly oriented, the latter parallel to vessel margin. There are indications of organic

temper. The non-plastics are randomly oriented.

Groundmass

Homogeneous throughout the section. In a few occasions (KST 00/96, 100, 101, 135) it seems

that there is incomplete clay mixing (?). The colour is orange-brown and sometimes grey-

brown in PPL (X40) and red-brown to dark grey brown in XPL. The micromass is optically

active and for some higher fired samples (KST 00/46, PLT 00/19) is inactive.

Inclusions

c:f:v 10 = ca. 24:73:3

Coarse Fraction: 3.6 - 0.1 mm long diameter

Fine Fraction: < 0.1 mm

Fine groundmass with coarse-grained inclusions. Bimodal grain size distribution. The coarse

fraction has a size range of granules to very fine sand, the fine fraction is of very fine sand and

below. The coarse fraction is moderately to poorly sorted, the fine is well sorted. The packing

of the inclusions ranges between single- and double-spaced and is matrix supported (wackestone texture).

#### **Coarse Fraction**

Dominant:

micrite/sand, equant, wr-sr, some elongate, composed of

microcrystalline limestone. Many fragments preserve original features of fossils. Mode for the wr: 0.25 mm. Size: 1.5 - 0.1 mm long

diameter.

Common:

monocrystalline quartz, equant, a-sa, size: 1 - 0.1 mm long diameter,

mode: 0.5 mm

Few to very few:

fossils (gastropods, foraminifera, sea weeds, shell fragments)

Very few:

quartzite, equant to slightly elongate. Size: 2.5-0.5 mm long diameter.

chert, equant, sr. Size: 0.7 - 0.25 mm long diameter

Rare:

calcite. Size: 0.3 - 0.1 mm long diameter

mica laths

Very rare:

metamorphic rock fragments, mainly phyllite in intergrowth with

schist, composed of biotite mica, quartz and occasionally some

chlorite laths. Size: 0.5 - 0.25 mm long diameter

Very rare to absent:

chalcedonic quartz. Size: 0.9 - 0.2 mm long diameter

plagioclase feldspar. Size: 0.25 mm long diameter

iron oxides (?)

Boundaries of the coarse fraction: clear to merging, well-rounded sand-size inclusions added as temper.

# Fine Fraction

Dominant:

monocrystalline quartz

Common:

biotite mica laths

Few:

sand fragments, r-sr

Rare:

muscovite mica

Very rare:

epidote

chlorite pseudomorphs/biotite degrading into chlorite

Very rare to absent:

chalcedonic quartz

### **Textural Concentration Features**

Few to common, sa-sr, equant or slightly elongate. Size range: 2.75 - 0.15-mm long diameter. There are to main types: a) Bright red in XPL either with quartz and biotite mica inclusions or with no inclusions. In some cases they display high optical density.

b) Dark brown to black in XPL with quartz and biotite mica inclusions.

For both types the boundaries are clear to merging and they are discordant with the micromass.

Incomplete clay mixing is attested through clay striations and porphyroclasts. There are also large lumps of clay in most cases surrounded by voids. In KST 00/94 there is a clay porphyroclast displaying swirl due to mixing.

FABRIC TYPE: Calcite-tempered

Samples

KST 00/38, 40, 41, 42, 44, 45, 47, 89, 91

CHT 00/36, 37, 41, 46

DEB 00/31

Microstructure

Very few to few meso and macro yughs and few planar voids. Very few mega yughs. For most

of the samples yughs and voids are randomly oriented, in a few occasions there is orientation

parallel to the vessel margins (KST 00/42). The non-plastics are randomly oriented too.

Groundmass

Homogeneous throughout the section. The colour is red-brown to dark brown in PPL (X40)

and dark red-brown to dark brown in XPL. In some samples it is orange-brown in PPL (X40)

to dark orange-brown or red brown in XPL. The micromass is optically active to inactive

according to firing atmosphere.

Inclusions

c:f:v 10 = ca. 50:45:5

Coarse Fraction: 3.1 - 0.2 mm long diameter

Fine Fraction: < 0.2 mm

Fine matrix with coarse inclusions. Bimodal grain-size distribution. The coarse fraction has

the size of granules to fine sand; the fine fraction contains inclusions of fine sand and below.

Both the coarse and fine fractions are poorly sorted. The packing of the coarse inclusions is

close to single-spaced, the fine fraction is close- to double-spaced and it is matrix supported

(wackestone texture).

### **Coarse Fraction**

Predominant:

<u>Dominant</u>: calcite/dolomite, equant or elongate, a-sa. Dolomite is distinguished

from calcite by its triangular zone patterns. The calcite does not display any zoning. Also present are grains composed of two or more calcite crystals in an interlocking texture. Size: 3.1- 0.2 mm long

diameter

<u>Common:</u> monocrystalline quartz with straight extinction, equant, sa-sr. Size:

1.0 - 0.2 mm long diameter

Few: chert, equant, sa-sr. Size: 0.85 - 0.2 mm long diameter

Few to very rare: metamorphic rock fragments: phyllite, elongate, 3.1 - 0.35 mm long

diameter, composed of biotite mica and quartz, occasionally there are

chlorite laths (KST 00/47).

Very few to few: quartzite, equant or elongate, a-sa. Size: 2.8 - 0.4 mm long diameter

Very rare: chalcedonic quartz. Size: 0.35 mm long diameter

schist fragments. Size: 0.75 - 0.30 mm long diameter

chlorite pseudomorphs/biotite degrading into chlorite (CHT 00/46)

Boundaries of the coarse fraction: sharp to merging

#### Fine Fraction

Frequent: calcite

Common: monocrystalline quartz

biotite mica laths

<u>Very few</u>: white mica laths

Rare: epidote

Very rare: Fe-oxides

chalcedonic quartz

### **Textural Concentration Features**

There are very few to rare tcf's of two types:

- a) Very dark red to almost black in XPL, equant, sr, with high optical density.
- b) Greenish to orange brown in XPL with inclusions of quartz, calcite and biotite mica.

All tcf's are discordant with the micromass and they have clear to merging boundaries. Size: 1.0 - 0.2 mm long diameter. Some contain inclusions of monocrystalline quartz and/or biotite mica laths, others do not have any inclusions.

Sample KST 00/38 contains grog fragments. Size: 2.34 - 0.24 mm long diameter

# Sample PLT 00/16

This sample needs to be discussed separately is fairly similar to the group described above in terms of composition but it has some textural differences. The calcite fragments are much larger than the ones of group D5 and the general appearance of the fabric is coarser. The vessel is a red slipped and scored bowl of EM I-IIA date. The difference in fabric might reflect a chronological difference, the material from Debla being slightly earlier than that from Chania.

FABRIC TYPE: Siltstone and fossils

Samples

Subgroup (a) Coarse

KST 00/13, 65, 68b, 133

PST 00/ 22

Subgroup (b) Semi-coarse-Fine

KST 00/81

CHT 00/ 18

PST 00/34

Microstructure

Very few to rare meso vughs and planar voids. They are randomly oriented. In some cases

they are surrounded or by or filled with secondary calcite. The non-plastics are randomly

oriented too.

**Groundmass** 

Homogeneous throughout the section. The colour is yellowish brown to dark brown in PPL

(x40) and greenish-brown to orange-brown and very dark brown in XPL. The micromass

ranges from optically active to inactive according to firing atmosphere.

Inclusions

c:f:v 10 = ca. 7: 91: 2 to 30:68:2

Coarse Fraction: 2.75 - 0.1 mm long diameter

Fine Fraction: < 0.1 mm long diameter

Very fine matrix with coarse to medium sized inclusions. The size of the coarse fraction is of very coarse to very fine sand (there are some granules too). The fine fraction is of very fine sand and below. The coarse fraction is poorly sorted, the fine fraction is moderately well-sorted. The packing of the coarse inclusions is close to double-spaced, that of the fine ones is close- to single-spaced. It is matrix supported (wackestone texture).

# **Coarse Fraction**

Frequent to very few: siltstone, ranging in colour from dark brown/black to orange brown in

XPL; fine-grained with inclusions of biotite mica, quartz and rarely chert, elongate, a-sa. Some fragments do not have any inclusions. Most fragments are surrounded by voids due to the differential

thermal expansion between the host matrix and the inclusions. The voids are in some cases filled with secondary calcite. Size: 2.75-0.1

mm long diameter.

Frequent to rare: micrite composed of microcrystalline limestone, in some cases with

inclusions of quartz, representative of the original rock, equant, wr-r.

mode = 0.15 mm long diameter. Size: 0.75-0.1 mm long diameter

fossils (foraminifera)

Frequent to common chert, fine-grained equant or elongate, in some cases grading into

mudstone, sa-sr. Size: 1.3-0.1 mm long diameter

Common: monocrystalline quartz, equant or elongate, a-sa, mode: 0.25 mm.

Size: 0.6-0.1 mm long diameter

Very few: quartzite, a-sa, in some cases grading into chert. Size: 1.25-0.2 mm

long diameter

biotite mica laths

Rare: phyllite fragments, composed of biotite mica, elongate. Size: 1.0-0.15

mm long diameter

Very rare: calcite fragments

Boundaries of the coarse fraction: clear to merging.

# Fine Fraction

<u>Common</u>: monocrystalline quartz

biotite mica laths

Few: fossils (foraminifera)

Few to very few: chert fragments

Few to common: rounded micrite fragments

Very few: siltstone fragments

Very rare: epidote

plagioclase feldspar (seen in KST 00/68b)

biotite fragments

# **Textural Concentration Features:**

In this fabric there are not any tcf's

FABRIC TYPE: Siltstone II

Samples

KST 00/122

Microstructure

Very few meso and macro vughs, most of them filled with secondary calcite. Both voids and

non-plastics are randomly oriented.

Groundmass

Homogeneous throughout the section. The colour is brown to greenish-brown in PPL (x40).

dark brown to golden-brown in XPL due to the extent of the secondary calcite. The micromass

is optically inactive, the patches with secondary calcite are active.

Inclusions

c:f:v 10 = ca. 30:66:4

Coarse Fraction: 3.1 - 0.15 mm long diameter

Fine Fraction: < 0.15 mm long diameter

Very fine matrix with coarse inclusions of siltstone and medium to fine grained quartz.

Bimodal grain size distribution. The size of the coarse inclusions ranges from granules to fine

sand. The fine fraction is of fine sand and below. The coarse fraction is poorly sorted, the fine

fraction is well-sorted. The packing of the coarse fraction is close- to double-spaced, that of

the fine fraction is single- to open-spaced. It is matrix supported (wackestone texture).

### **Coarse Fraction**

Common: siltstone fragments. The colour is orange-brown in PPL (x40) and dark brown

or dark red-brown in XPL. The boundaries are clear to merging. They are elongate, fine-grained with inclusions of quartz, chert, biotite mica and secondary calcite. They are surrounded by voids filled with secondary calcite.

Size: 3.1-0.15 mm long diameter.

Few: micrite fragments composed of microcrystalline limestone, sa-sr. Size: 1.0-

0.15

Very few: monocrystalline quartz, with straight extinction, equant, a-sa, mode: 0.2 mm.

Size: 0.25-0.15 mm long diameter

biotite fragments

Rare: chert, equant, sr, mode: 0.2 mm. Size: 0.5-0.15 mm long diameter

Very rare: fossils (foraminifera) and shell fragments

polycrystalline quartz grading into quartzite. Size: 0.6-0.2 mm long diameter

### Fine Fraction

Common: micrite

Few: monocrystalline quartz

biotite mica laths

<u>Very few</u>: siltstone fragments, equant, without any inclusions

Rare: chert

Very rare: epidote

plagioclase feldspar

## **Textural Concentration Features**

There are not any tcf's in this fabric

FABRIC TYPE: Red with quartz, grog and calcite

Samples

KST 00/ 12, 15, 18, 20, 25, 29, 35, 39, 43, 106, 120, 121

CHT 00/ 1, 2, 6, 7, 8, 9, 29, 30, 48

MIT 00/9

PLT 00/ 12

EM I subgroup

KST 00/2, 3, 5, 6

CHT 00/4

Microstructure

Very few to few meso and macro vughs and planar voids; rare mega vughs. In all samples voids and non-plastics are randomly oriented. In sample KST 00/3 there is evidence for

organic tempering. In sample KST 00/120 the voids are surrounded by secondary calcite.

Groundmass

Homogeneous throughout the section for most of the samples. In some cases the core is darker

than the margins. The colour is yellowish/ greenish-brown to brown in PPL (X40) and

greenish/ orange brown to grey-brown in XPL. The micromass ranges from optically active

(for most of the samples) to inactive.

**Inclusions** 

c:f:v 10 = ca. 30:67:3 to 15:85:5

Coarse Fraction: 2.0 - 0.1 mm long diameter

Fine Fraction: < 0.1 mm long diameter

Very fine matrix with primarily medium and some very coarse sized inclusions. Bimodal grain-size distribution. The coarse fraction is of very coarse to very fine sand (there are some granules too). The fine fraction is of very fine sand and below. The coarse inclusions are poorly-sorted, the fine ones are moderately to well-sorted. The packing of the coarse fraction is single- to double-spaced, that of the fine fraction is single- to open-spaced. It is matrix supported (wackestone texture).

#### **Coarse Fraction**

Frequent to common: monocrystalline quartz, equant or elongate, some grains displaying

undulose extinction (most grains with straight extinction), occasionally there are grains with high optical density, a-sa, mode: 0.2

mm. Size: 0.8 - 0.1 mm long diameter

Few: quartzite, equant or slightly elongate, sa. Size: 1.5-0.25 mm long

diameter

metamorphic rock fragments. Phyllite, elongate, composed of quartz biotite mica and chlorite, occasionally there are white mica laths too. There are also schist fragments composed of quartz and white mica, mode: 0.5 mm. The size for the phyllite is 1.5 - 0.2 mm and for the

schist it is 0.75 - 0.2 mm long diameter

Few to absent: calcite composed of microcrystalline limestone, equant or elongate, a.

Size: 0.75-0.1 mm long diameter

micrite fragments, equant or elongate, sr. Size: 1.25 - 0.1 mm long

diameter

fossils (associated with calcite and micrite)

Very few: biotite mica laths

Rare: chert, equant, sa-sr. Size: 0.35 - 0.1 mm long diameter

Very rare: chalcedonic quartz. Size: 0.5 – 0.2 mm long diameter

biotite fragments (detrital)

Very rare to absent: plagioclase feldspar (seen in KST 00/120)

# alkali feldspar (seen in KST 00/3)

Boundaries of the coarse fraction: sharp to merging

### Fine Fraction

Common:

biotite mica laths

Few:

monocrystalline quartz

calcite

Very few:

micrite

chert

Very few to rare:

phyllite fragments

Rare:

epidote

white mica laths

biotite fragments

tourmaline (seen in KST 00/36)

### **Textural Concentration Features**

Common to few tcf's and grog constitute one of the main components of this fabric. The following types were identified:

- a) greenish to grey-brown in XPL, equant or elongate, sa-sr, with quartz and biotite mica inclusions
- b) orange brown to dark red, equant, in some cases with high optical density. They might contain quartz or biotite mica inclusions or no inclusions at all
- c) grog fragments, angular, dark brown to black in XPL, with small quartz inclusions. In many cases they are surrounded by voids due to the differential thermal expansion between the host matrix and the grog fragment. In one case (CHT 00/48) there is a grog fragment of different base clay than the base clay: it is yellowish brown and contains fossils when the rest of the sample does not have any fossils at all.

Size: 2.0 - < 0.1 mm long diameter. Most tcf's and grog fragments are discordant with the micromass. The boundaries are clear to merging.

Other types of tcf's include clay porphyroclasts and striations, indicative of incomplete clay mixing (KST 00/12, 29). There is evidence for organic tempering too.

FABRIC TYPE: Red with quartz, grog and pellets

Samples

KST 00/7, 8, 14, 19, 26, 28, 34, 37, 39, 119, 126

CHT 00/23

Microstructure

Very few meso and macro vughs, rare planar voids. Voids and non-plastics are randomly

oriented; only in sample CHT 00/23 the voids are oriented parallel to vessel margins. In some

cases they are also filled with secondary calcite.

Groundmass

Homogeneous throughout the section for most of the samples. In some cases the core is darker

than the margins. The colour is orange- to red-brown in PPL (x40) and dark red-brown to

black in XPL. The micromass ranges from optically active to inactive.

Inclusions

c:f:v 10 = ca. 25:72:3 to 15:82:3

Coarse Fraction: 3.51 - 0.1 mm long diameter

Fine Fraction: < 0.1 mm long diameter

Very fine matrix with medium- to small-sized inclusions. The coarse inclusions range from

very coarse to very fine sand (there are some granules too). The fine fraction is of very fine

sand and below. The coarse fraction is from poorly to moderately well-sorted, the fine fraction

is poorly sorted. The packing of the coarse fraction is close- to double-spaced, the fine fraction

is close- to single-spaced. It is matrix supported (wackestone texture).

### **Coarse Fraction**

Frequent to common: monocrystalline quartz, equant, sa-sr, mode = 0.15 mm. Most grains

have straight, some undulose extinction. Some grains display high

optical density. Size: 3.51-0.1 mm long diameter

Few: biotite mica laths

Few to rare: quartzite, slightly elongate, mode = 0.25 mm long diameter. Size:

0.75-0.15 mm long diameter

<u>Very few to rare</u>: fossils (foraminifera)

low-grade metamorphic rock fragments; phyllite, composed of biotite mica, sometimes "in intergrowth" with schist. Size: 0.75-0.25 mm

long diameter

Rare: micrite, composed of microcrystalline limestone, elongate, sr. Size:

0.45-0.1 mm long diameter

Very rare: chert, equant, sr. Size: 0.5-0.15 mm long diameter

chalcedonic quartz, equant, sr, mode = 0.3 mm long diameter

white mica laths

biotite fragments

Very rare to absent: calcite fragments, equant, a. Size: 0.5-0.15 mm long diameter

alkali feldspar, equant (seen in KST 00/26)

epidote

Boundaries of the coarse fraction: sharp to merging

### **Fine Fraction**

Common: monocrystalline quartz

biotite mica laths

Few: biotite fragments

Very few: white mica laths

Very few to absent: micrite

fossils (foraminifera)

chert

Rare: phyllite/schist fragments

Very rare: epidote

glauconite (?) - in KST 00/37

# **Textural Concentration Features**

Few to very few displaying textural and colour variation. There are three types that co-exist in all the sections:

a) dark red-or bright red in XPL, sr-sa, with clear to merging boundaries. They have compact appearance, sometimes without inclusions, others with inclusions of quartz and biotite mica. They are discordant with the micromass. Size: 0.5 - <0.1 mm long diameter. Most likely they are clay pellets.

b) greenish-brown to brown in XPL, equant or elongate, sa, with inclusions of quartz, biotite mica, and micrite. They are discordant with the micromass. Size: 0.75 - < 0.25 mm long diameter.

c) grog frgments, dark grey to black in XPL, elongate, a, with inclusions of quartz. Size: 2.0 - 0.2 mm long diameter.

There is also evidence for clay mixing like clay striations and porphyroclasts.

FABRIC TYPE: Coarse Phyllite

Samples

Subgroup (a): coarse buff

KST 00/32, 108, 110

CHT 00/ 12

Subgroup (b): coarse red

KST 00/4, 23, 49, 50(?), 51, 125, 130

CHT 00/5, 11

DEB 00/29

Microstructure

Very few to common meso and macro vughs, few to rare mega voids and very few to rare

planar voids. In general, voids and non-plastics are randomly oriented, except for KST 00/49

where vughs and non-plastics seem oriented parallel to vessel margins. In some cases very

coarse inclusions are surrounded by voids and in very few cases vughs are surrounded by or

filled with secondary calcite.

Groundmass

Homogeneous throughout the section. In some cases the core is darker than the margins. For

group A the colour ranges from orange-brown to grey brown in PPL (x40) and from dark grey

brown to dark red brown in XPL. For group B the colour is dark red in PPL (x40) and dark red

brown in XPL. The micromass ranges from optically active to inactive.

#### Inclusions

c:f:v 10 = ca. 45:47:8 to 35:60:5

Coarse Fraction: 3.9 - 0.2 mm long diameter

Fine Fraction: < 0.2 mm long diameter

Fine matrix with coarse, and medium-sized inclusions. The size of the coarse fraction ranges from granules to fine sand, the size of the fine fraction is of fine sand and below. Both fractions are poorly sorted. The packing of the coarse fraction is close-shaped, that of the fine fraction is close- to single-spaced. It is matrix supported (wackestone texture).

### Coarse Fraction

Dominant to frequent: metamorphic rock fragments; there are different types of phyllite: a) golden brown to purple in XPL, elongate, fine-grained, composed of biotite mica laths, occasionally some chlorite and some white mica, b) orange to silvery in XPL, elongated, composed of biotite mica and quartzite. In many cases they occur "in intergrowth" with quartzite. The phyllites display sometimes small-scale folding of the schistosity. In KST 00/49 there is fragment of phyllite with quartzite-schist in "flow structure". Some fragments contain opaques, probably illmenite. Size: 3.9 - 0.2 mm long diameter

> quartzite: composed entirely of quartz, equant or elongate, a-sa, sometimes with biotite mica laths. In some cases it grades into quartzite-schists. Size: 3.9 - 0.25 mm long diameter.

> slate: bright yellow in XPL, very fine-grained, equant, composed of quartz and biotite mica. Size: 0.5 - 0.2 mm long diameter

Common:

biotite mica laths

Common to frequent:

monocrystalline quartz with straight or undulose extinction, a-sa, some fragments with high optical density. Some wedge-shaped or very thin and elongate fragments seem intentionally crushed (KST 00/51). Size: 1.5 – 0.2 mm long diameter.

Few to rare:

micrite composed of microcrystalline limestone, equant, sr. Size:

1.25-0.2 mm long diameter

calcite fragments, equant to slightly elongate, a-sa. Size: 0.75-0.2 mm

long diameter

Very few to rare:

biotite fragments, equant to rectangular, some altered into chlorite.

Size: 0.25 - 0.2 mm long diameter

chert, equant, sr-sa. Size: 1.17 - 0.2 mm long diameter

Very rare to absent:

fossils (identifiable by their cast)

epidote

amphibole. Size: 0.75 mm long diameter (seen in KST 00/4)

Boundaries of the coarse fraction: clear to merging

### **Fine Fraction**

Frequent:

monocrystalline quartz

Frequent to common:

biotite mica laths

Common:

metamorphic rock fragments

Very few:

chert

Very few to rare:

biotite fragments

Rare:

epidote

Very rare:

alkali feldspar (seen in KST 00/49)

glauconite (seen in KST 00/130)

Fe oxides?

### **Textural Concentration Features**

Very few to rare. They are dark red to almost black in XPL, equant, sr, medium to small-sized, in most cases compact in appearance (clay pellets). The larger fragments have inclusions of quartz and biotite mica. Mode: 0.25 mm. They are discordant with the micromass.

There are also rare grog fragments, brown to dark brown in XPL, a-sa, with inclusions of quartz and biotite mica laths (see KST 00/ 32 and 108). They are discordant with the micromass.

Size: 1.0 - < 0.2 mm long diameter

There is also evidence of clay mixing in the form of clay striations.

FABRIC TYPE: Coarse phyllite, sand and fossils

Samples

KST 00/ 127, 129, 134

CHT 00/27

Microstructure .

Few to common meso, macro and mega vughs, few planar voids, rare vesicles close- to single-

spaced. In sample KST 00/124 the vughs and planar voids are oriented parallel to vessel

margins. Some voids are surrounded by secondary calcite. The non-plastics are randomly

oriented.

Groundmass

Homogeneous throughout the section. The colour ranges from orange-brown to grey-brown in

PPL (x40) and from dark orange-brown to grey/black in XPL. The micromass is optically

active.

Inclusions

c:f:v 10 = ca. 20:75:5 to 30:64:6

Coarse Fraction: 5.4 - 0.1 mm long diameter

Fine Fraction: < 0.1 mm long diameter

Fine matrix with medium-sized inclusions. The size of the coarse fraction ranges from pebbles

(one grain) to very fine sand. That of the fine fraction is of very fine sand and below. Both

fractions are poorly sorted. The packing of the coarse fraction is close- to single-spaced, that

of the fine fraction is close- to double-spaced. It is matrix supported (wackestone texture)

#### Coarse Fraction

<u>Common</u>: micrite, composed of microcrystalline limestone, fine-grained, equant

or elongate, sr-sa. Some fragments contain quartz inclusions – probably representative of the original rock Size: 1.75 – 0.1 mm long

diameter

Common to frequent: metamorphic rock fragments; quartzite: it is the main constituent of

this fabric. It is composed entirely of quartz and sometimes there are biotite mica and white mica laths. The grains are equant or elongate, fine-grained or coarser. There are some quartzite-schists too. Size: 5.4

- 0.15 mm long diameter.

phyllite: brown or golden brown in XPL, elongate and fine-grained, composed of biotite mica, quartz and in some cases there is white mica too. Some fragments contain opaques (illmenite). Some grains display folding of the schistosity. Size: 1.4 – 0.2 mm long diameter.

Common to rare: fossils (foraminifera and shell fragments)

Few to common: monocrystalline quartz, equant or elongate, a-sa with straight

extinction, mode = 0.2 mm. Size: 1.5 - 0.1 mm long diameter.

Very few to rare: calcite composed of microcrystalline limestone, a-sa. Size: 1.6 - 0.2

mm long diameter.

Very few to absent: biotite fragments with chlorite (?) and epidote / altered? Size: 0.5 -

0.2 mm long diameter.

Rare: chert, equant, sr. Size: 0.5 - 0.2 mm long diameter.

Very rare: chalcedonic quartz, equant. Size: 0.9 - 0.2 mm long diameter

Boundaries of the coarse fraction: clear to merging

### Fine Fraction

Dominant to rare: micrite

Frequent: monocrystalline quartz

Frequent to dominant: biotite mica laths

Common to absent: fossils (

fossils (foraminifera)

Very few:

white mica laths

Rare:

epidote

biotite fragments

chert

Very rare:

tourmaline? (seen in CHT 00/27)

## **Textural Concentration Features**

There are few tcf's. Two types: a) dark red in XPL without inclusions or with small inclusions of quartz and biotite mica, equant, sr (clay pellets). They are discordant with the micromass. Mode = 0.2mm. Size: 1.25 - 0.1 mm long diameter.

b) dark brown to black in XPL with inclusions of quartz, a, elongate (grog?). They are discordant with the micromass. Size: 2.0 - 0.2 mm long diameter. They are found mainly in KST 00/127.

E. PSATHI FABRIC

**E**1

FABRIC TYPE: Red with quartz and mica

Samples

Subgroup (a) Low-fired

PST 00/7, 15, 24, 35, 36

Subgroup (b) High-fired

PST 00/1, 2, 3, 5, 6, 13, 16, 17, 18, 19, 20, 21, 23, 25, 26, 27, 29, 31, 32, 33

Microstructure

Very few to rare meso and macro vughs, very rare mega vughs and planar voids. Vughs, voids

and non-plastics are randomly oriented. In rare cases vughs are filled with secondary calcite.

Groundmass

Homogeneous throughout the section. In the first group the core can be darker than the margins. The colour ranges from orange brown to brown in PPL (x40) and from brown to grey brown and dark brown in XPL. The micromass ranges from optically active to moderately active. For the second group the colour is brown in PPL (x40) and dark brown to dark red

brown in XPL. The micromass ranges from optically active to inactive.

**Inclusions** 

c:f:v 10m = ca. 20:78:2 to 30:68:2

Coarse Fraction: 2.30-0.1 mm long diameter

Fine Fraction: <0.1 mm long diameter

Very fine matrix with medium and small sized inclusions. Bimodal grain size distribution. The coarse fraction is of very coarse to very fine sand (there is one granule), the fine fraction is of very fine sand and below. Both the coarse and fine inclusions are poorly sorted. The packing of the coarse fraction is close to single-spaced, that of the fine fraction is single to open spaced. It is matrix supported (wackestone texture).

#### Coarse Fraction

<u>Dominant</u>: monocrystalline quartz, with straight extinction, equant or elongate, a-

sa, mode = 0.25 mm long diameter. Size: 0.75-0.1 mm long diameter

Frequent: biotite mica laths; in some cases they turn red in colour (in XPL) due

to high temperature

Few: quartzite, composed of quartz grains and occasionally biotite mica,

equant to elongate. In some cases it grades into quartzite-schist. Size:

2.30-0.25 mm long diameter

Few to rare: fossils and shell fragments, identifiable by their casts, mainly visible

in PPL

Very few: phyllite fragments, composed of biotite mica. Size: 0.5-0.15 mm long

diameter

Rare: chert, equant, sr. Size: 0.25-0.15 mm long diameter

white mica laths

biotite fragments, sometimes chloritised

Very rare to absent: epidote

chalcedonic quartz

Boundaries of the coarse fraction: sharp to merging

#### Fine Fraction

Predominant to frequent: biotite mica laths

Dominant: monocrystalline quartz

Very few:

phyllite fragments

Rare:

biotite fragments

#### **Textural Concentration Features**

There are few to rare tcf's of two types

a) dark red brown to black in XPL, equant, sr, with clear to merging boundaries. In most cases they do not have any inclusions or very few consisting of small grains of quartz and biotite mica. They are discordant with the micromass. Most likely clay pellets. Size: 1.0-0.1 mm long diameter

b) grog fragments, dark brown in XPL, equant, a, with clear to merging boundaries. They have few inclusions of quartz, biotite mica and quartzite. They are discordant with the micromass.

Size: 1.5-0.2 mm long diameter

F. PLATYVOLA FABRIC

FABRIC TYPE: Red with quartz, grog and pellets

Samples

PLT 00/ 1, 2, 4, 5, 6, 7, 8, 10, 13, 14, 20

Microstructure

Very few to rare meso and macro vughs, rare planar voids, very rare to absent mega vughs,

double to open-spaced. In some cases coarse non-plastics and grog are surrounded by voids.

Vughs, voids and non-plastics are randomly oriented. Some voids are filled with secondary

calcite.

Groundmass

Homogeneous throughout the section. The colour ranges from orange brown to red brown in

PPL (x40) to yellowish brown, orange brown and dark red brown in XPL. The micromass in

optically active except for samples PLT 00/7 and 10 where it is moderately active.

**Inclusions** 

c:f:v 10 = ca. 30:68:2 to 20:78:2

Coarse Fraction: 1.75 to 0.1 mm long diameter

Fine Fraction: < 0.1 mm long diameter

Very fine matrix with semi-fine inclusions. The coarse fraction is of very coarse to very fine

sand, the fine fraction is of very fine sand and below. The coarse inclusions range from

moderately well to poorly sorted, the fine fraction is poorly sorted. The packing of the coarse

fraction ranges from close- to double-spaced that of the fine fraction is single to open-spaced.

It is matrix supported (wackestone texture).

109

#### Coarse Fraction

Dominant to common: monocrystalline quartz, equant to slightly elongate, with straight

extinction, some with sharp boundaries, a-sa, mode = 0.15 mm long

diameter. Size: 1.5 to 0.1 mm long diameter.

Frequent to common: biotite mica laths

textural concentration features and grog (see relevant description)

Few: metamorphic rock fragments; quartzite, composed of quartz grains

and in some cases biotite mica laths and opaques (ilmenite), equant to elongate. Some fragments grade into quartzite-schist. Size: 1.5-0.25

mm long diameter

phyllite very rare fragments, composed of biotite mica and rarely white mica, elongate. In some cases they are in intergrowth with

quartzite. Size: 1.75-0.15 mm long diameter

<u>Very few</u>: chert fragments, composed of fine quartz grains, equant, sr. Size: 0.5-

0.15 mm long diameter

Very few to rare: biotite fragments, occasionally chloritised. Size: 0.3-0.1 mm long

diameter

Rare: polycrystalline quartz, mode = 0.12 mm long diameter

Very rare: epidote

white mica laths

tourmaline (seen in PLT 00/13)

Boundaries of the coarse fraction: sharp to merging

#### Fine Fraction

Frequent: monocrystalline quartz

Common: biotite mica laths

Few: metamorphic rock fragments (mainly quartzite)

Rare: biotite fragments

chert

Very rare:

epidote

white mica laths

#### **Textural Concentration Features**

Tcf's are frequent to common in this fabric and occur in the following types:

a) bright red to dark red in XPL, some do not have any inclusions, others contain inclusions of quartz, and biotite mica. They are equant, sr, with clear to merging boundaries, most likely

clay pellets. They are discordant with the micromass. Size: 1.75 - < 0.1 mm long diameter

b) greenish-brown to brown in XPL, with similar inclusions as type a) but with more biotite

mica. They are equant to slightly elongate with clear to merging boundaries, discordant with

the micromass. They are probably clay concentrations. Size: 1.5-0.25 mm long diameter

c) grog fragments, dark brown to black in XPL, with inclusions of quartz, quartzite and biotite

mica, equant of slightly elongate, a-sa with clear to merging boundaries. In some cases, the

grains are surrounded by voids, due to the differential thermal expansion during firing. Size:

1.25-0.25 mm long diameter.

There is strong evidence of clay mixing in the form of clay striations and porphyroclasts.

sample	As I	Ba	Ca	Ce	Co	Cr	Cs	Eu	Fe	HF	K	La	Lu	Na	Nd	Ni	Rb	Sb	Sc	Sm	та	Tb	Th	U	Vh	7	
CHT00/02	63.6	371	2.78	103.0	22.0	151	6.20	2.13					0.60		68.10		97	2.12		10.00				4.00	<b>Yb</b> 5.20	Zn	<b>2</b> F 296
CHT00/03	23.5	337	0.58	113.0	18.0	107		2.01					0.50		63.00		129	1.38		9.47				4.51			
CHT00/05	19.2 2	260	0.30	88.4	21.0	100		1.79					0.53		60.40		104	1.67	_	8.69		_		4.31	4.51 4.42		
CHT00/07	47.4 2	255	1.48	90.7	21.6	128		1.97					0.50		51.30	87	99	1.46		8.98				3.25	4.42		344
CHT00/10	28.7	322	0.92	134.0	34.0	112										98	96	1.23		15.10				3.44			
CHT00/11	30.9 2	206	0.77	78.7	11.1	107		1.25					0.37		34.70		106	1.39		6.53				3.44 3.39	4.73 3.00		211
CHT00/13	11.7	400	4.80	81.3	24.6	195		1.37					0.41		42.00		114	0.82		6.90				3.3 <del>5</del> 3.26	3.25		269
CHT00/14	30.5 2	264	2.39	78.2	15.9	108	4.76	1.42	5.19	8.92	1.75		0.43		0.00	62	81	0.87		6.97				3.20 4.17	3.38		209 388
CHT00/17	12.4	<b>369</b>	4.56	79.9	26.1	199		1.52					0.43		35.60	-		1.04		7.35				3.47	3.49		
CHT00/20	11.9 2	259	6.30	77.5	29.7	170		1.64					0.44		37.10			0.84		7.54				3.47	3.38		
CHT00/28	27.9 2	243	3.60	67.5	11.4	119	5.36	1.09	5.13	7.03	1.65		0.34		28.20	61	86	1.11				0.66		4.73	2.87		
CHT00/30	48.5 2	279	1.37	168.0	40.0	120	8.01	2.31	5.39	6.51	1.94		0.55		56.60		114	1.37		11.20				4.18	4.46		396
CHT00/31	25.4 2	283	6.47	77.8	15.4	114	4.31	1.77	4.49	6.34	1.84	47.3	0.39	0.49	46.80	82	90	0.89		8.71				4.01	3.44		284
CHT00/34	19.8	375	3.17	96.1	26.8	189	6.30	1.59	5.06	5.63	2.25	34.1	0.26	0.61	45.90			0.90		4.86				2.17	2.64		214
CHT00/37	8.5 1	185	11.64	55.9	10.5	105	3.24	2.14	3.11	4.96	1.35	42.3	0.36	0.29	66.50		50	0.83		6.54			7.9	2.26			
CHT00/42	16.8	187	7.36	83.1	17.2	77	5.01	1.50	3.67	5.32	1.68	34.5	0.31	0.31	44.30	66	73			5.58				1.92	2.70		191
CHT00/43	21.3 2	224	4.38	81.6	6.2	98	7.00	1.21	4.77	6.33	2.10	38.8	0.49	0.47	39.00	49	97	1.28		6.48				3.76	3.74		218
CHT00/45	39.8	309	6.61	164.0	18.6	101	7.73	4.38	4.49	5.98	1.94	81.1	0.71	0.39	121.00	89	117	1.25	14.2	16.10				2.81	6.70		
CHT00/46	38.2		7.47	94.4	17.0	107	6.54	2.14	5.44	6.29	2.04	50.1	0.37	0.31	62.80	64	94	1.25		6.67				2.28	3.19		276
CHT00/48	36.6 2	288			27.0	123	8.69	3.55	5.67	6.40	2.32	61.8	0.60	0.38	100.00	119	125	1.34	17.6	10.20				2.28	5.36		
DEB00/03	12.3	462	1.08	151.0	17.3	127	8.89	5.13	4.39	8.95	1.02				111.00		124	1.01	17.6	22.50				4.83	7.30		
DEB00/08	14.1 2	271	0.52	90.2	18.1	124	5.23	1.75	5.06	8.11	1.52	42.7	0.51	0.25	35.50	0	74	1.12	15.5	8.60				5.45	4.40		234
DEB00/09	21.2	0	0.41	95.3	24.5	99	12.00	1.77	5.12	6.73	2.63	38.2	0.50	0.24	52.20	77	110	3.25	16.2	8.76				5.83	3.79		267
DEB00/11		263		153.0	47.2	122		2.34				51.4	0.56	0.31	59.60	160	62	1.56	15.7	11.40				5.46	4.75		
DEB00/15		281	0.30	90.3	20.7			2.31				43.3	0.45	0.48	67.00	91	57	0.64	16.9	10.20				4.17	3.74		331
<b>DEB</b> 00/16	15.8 3		0.63	73.2			10.60	2.03	5.00	7.40	2.90	35.0	0.46	0.26	48.60	135	107	3.89	16.4	9.41				6.07	4.12	-	327
DEB00/17	5.5	0		111.0	31.8	172		2.97				59.3	0.66	0.28	80.40	121	26	0.98	18.6	13.50				4.49	5.47		
DEB00/18		245	2.85	94.7	29.0		0.50	2.52	5.54	9.74	1.65	51.7	0.57	0.37	52.20	150	38	1.10	15.8	11.30	2.13	1.39	13.9	3.63	4.87		
DEB00/21		343		117.0	29.2	152		2.76				52.8	0.53	0.45	57.70	135	80	0.89	18.0	11.80				4.34	4.41		
DEB00/22	11.6		0.30	98.4	21.2		7.25					44.2	0.52	0.37	57.20	117	92	0.89	16.8	10.30	2.72	1.16	16.4	4.09	4.41		
DEB00/23	11.0 3	344		132.0	25.0	113	11.50					43.1	0.48	0.19	58.40	133	90	4.56	15.3	11.00				6.49	4.46		
DEB00/26	16.4			123.0	24.9		9.20					38.5	0.49	0.23	61.70	133	85	3.39	15.8	10.50				5.79	4.38		
DEB00/28	24.7	344		194.0	25.3	117	13.40					38.1	0.49	0.22	58.70	146	106	5.35	17.1			0.90		6.31	4.02		
DEB00/31	8.7 2		5.20		24.2			2.08				48.1	0.45	0.45	51.40	117	56	1.03	16.5	9.48				3.64	3.73		
DEB00/32		204		128.0	46.6		0.61	2.58	6.87	8.30	0.89	59.4	0.58	0.46	0.00	197	27	0.69	18.6	11.90				3.29	5.08		
DEB00/33	9.9 3	359	0.75	92.4	29.7	158	6.21	2.27	6.75	8.77	1.56	45.8	0.46	0.48	63.60	117	77	0.88	16.6	10.10				3.96	4.07		
																					-	_					

_	<b>EB00/35</b>	22.0 35				31.7	116	13.70 4.15	9.33	5.70	1.66	80.5 0	).69	0.29	99.40	148	133	2.82	26.0	19.80	1.59	2.07	23.5	3.74	6.07	133	238
C	<b>EB00/36</b>	0.0 55				21.1	123	5.71 2.53	6.25	9.56	0.00	5798.0 1	.02	0.00	60.80									2173.00	8.68		
E	<b>EB</b> 00/37	8.4 44	14	0.30	114.0	31.3	170	5.44 2.77	6.07	8.12	2.09	58.0 0	).57	0.50	60.80	160		0.89		13.40				4.22	4.76		
E	<b>DEB</b> 00/38	14.2 42	22	0.89	119.0	17.0	111	6.90 3.03	4.95	9.51	1.28	66.4 0	).66	0.31	0.00	98	99	0.86	16.4	14.80				4.89	5.32		
	<b>EB00/41</b>	14.1 40	<b>)</b> 6	0.30	111.0	22.9	120	7.53 2.12	6.11	9.02	1.34	45.1 0	).54	0.38	0.00	93	87	0.89	18.0	10.50				4.73	4.39		
	<b>EB00/42</b>	16.1 42	28	0.70	148.0	30.1	117	10.70 1.93	6.13	8.74	2.21	<b>39.6</b> 0	).49	0.19	65.10	119	99	3.96			2.39			7.08	4.39		
•	CST00/02	22.0 21	17	1.63	116.0	16.6	118	7.04 4.08	4.55	7.80	2.37	85.9 0	).91	0.40	111.00		110	1.10	14.9	18.10				3.17	7.65		
ı	(ST00/03	35.6 24	18	1.13	126.0	24.4	108	5.06 2.02	3.93	7.88	2.09	50.3 0	).47	0.41	60.30	59	91	0.90		10.30				4.88	3.90		
	(ST00/08	39.4 13	53	0.30	147.0	30.4	127	6.16 2.12	5.78	7.67	2.01	38.3 0	).69	0.28	49.70	70	100	1.88			1.73			2.92		112	
	(ST00/09	22.8 23	51	0.94	86.0	15.1	84	5.30 1.34	4.34	7.41	1.96	31.0 0	).45	0.36	42.30	48	92	1.04			1.75			3.85	3.50	59	0
ı	(ST00/10	113.0 21	16	0.93	111.0	16.0	81	5.15 1.83	4.44	8.84	1.60	45.7 0	).53	0.38	52.40	58	86	1.09			1.85			2.69	4.31		387
ı	CST00/13	32.1 17	70	6.56	63.0	32.9	172	5.57 1.07	4.30	3.64	2.10	25.9 0	).35	0.40	32.50	175	95	0.94			0.89			2.15	2.71	-	113
	(ST00/14	45.4 28	37	2.34	104.0	19.2	117	6.22 2.11	5.15	6.45	2.42	43.6 0	).61	0.42	59.90	48	95	1.10		10.20				6.21	5.27	96	
	(ST00/15	36.9 40	<b>)8</b>	0.80	138.0	53.5	127	8.26 3.27	5.00	7.07	2.37	69.5 0	).77	0.53	102.00	95	115	1.30		15.30				6.38	6.88		
	(ST00/16	23.4 31	14	1.22	137.0	23.8	131	11.70 3.74	5.28	7.81	2.34	78.0 1	.00	0.45	110.00		140	1.69	19.8	17.80				4.37	8.22		
	(ST00/17	31.3 38	32	0.30	150.0	24.3	112	8.12 3.91	5.15	9.42	2.33	75.6 1			93.50		111	1.12		18.10				4.58	8.91		
ı	CST00/18	21.5 35	58	1.50	88.8	25.8	232	5.26 1.97	4.79	6.35	2.09	<b>39.5</b> 0	).57	0.41	42.00		85	1.91	18.9	9.03				8.55	4.77		
ı	CST00/19	34.9 33	54	1.35	209.0	25.6	143	11.10 4.95	6.43	7.62	1.91	80.5 1	1.24	0.49	118.00	123	140	1.77		21.50					11.90		
ı	CST00/20	53.4 42	25	1.35	118.0	18.2	134	8.06 4.39	6.60	7.51	1.94	77.8 1	1.12	0.42	107.00	100	116	1.70	18.9	19.40				6.70	9.56		
_	CST00/21	12.7 33	54	7.74	84.7	28.9	209	5.50 2.07	4.51	5.14	1.58	48.2 0			57.30		86	1.23		9.67				6.03	4.47		0
ı	CST00/27	13.1 36	66	3.13	99.7	25.2	253	6.33 2.18	3.62	6.02	2.30	48.3 0	).61	0.34	63.60	163	100	1.74		10.50				7.93	5.05		0
-	(ST00/41	15.1 23	_	4.97	71.7	15.4	96	4.22 1.14	3.72	6.37	1.39	<b>30.1</b> 0	).35	0.33	0.00		73	0.76			1.34			3.03	2.73		199
•	CST00/46	18.4 24	11	5.65	127.0	25.6	94	6.29 2.40	4.24	6.91	1.39	57.2 0	).5 <del>9</del>	0.45	83.30	0	90	1.46	13.3	11.60				3.06	4.98		246
1	CST00/48	27.2 18		7.25	92.5	17.4	109	4.99 2.13	3.95	6.11	1.61	45.1 0	).59	0.35	0.00	76	68	1.21	11.7	10.00				2.34	5.03		259
ı	CST00/49	32.0 28	39	0.56	67.6	9.9	108	4.83 0.80	3.66	9.08	1.80	28.3 0	).36	0.64	0.00	45	89	0.57	11.9		2.33			4.69	2.88	84	
	(ST00/51	29.6 29		8.79	99.6	28.4	92	4.35 2.25	4.17	5.92	1.41	51.3 0	).60	0.40	78.40	176	61	5.52	10.7	10.50				5.24	4.87		
_	(ST00/53	12.0 34	11	3.75	70.7	27.0	151	7.70 1.34	5.00	5.26	2.32	<b>32.9</b> 0	).42	0.65	0.00	144	131	1.45	17.6		1.20			4.14	3.23	90	0
_	(ST00/60	13.8 36	_	5.63	73.4	27.1	215	7.94 1.65				39.4 0	).40	0.73	80.20	162	132	1.01	18.7		1.28			4.57		112	_
-	CST00/61	15.3 37	_	6.75	79.1	27.4	208	8.52 1.65	5.46	5.58	2.42	41.4 0	).44	0.61	0.00	166	133	1.05	18.7		1.35			4.33	3.43		
	CST00/62	16.6 23	-	1.80	146.0	36.4		8.61 2.49	4.76	7.93	2.02	57.8 0	).57	0.57	85.70	156	90	2.67	15.8	12.10				4.33	4.71		
	CST00/63	17.4 31		2.60	80.4	32.1		7.76 1.53	5.31	5.21	2.23	<b>37.9</b> 0	).45	0.72	45.10	205	127	0.94	19.1	7.57	1.31	0.95	12.6	5.08	3.61		
ı	CST00/65	28.9 21	_	3.60	66.6	35.3	214	6.11 1.28	4.99	4.62	2.34	31.1 0	0.40	0.58	0.00	241	96	0.98	16.7		1.24			3.28	3.09		
_	CST00/68	21.2 28		5.67	77.7	27.3		6.42 1.54				<b>39.7</b> 0	).41	0.57	46.90	159	111	1.00	17.5		1.35			4.83	3.28		
`	(ST00/71	8.9 24		4.07	81.5	27.2	229	5.85 2.31				51.4 0	).71	0.39	51.20	217	78	1.75	16.6	10.60				5.98	5.36		
_	(ST00/74	_		3.10	86.8	26.1		8.01 1.60				41.0 0	).47	0.67	46.60	147	131	1.28			1.75			5.12	3.51		
_	CST00/77	22.1 29	_	4.45	78.4	27.7	218	8.02 1.58				38.4 0	).46	0.52	0.00			1.16			1.30			4.85	3.66		
•	(ST00/78	20.3 29	<b>31</b>	3.00	105.0	67.7	183	6.05 2.36	4.45	6.47	0.61	54.8 0	).70	0.32	64.00	239	67	2.03		11.00				5.51	5.54		
																							. 3.0	5.51	J.J-	,	

KSTOO	/79	24.8	408	5.91	73.7	22.8 2	21 6.	03 1.5	5.03	5.91	2.50	37.2	0.42	0.64	0.00	157	117	0.84	17.2	7.40	1.30	0.92	11.4	4.12	3.33	93	212
KSTOO	/81	13.5	388	5.35	68.8	31.1 2	<b>:09</b> 5.	70 1.3°	5.19	4.42	2.87	30.2	0.40	0.46	38.30	237	121	0.66	16.5	6.22	1.30	0.73	11.0	4.62	2.93	141	193
KSTOC	/82	15.7	362	4.73	78.5	18.9 1	78 6.	11 1.3	4.44	5.95	2.38	35.7	0.44	0.52	0.00	125	122	1.05	15.9	6.73	1.68	0.77	11.4	6.01	3.21	70	0
KSTOC	/85	27.1	0	3.76	85.3	14.4 1	14 5.	43 2.8	2 4.20	7.11	2.24	66.1	0.56	0.66	0.00	0	104	0.61	14.8	14.20	2.36	1.61	13.5	4.90	4.73	113	278
KSTOC	/91	26.0	206	10.35	61.9	12.8	90 4.	97 1.2	3.93	4.64	1.35	31.5	0.34	0.31	27.40	79	72	1.43	11.0	5.87	1.27	0.70	9.8	2.68	2.74	71	143
KSTOC	<b>)/92</b>	25.0	304	7.32	102.0	21.6 1	07 6.	11 2.5	3.77	5.89	1.90	56.8	0.59	0.46	0.00	78	86	1.23	14.0	12.20	1.67	1.35	13.6	4.27	4.94	85	235
KSTOC	/94	23.1	252	3.11	97.5	17.5° 1	08 8.	59 1.7	4.90	5.67	2.36	51.0	0.43	0.48	54.10	81	120	1.29	15.3	9.01	2.00	0.94	14.9 ·	3.99	3.35	117	193
KSTO	)/95	22.4	285	6.17	116.0	17.1 1	04 6	<b>35 2.0</b>	1 4.62	6.47	1.74	43.3	0.51	0.45	52.40	89	90	1.11	14.0	9.20	1.72	1.21	13.6	3.06	4.41	95	239
KSTO	1100	20.6	0	5.51	108.0	19.6 1	25 8.	85 2.4	4.74	6.62	2.06	65.9	0.63	0.51	0.00	83	123	1.33	16.7	11.50	1.91	1.25	15.0	3.39	5.28	123	336
KSTO	1103	12.2	226	6.81	78.3	24.3 1	191 4	08 2.1	7 3.93	5.82	2.02	47.7	0.60	0.37	51.00	157	69	2.07	13.9	9.64	1.22	1.18	10.0	3.86	5.11	133	317
KSTO	1104	9.5	229	1.87	101.0	21.7 1	43 6	45 1.7	5 5.23	7.69	2.23	46.6	0.50	0.76	52.80	99	113	1.70	16.2	8.55	2.02	1.06	13.9	3.45	4.14	102	367
KST00	2010	17.6	276	1.53	92.0	25.5 1	i <b>72</b> 5.	11 1.8	3 4.82	6.69	1.82	46.2	0.47	0.53	47.40	138	87	0.94	16.3	8.62	1.63	1.02	12.5	3.44	4.14	110	284
KSTO	1109	16.1	317	4.92	75.9	24.3 1	188 6	42 1.5	4.96	5.51	2.52	37.7	0.43	0.57	42.10	141	121	1.06	16.8	7.29	1.31	0.80	11.3	3.12	3.54	93	0
KSTO	7111	28.1	249	3.51	78.6	17.0 1	112 4	46 1.2	1 4.68	7.37	1.90	32.2	0.39	0.48	0.00	68	84	0.92	12.9	6.07	1.67	0.67	12.1	4.88	3.00	75	378
KSTO	2113	20.9	307	4.20	79.6	11.4 1	115 5	11 1.2	<b>5.23</b>	7.70	1.67	35.2	0.41	0.61	35.90	52	82	1.11	14.7	6.48	1.80	0.77	13.4	4.38	3.32	74	343
KSTO	7114	23.0	0	5.19	71.1	14.0 1	108 4	08 1.1	2 4.88	7.02	1.76	31.3	0.37	0.50	33.20	0	70	1.09	12.9	5.62	1.55	0.67	12.2	3.26	3.02	73	316
KSTO	<b>)126</b>	24.7	324	0.81	103.0	17.3 1	126 10	50 2.0	4 6.49	7.68	2.38	55.6	0.58	0.47	54.30	0	129	1.49	20.1	10.20	2.31	1.13	18.0	4.23	4.58	113	241
KSTO	1127	20.1	287	3.09	103.0	26.7		69 1.7	0 4.78	5.81	2.17	38.6	0.45	0.52	47.90	143	93	1.29	15.6			0.94		4.00	3.58	89	179
KSTO	0134	11.1	279			21.2		.04 1.1		-	-	30.1	0.35	0.86	34.10	183	115	0.66	17.2	5.65	1.10	0.67	9.7	3.01	2.70	115	165
KSTO			344		105.0	17.7 <i>′</i>		47 1.8						0.44	54.00	-		1.26	16.0	9.14	1.99	0.96	15.3	4.21	3.85	105	0
KSTO	0137		344			12.6		.36 1.2						0.60	33.00		130	1.28				0.70		3.68	3.13	72	178
MITO		16.9	242		126.0	27.7 <i>′</i>		.79 1.6				41.5	0.26	0.30	52.60			1.26	17.9	5.14	2.84	0.84	16.6	2.83	2.34	72	327
MITO			311		160.0	40.2		.30 2.1						0.31	49.30				19.7			1.21		6.70	3.57		
MITO		_	278			23.1		.66 1.1						0.22	32.40				22.2			0.78		4.76	2.61		
MITO			242		138.0	31.0		.39 4.0					-	0.20	86.50				28.7	18.30				4.37			266
MITO			211			19.6		.14 1.5						0.40	38.20		-		16.0				13.6	3.11	3.66		319
MITO			222			16.5		.71 1.2						0.53	27.60	_			17.4			• · · ·	15.0	4.00	2.84		301
MITO			207					.60 1.2						0.24	38.40				18.4			-	17.5	6.86	3.75		306
MITO			277			21.3		.49 2.5						0.24	56.20				28.5				23.9	5.77			256
MITO			219			11.0		.75 1.5						0.29	45.70				22.9				21.4	4.89	3.36	-	244
MITO			163			28.4		.54 2.2						0.21	63.90				26.5			1.25		4.39			285
MITO			257			29.5		.15 0.9						0.49	30.20				17.0			0.55		3.39	3.20		195
MITO			189			22.7		.44 0.8						0.41	22.60				14.7				13.0	3.06	2.88	. –	240
MITO	-		267			33.3		.16 0.9						0.47	28.80				17.8				13.0	3.26			183
* MITO			175			16.9		.79 1.1					-	0.40					19.6				16.6	3.94	3.36		237
MITO			196			23.9		.83 1.5						0.38	39.80				17.0				14.8	3.31	4.22		293
MITO	0/28	31.1	173	0.30	80.1	24.2	111 12	.20 2.7	6 8.3	6.8	3 1.75	34.0	0.50	0.31	71.00	90	85	2.92	18.7	12.70	2.02	1.29	17.1	6.39	4.76	115	222

	MIT00/30	31.5	167	0.36	71.0	16.1 121	8.60 1.62	5.55 7.9	9 2.02	34.6 0.45 0.19	46.70 79 90	3.76 18.5	8.01 2.21 0.86 17.7	6.27	4.27 98 242
	MIT00/31	29.9	295	0.30	95.4	23.9 142	8.26 2.34	7.65 7.7	2 2.20	43.2 0.59 0.25	60.60 145 104	2.31 22.1	10.80 2.24 1.14 19.7	5.44	4.05 127 362
	NOP00/1	11.6	402	0.85	164.0	185.0 126	4.62 3.29	3.84 5.6	1.72	60.3 0.63 0.37	0.00 168 69	0.88 12.4	15.20 1.29 1.91 9.7	3.59	5.50 119 235
	NOP00/11	6.5	398	0.67	83.0	37.2 183	4.26 1.34	5.35 4.9	7 1.42	32.8 0.43 0.34	0.00 129 58	1.11 13.8		2.84	3.31 99 0
	NOP00/12	12.5	424	0.30	112.0	27.1 134	4.30 1.74	5.93 8.5	9 1.44	44.6 0.51 0.46	46.20 111 70	1.60 14.6		4.00	4.16 148 306
	NOP00/13	18.4	768	0.51	85.5	41.5 164	7.45 1.53	5.18 5.4	9 2.32	35.5 0.44 0.41	0.00 175 95	2.52 16.6		3.49	3.44 248 197
	NOP00/15	11.3	563	0.72	69.5	12.2 131	5.32 0.90	5.13 6.8	0 1.77	28.2 0.37 0.56	25.30 95 103	1.17 14.8		3.37	2.94 93 222
	NOP00/17	12.1	494	1.10	109.0	28.2 147	4.25 1.78	6.57 7.1	8 1.45	46.4 0.47 0.43	52.40 132 80	1.07 16.2		3.26	3.83 90 302
	NOP00/20	11.1	399	1.45	80.1	16.8 151	3.71 1.90	5.04 8.4	1.18	47.2 0.53 0.39	54.40 112 60	0.83 15.0		4.23	4.28 503 268
	NOP00/22	12.0	438	4.91	70.5	14.1 105	3.97 1.03	4.14 7.5	5 1.27	30.2 0.36 0.28	27.60 0 62	0.81 11.9		3.60	2.67 105 232
	NOP00/25	13.9	647	2.12	92.2	49.0 317	6.39 1.80	5.70 5.7	7 1.83	42.5 0.49 0.35	0.00 360 91	0.99 20.7	8.37 1.66 1.05 13.2	3.49	3.93 210 239
	NOP00/3	18.8	394	0.88	96.0	30.0 154	1.45 1.49	5.71 7.4	5 1.00	44.2 0.50 0.23	45.70 100 32	0.83 15.6	_	5.18	3.58 128 0
	NOP00/30	20.9	467	0.91	80.1	23.8 140	2.90 1.58	4.42 5.7	3 0.95	42.7 0.40 0.33	43.60 85 42	0.80 13.1	7.38 1.35 0.98 10.6	2.26	3.29 101 0
	NOP00/34	18.4	496	1.01	207.0	41.0 213	6.80 3.26	5.89 6.6	7 1.50	70.4 0.67 0.36	91.40 260 80	1.22 18.1	16.00 1.82 1.70 15.4	4.11	5.73 158 266
	NOP00/39	13.1	336	0.18	102.0	35.9 166	3.76 1.70	5.53 6.9	4 1.32	46.3 0.47 0.33	0.00 146 53	1.30 16.3		3.80	4.07 160 270
	NOP00/4	10.4		2.28	82.0	33.8 214	7.00 1.27	5.32 5.4	5 1.95	30.3 0.41 0.82	0.00 168 124	0.76 17.6		3.14	3.23 113 168
	NOP00/40		263	4.07	88.3	28.4 170	3.71 1.42	5.92 7.2	2 1.33	41.7 0.43 0.53	35.30 207 63	0.96 17.1	7.28 2.20 0.91 13.8	3.30	3.47 102 231
	NOP00/41	23.0			116.0	21.4 145				47.3 0.43 0.50	56.10 167 95	1.15 16.4		4.55	3.71 102 327
	NOP00/43	14.5		0.64	86.0	36.2 267				30.4 0.46 0.50	36.60 376 92	1.05 18.5	and the second s	3.36	3.74 131 260
	NOP00/47		436	0.30			10.60 1.09			30.5 0.44 0.50	32.60 368 94	1.09 18.6		3.32	3.40 140 289
	NOP00/50		752		105.0	45.5 124				48.4 0.42 0.43	0.00 189 67	0.92 13.1	9.90 1.53 1.08 10.3	3.78	3.34 139 308
	NOP00/51	21.6			118.0	12.6 118		5.37 9.2	0 1.16	57.2 0.45 0.29	61.90 196 64	0.83 15.7	10.30 2.09 1.12 15.8	4.30	3.55 107 424
	NOPO0/52	14.9			101.0	26.1 155				41.6 0.46 0.40	49.20 107 53	0.53 14.8	7.61 2.03 0.91 14.2	3.52	3.70 98 318
	NOP00/53	14.1		2.16	79.4	22.5 176				38.4 0.44 0.32	35.90 175 39	0.68 16.4		3.62	3.46 91 220
	NOP00/54	24.1			103.0	44.6 184				38.5 0.49 0.38	35.90 169 91	0.93 15.9	7.56 1.72 1.08 13.8	3.91	3.71 185 303
	NOP00/55	28.6			164.0	26.6 124				74.7 0.80 0.33	78.20 132 112	1.21 18.4	16.10 2.29 2.23 18.7	3.89	6.54 149 323
	NOP00/56	11.6	-	0.62	62.2	21.5 142				25.0 0.35 0.48	19.80 116 107	1.58 16.5		3.04	2.71 160 281
	NOP00/57	12.1		6.13	78.7	37.5 152				30.9 0.35 0.38	0.00 181 81	0.90 14.4	6.69 1.52 0.71 10.9	3.10	2.80 129 230
	NOP00/59	15.4		2.44	76.5	33.1 238				35.9 0.45 0.45	30.60 270 66	0.66 19.0	6.75 1.29 0.92 11.8	3.34	3.45 101 174
	NOPOO/6	13.3			101.0	21.8 84	5.43 1.89			46.9 0.54 0.48	53.80 41 111	0.94 13.9	8.81 2.12 1.43 13.2	3.21	4.27 98 234
	NOP00/60	12.0			103.0	39.2 226	5.86 1.94			50.8 0.54 0.48	0.00 236 99	1.08 19.1	8.94 1.95 1.06 14.3	3.77	4.11 154 189
	NOP00/66		404	2.28	74.4	26.7 195	1.41 1.34			34.6 0.38 0.35	29.50 0 39	0.61 15.6	6.35 1.17 0.78 10.8	2.89	3.10 95 226
_	NOP00/68		320	5.59	93.5	27.5 165	2.33 1.68			41.3 0.43 0.59	40.40 152 46	0.87 17.0	7.27 2.26 0.83 14.3	2.99	3.35 113 306
ń	NOP00/71		365		100.0	31.2 155	4.60 1.82			45.6 0.46 0.69	43.40 113 77	1.13 17.6	7.94 2.47 1.02 15.6	3.55	3.70 130 301
	NOP00/73		396		106.0	36.9 178	1.47 1.76			43.7 0.50 0.57	41.20 134 36	1.14 18.0		3.91	3.83 137 288
	NOP00/75	11.8			112.0	29.7 149	_			51.9 0.52 0.63	0.00 100 68	1.04 18.4	9.18 2.61 1.21 16.4	3.93	4.27 141 291
	NOP00/77	11.4	540	0.30	76.0	11.7 119	6.50 0.94	4.82 7.6	6 2.06	31.9 0.34 0.57	28.80 0 127	1.01 13.5	5.03 2.12 0.50 12.3	3.37	2.66 88 206

	womaa /a	70	404	0.77	00.0	20 5	467	A E7	4 E A	4 00	7.00	4 77	AA E	0.45	O AE	35.20	420	70	0.00	4E G	7.50	4 74	0.89	42.0	2.00	3.38	40E	220
_	NOPOO/8		481	2.77	90.0	22.5		4.57							0.45			78 75	0.80						2.99			
-	NOP00/80		302	1.49	85.9	24.1		2.03						0.42		36.60		35	0.65				0.95		2.86	3.42		
	PLT00/01				182.0	15.5		8.54								241.00	96	92	0.95		39.20					14.40		
	PLT00/02				157.0	22.3		7.53						0.73		79.70	94	89	1.31		13.50				4.56	6.04		
	PLT00/03			13.59	77.1	4.2	69	4.59						0.32		0.00	0		0.48				0.66		2.49	2.79		197
	PLT00/04		230		119.0	16.3			1.36					0.41		0.00			1.09				0.82		3.88	3.25		
	PLT00/05				116.0	11.0		8.54						0.58		0.00	-		1.34		10.70				4.18	4.60		
	PLT00/06				114.0	11.0		8.25						0.56		0.00	86		1.31		10.30				4.04	4.74		
	PLT00/07	14.0	136	0.30	66.1	10.2			0.97		-			0.35	_	0.00	82		1.34				0.68		4.00	3.01		289
	PLT00/08	7.6	0			15.8		8.19			_			0.56		0.00			1.33		10.80				4.27	4.77		0
	PLT00/09	10.9			134.0	20.7		4.98						0.68		0.00			1.01		12.30				3.89	6.24		343
1	PLT00/10	5.7	327	1.39	137.0	19.6	108	4.79					61.6	0.42	0.91	0.00	95	59	0.66	20.0	11.80	3.68	1.28	11.6	3.71	3.62	132	255
	PLT00/11	10.3	404	3.29	98.2	25.2	145	7.49	1.57	5.26	7.39	2.56	44.6	0.43	0.74	0.00	146	117	1.48	16.8	7.76	2.10	1.01	13.4	4.00	3.53	134	231
	PLT00/12	4.3	394	1.07	139.0	8.8	118	10.90	2.24	3.33	9.89	1.42	65.8	0.55	0.39	79.80	64	98	0.84	16.9	11.20	2.71	1.42	18.5	4.14	4.34	196	389
	PLT00/13	12.4	335	1.48	116.0	17.8	109		2.47				57.0	0.46	0.38	77.40	58	77	1.41	17.3	12.10	2.03	1.18	16.5	3.27	3.84	154	349
	PLT00/14	5.1	427	1.63	124.0	13.7	113	8.32	2.09	3.57	8.12	1.33	55.9	0.52	0.34	53.50	68	100	0.80	17.1	10.20	2.42	1.11	17.0	3.71	4.34	370	300
	PLT00/15	24.8	277	0.30	102.0	13.6	125	13.80	1.86	5.42	7.99	2.61	49.9	0.52	0.34	66.60	84	135	4.88	19.0	9.56	2.34	1.06	17.7	5.63	4.12	126	319
	PLT00/16	9.8	274	13.79	92.1	14.3	77	5.10	1.80	3.68	5.14	1.05	46.6	0.50	0.30	<b>55.70</b>	56	81	0.83	11.4	8.49	1.70	1.17	12.1	3.06	4.16	123	193
	PLT00/17	23.4	411	4.36	91.9	25.3	102	7.03	1.60	4.35	6.94	2.04	45.9	0.45	0.51	59.30	58	103	1.40	14.7	8.05	1.76	0.94	14.1	3.80	3.63	96	266
	PLT00/18	25.2	347	0.61	101.0	13.7	127	14.10	1.91	5.38	7.62	2.78	50.8	0.46	0.33	59.60	86	130	4.98	18.8	9.66	2.41	1.01	17.9	6.01	3.91	135	349
	PLT00/19	19.1	314	3.29	103.0	21.5	122	8.29	2.00	4.87	7.47	1.70	53.5	0.53	0.51	76.10	81	113	1.92	16.2	9.88	1.70	1.11	15.2	3.87	4.16	143	286
	PLT00/20	6.4	221	0.85	134.0	23.7	107	50.10	1.98	2.81	8.22	1.98	61.2	0.53	0.43	0.00	108	119	1.68	16.9	9.93	2.58	1.12	16.8	6.66	3.61	205	241
	PST00/02	13.7	0	2.35	82.5	15.2	126	1.47	1.30	5.59	8.65	0.59	37.7	0.37	0.39	0.00	83	23	1.27	16.1	6.50	2.24	0.81	14.7	3.79	3.02	88	266
	PST00/07	17.6	309	1.25	90.4	12.1	120	3.29	1.87	5.42	8.58	1.38	44.1	0.57	0.32	0.00	89	64	0.71	13.3	9.21	2.23	1.32	14.9	3.74	4.09	61	264
	PST00/09	15.9	200	2.14	84.3	17.1	105	2.08	1.45	5.11	8.58	1.01	39.1	0.41	0.40	0.00	82	43	0.73	13.5	7.40	2.23	0.88	13.8	3.34	3.19	82	229
	PST00/11	16.7	266	2.29	131.0	31.5	105	2.92	1.56	5.28	8.91	1,11	41.3	0.47	0.43	0.00	96	49	0.73	14.4	8.00	2.16	0.95	14.0	3.45	3.58	91	302
	PST00/12	14.8	316	2.59	66.3	10.5	113	2.21	1.27	5.11	9.37	1.01	36.1	0.46	0.31	0.00	72	42	0.58	12.6	6.77	2.11	0.90	13.9	3.82	3.27	61	253
	PST00/15	12.7	340	1.12	87.3	15.8	111	3.81	1.72	5.68	9.51	1.43	45.2	0.48	0.49	0.00	94	70	0.74	13.9	8.56	2.30	1.06	15.1	3.57	3.67	79	283
	PST00/18	9.6	0	3.39	82.4	14.0	125	1.54	1.35	6.28	9.63	0.83	39.7	0.44	0.54	0.00	85	26	1.11	16.1	6.73	2.60	0.85	16.3	3.95	2.86	103	244
	PST00/19	7.8	260	2.58	82.7	15.2	124	3.37	1.39	5.88	8.86	0.90	38.3	0.42	0.50	0.00	86	50	1.22	15.3	6.88	2.38	0.74	16.2	3.53	3.27	81	287
	PST00/21	10.4	306	3.90	84.8	15.6	113	1.73	1.60	5.55	7.94	1.18	43.6	0.44	0.48	0.00	83	45	0.94	14.7	7.79	2.29	0.92	14.5	3.48	3.60	85	259
	PST00/22	6.2	0	3.96	105.0	26.5	146	3.29	2.33	6.22	7.30	1.12	52.5	0.52	0.57	0.00	126	50	0.92	16.5	10.70	2.22	1.30	15.1	3.15	4.15	103	259
	PST00/24	15.9	290	1.25	72.9	11.6	139	3.06	1.81	5.87	8.30	1.56	46.0	0.54	0.34	0.00	107	58	0.76	14.1	8.79	2.20	1.22	15.5	3.91	3.96	72	295
_	PST00/25	6.4	320	3.34	77.4	14.4	131	1.51	1.40	5.69	8.68	0.75	39.6	0.44	0.42	0.00	93	28	0.97	14.8	7.10	2.28	0.82	15.0	3.60	3.43	87	287
7	PST00/29	11.6	285	2.67	84.2		126	1.93	1.44	5.82	8.78	0.98	39.3	0.42	0.45	0.00	78	36	1.31	15.5	6.96	2.27	0.85	15.8	3.48	3.12	88	283
	PST00/30	21.2	226	2.19	82.4	12.8	124	3.50	1.68	5.25	7.39	1.55	41.5	0.47	0.38	0.00	64	60	0.80	13.7	8.40	1.90	1.06	14.2	3.12	3.83	71	225
	PST00/34	21.3	310	1.19	76.4	22.0	169	6.14	1.54	5.57	6.56	1.55	40.5	0.46	0.40	0.00	149	88	0.74	15.5				13.1	3.13			240
							-												•									

PST00/35	15.2 368	0.94	116.0	19.1 1	11 1.3	1.76	5.45	8.26	1.05	48.0	0.49	0.32	54.20	80	<b>37</b>	0.60	15.5	8.98	2.12	0.97	14.4	3.59	4.00	85	265
STV00/01	29.3 556	1.04	125.0	16.4 1	32 6.79	2.44	6.27	6.79	2.23	58.0	0.55	1.55	77.90	97	157	1.47	17.6	11.70	1.93	1.42	17.0	4.18	4.67	103	248
STV00/04	23.0 255	0.99	59.9	28.4 3	32 4.2	1.83	5.53	5.06	1.73	38.9	0.43	1.47	0.00	220	85	1.43	16.4	7.92	1.07	1.07	9.1	3.17	3.45	113	0
STV00/06	35.5 322	1.32	74.2	28.7 2	47 3.74	2.45	5.08	4.55	1.47	50.4	0.53	1.66	0.00	243	74	1.12	18.2	10.90	1.03	1.53	9.7	5.85	4.65	107	156
STV00/09	25.3 247	16.12	51.8	23.2 1	61 3.2	2.91	3.40	3.23	1.10	46.9	0.94	0.86	0.00	183	51	0.79	11.5	11.20	0.83	2.11	6.6	4.59	7.85	93	148
STV00/12	49.5 374	0.30	89.7	26.2 1	55 12.3	1.67	6.07	6.89	2.50	48.0	0.44	0.37	0.00	<b>352</b>	138	9.96	18.7	8.37	1.72	1.15	14.4	7.86	3.58	340	252
STV00/14	7.6 479	1.01	124.0	20.7 1	06 4:8	2.06	4.89	9.73	2.25	59.7	0.46	0.68	66.40	.68	106	0.64	17.7	10.20	3.23	1.23	16.0	3.84°	4.09	100	315
STV00/17	28.5 416	0.68	165.0	7.4 1	13 6.2	3.05	6.06	7.49	2.36	81.6	0.45	0.94	91.80	48	146	0.92	19.9	15.20	2.20	1.67	17.4	5.51	3.30	128	321
STV00/18	71.0 287	0.30	99.4	33.9 1	77 11.9	1.87	5.80	7.67	2.37	49.7	0.54	0.38	57.30	334	139	9.78	18.7	8.59	1.91	1.11	15.2	5.44	4.02	342	280
STV00/20	15.4 291	0.30	112.0	19.7 1	56 5.8	1.83	5.47	9.19	1.83	50.8	0.54	0.52	54.30	87	112	1.33	17.2	9.02	2.73	1.07	15.7	3.24	4.18	117	322
STV00/25	13.6 267	3.34	82.6	23.1 2	02 6.4	2 1.71	4.91	6.49	1.87	42.0	0.49	0.74	33.50	178	101	1.22	17.5	7.94	1.64	1.04	12.5	3.11	4.13	120	229
STV00/27	14.1 471	0.30	140.0	9.7 1	10 6.2	2 2.63	6.18	8.01	2.43	76.4	0.48	0.72	0.00	45	134	1.21	22.3	13.10	2.33	1.45	18.0	4.48	3.45	123	290
STV00/29	19.3 290	8.59	71.7	33.6 3	25 7.8	1.52	4.34	4.25	1.67	34.8	0.43	0.43	35.40	282	113	1.56	18.0	6.95	1.33	0.87	10.7	3.20	3.31	121	189
STV00/30	13.8 252	2.01	69.0	27.2 2	46 5.4	3 1.79	4.73	5.17	1.53	35.1	0.54	0.78	50.30	226	86	0.96	17.3	7.62	1.26	1.10	10.0	3.61	3.98	143	190
STV00/31	24.8 243	1.01	56.3	<b>8.7</b> 1	69 4.6	4 0.94	4.90	6.20	1.05	23.5	0.35	1.16	0.00	68	74	1.41		4.79	1.19	0.60	11.0	3.35	2.67	61	221
STV00/35	6.0 272	6.82	49.5	36.4		7 1.02	5.56	3.28	1.66		0.30		0.00	414	83	0.65	19.0	4.28	0.98	0.66	8.6	2.35	2.71	101	131
STV00/37	18.3 363	1.92	77.0	25.3 2	93 6.1	6 1.95	4.93	6.15	2.12	42.6	0.54	0.90	55.00	223	94	1.34	18.5	8.45	1.37	1.13	10.7	4.28	4.68	158	212
STV00/39	35.8 327	2.12	101.0	31.4 2	78 4.5	0 3.37	5.44	4.62	1.48	55.7	0.96	0.92	88.10	291	73	0.97	17.5	13.50	1.26	2.09	9.3	6.80	7.84	148	276
STV00/5	48.5 307	1.42	76.6	31.8 2	49 3.8	B 2.58	5.25	5.63	1.42	51.2	2 0.63	1.64	65.00	205	65	1.03	18.6	11.00	0.87	1.69	10.5	7.41	4.69	114	294

# FIGURES

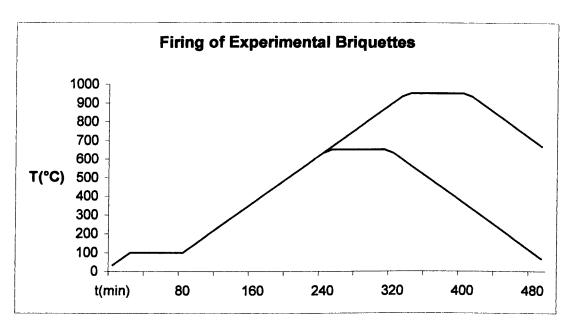


Fig. 1 Diagram showing the process of firing of the experimental briquettes. The axes represent time versus temperature.

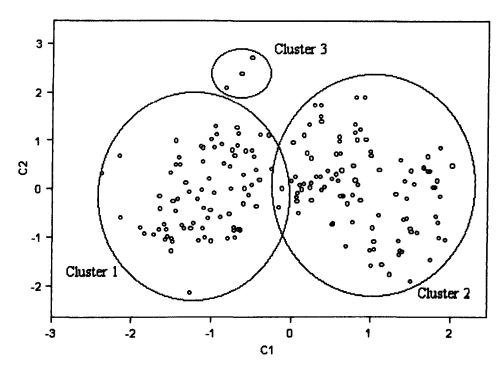


Fig. 2 Principal Components Analysis of the entire data set from West Crete. The ellipses around the groups are just indicative of the clusters and do not signify 95% certainty.

#### The West Cretan Data Set (Ca not considered)

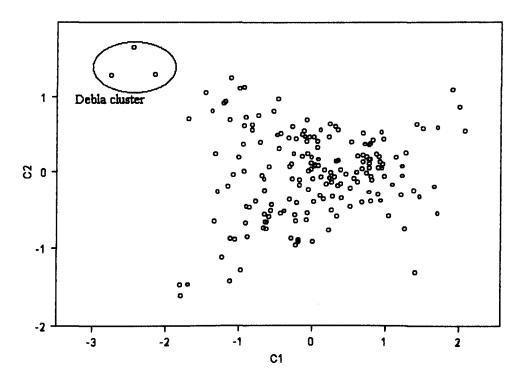
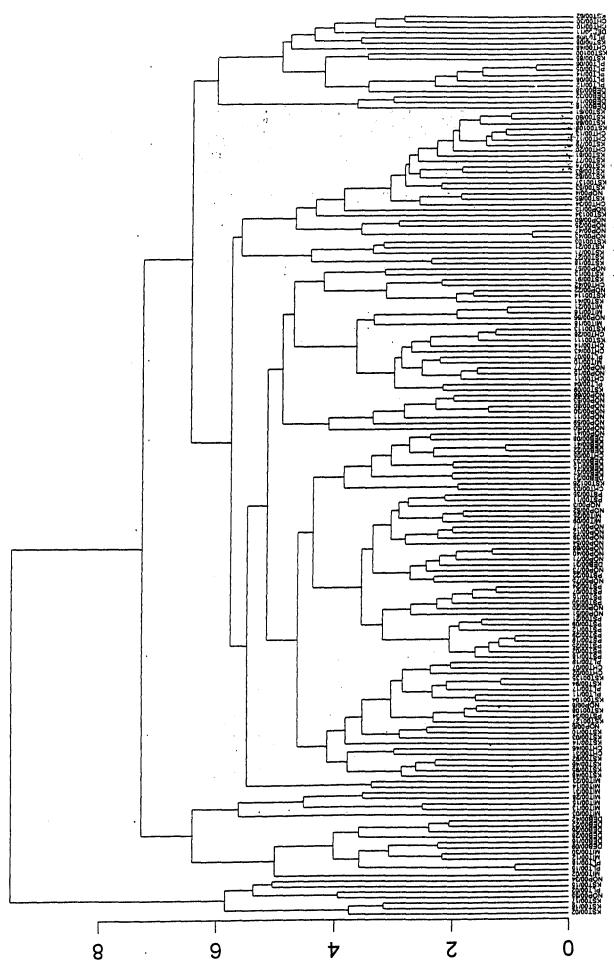


Fig. 3 Principal Components Analysis of the entire data set from West Crete without considering Ca.



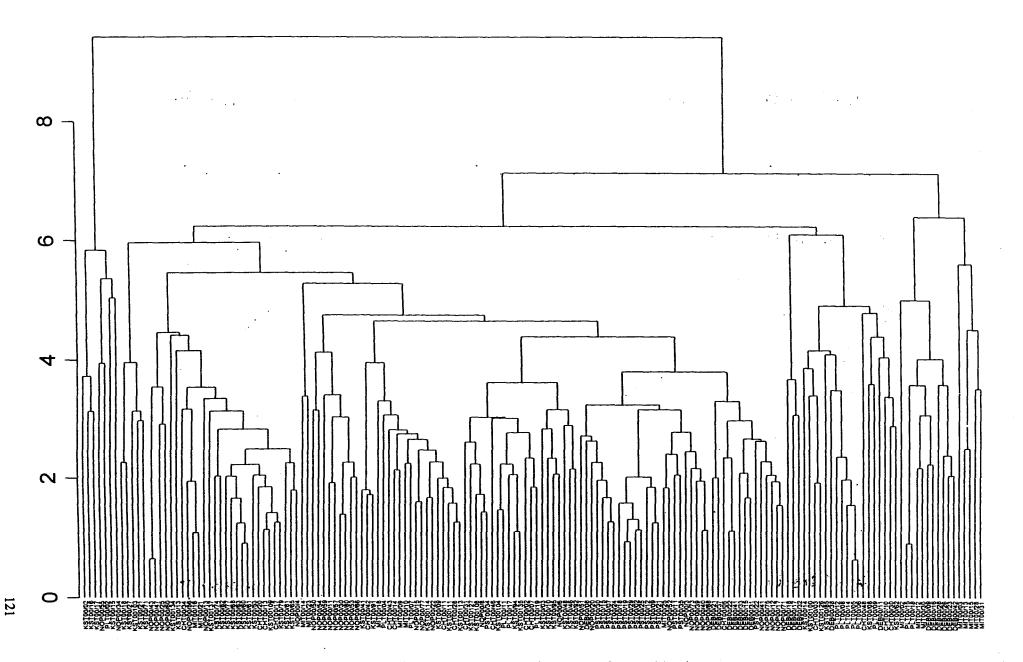


Fig. 5 Dendrogram for the entire data set from West Crete without considering Ca

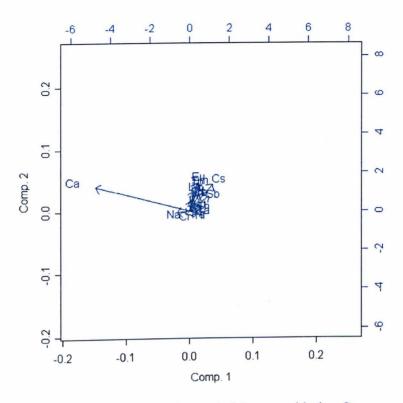


Fig. 6 Biplot of logged unscaled data considering Ca

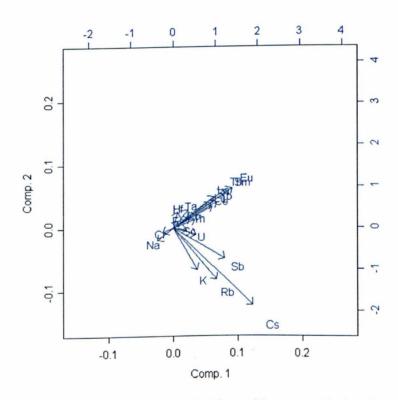


Fig. 7 Biplot of logged unscaled data without considering Ca

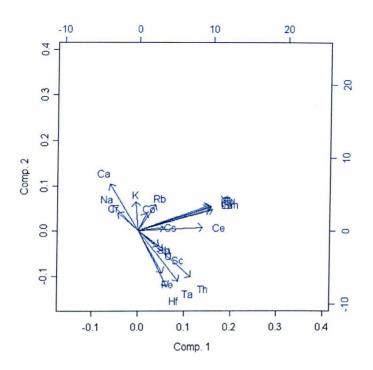


Fig. 8 Biplot of standardised (scaled) data considering Ca

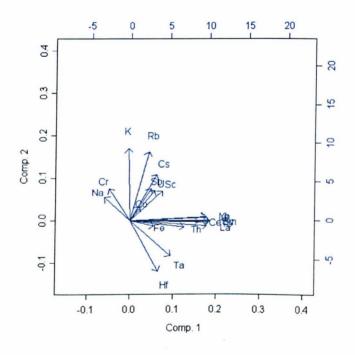


Fig. 9 Biplot of standardised (scaled) data without considering Ca

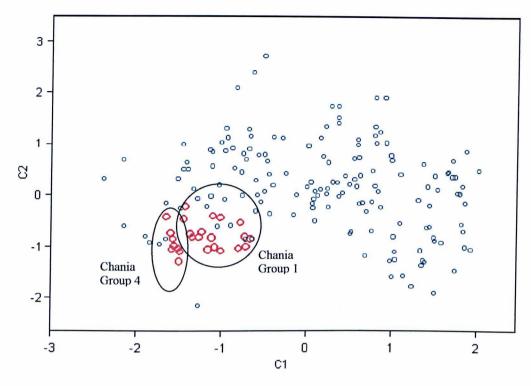


Fig. 10 Principal Components Analysis of the entire data set. In red are indicated the samples from Chania Groups 1 and 4. The ellipses around the groups are just indicative of the clusters and do not signify 95% certainty.

#### CHANIA GROUPS 2 and 3

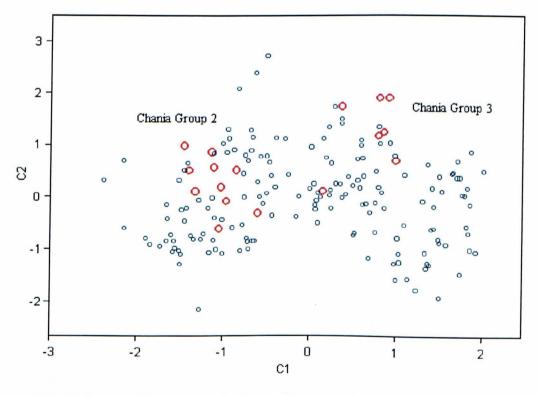


Fig. 11 Principal Components Analysis of the entire data set. In red are indicated the samples from Chania Groups 2 and 3

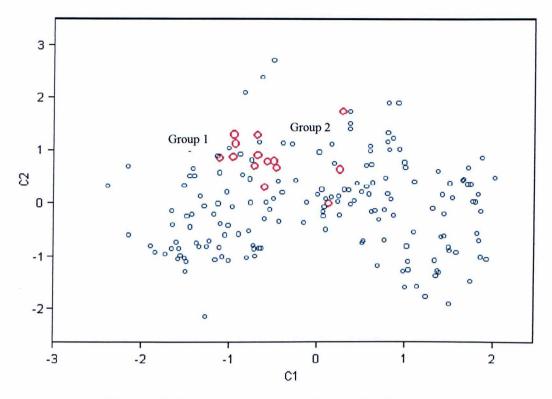


Fig. 12 Principal Components Analysis of the entire data set. In red are indicated the samples from Psathi Groups 1 and 2

# NOPIGEIA GROUPS 1 and 2

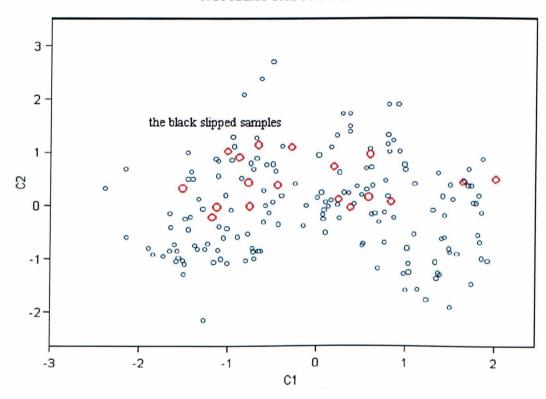


Fig. 13 Principal Components Analysis of the entire data set. In red are indicated the samples from Nopigeia Groups 1 and 2

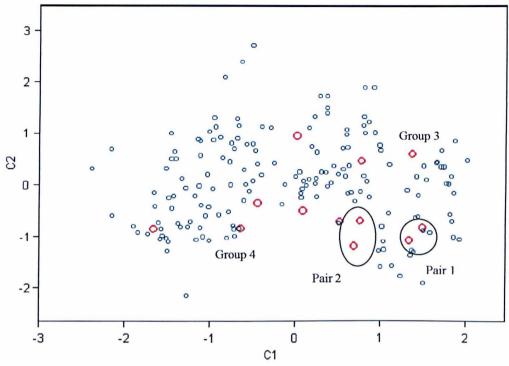


Fig. 14 Principal Components Analysis of the entire data set. In red are indicated the samples from Nopigeia Groups 3, 4 and Pairs 1, 2. The ellipses around the groups are just indicative of the clusters and do not signify 95% certainty.

### DEBLA GROUPS 1, 2 and 3

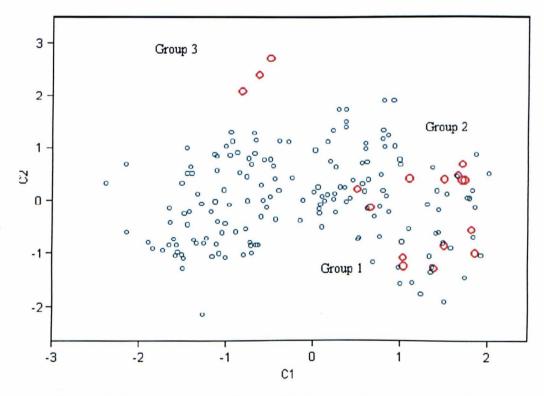


Fig. 15 Principal Components Analysis of the entire data set. In red are indicated the samples from Debla Groups 1, 2, 3

#### PLATYVOLA GROUP

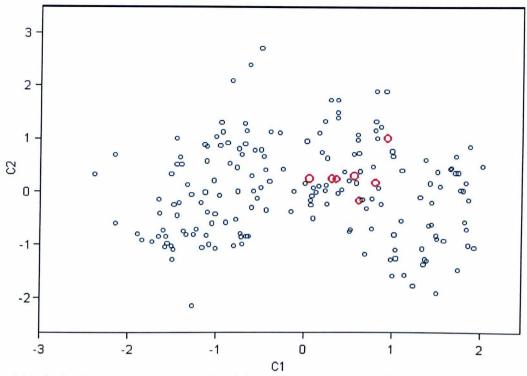


Fig. 16 Principal Components Analysis of the entire data set. In red are indicated the samples from the Platyvola Group

## MITATOULIA GROUP

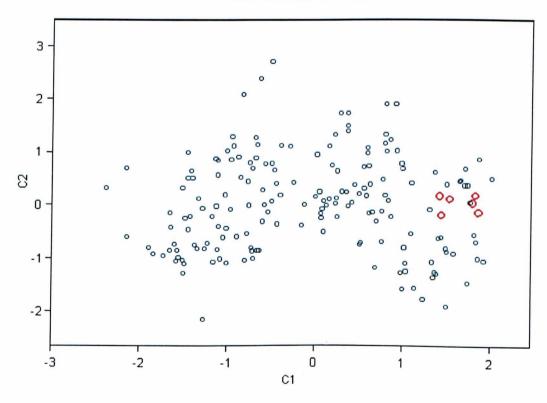


Fig. 17 Principal Components Analysis of the entire data set. In red are indicated the samples from the Mitatoulia Group.

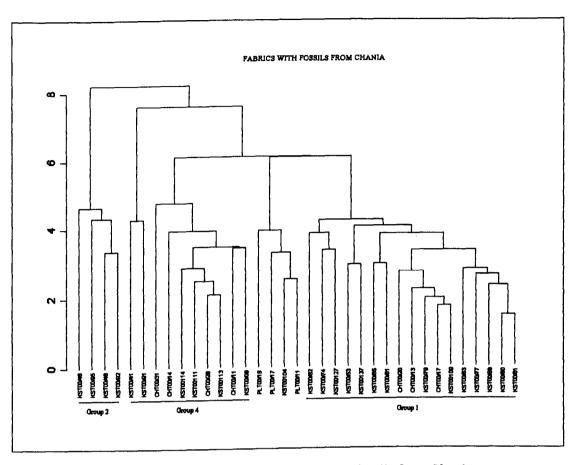


Fig. 18 Dendrogram with the fabrics with fossils from Chania

# FABRICS WITH FOSSILS FROM CHANIA

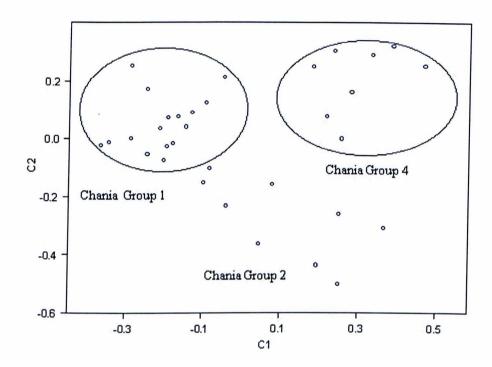


Fig. 19 Principal Components Analysis with the fabrics with fossils from Chania. The ellipses around the groups are just indicative of the clusters and do not signify 95% certainty.

# **RED WARES**

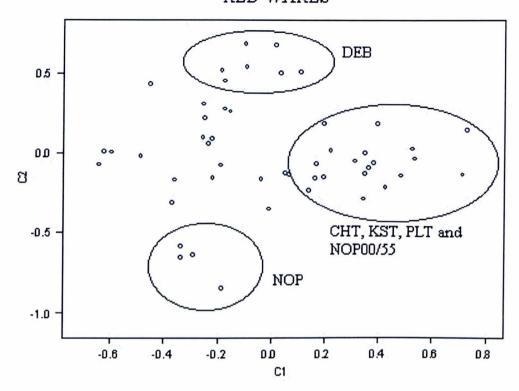


Fig. 20 Principal Components Analysis with the red fabrics. The ellipses around the groups are just indicative of the clusters and do not signify 95% certainty.

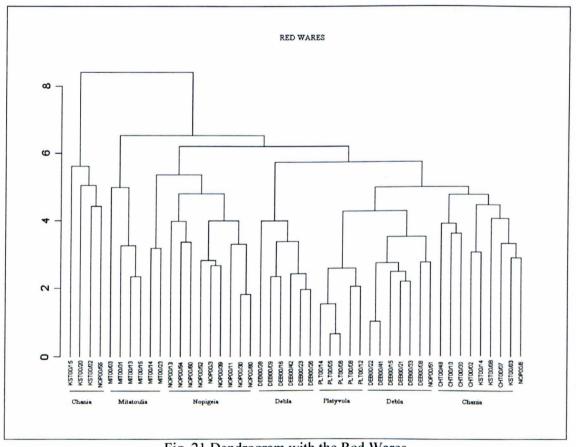


Fig. 21 Dendrogram with the Red Wares

#### BLACK SLIPPED WARES

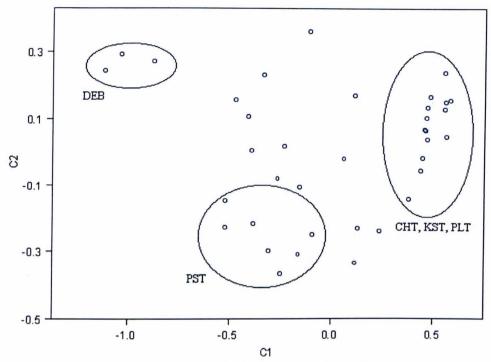


Fig. 22 Principal Components Analysis with the Black Slipped Wares. The ellipses around the groups are just indicative of the clusters and do not signify 95% certainty.

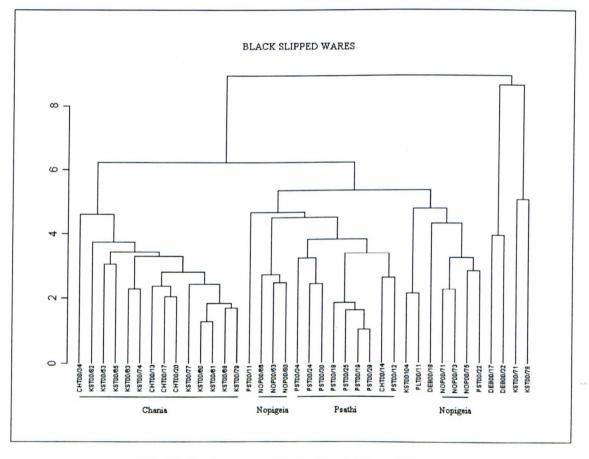


Fig. 23 Dendrogram with the Black Slipped Wares

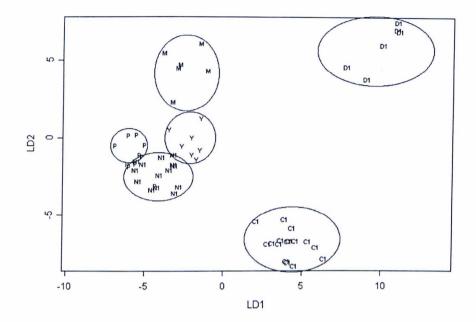


Fig. 24 Discriminant analysis of the major chemical groups. C1= Chania Group 1, D1= Debla Group 1, M= Mitatoulia, Y= Platyvola, P= Psathi Group 1, N1= Nopigeia Group 1. The ellipses around the groups are just indicative of the clusters and do not signify 95% certainty.

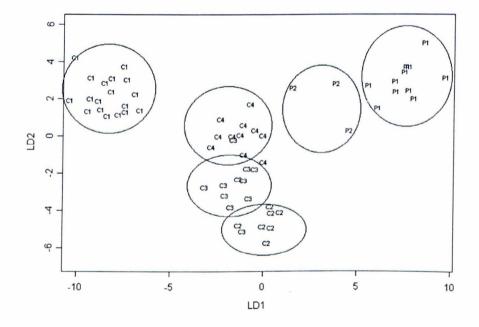


Fig. 25 Discriminant analysis of the groups from Chania and Psathi. C1-4= Chania Groups 1-4, P1-2= Psathi Groups 1-2. The ellipses around the groups are just indicative of the clusters and do not signify 95% certainty.

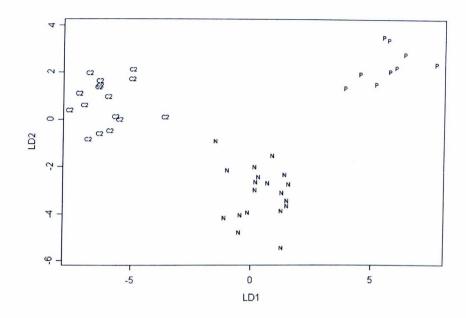
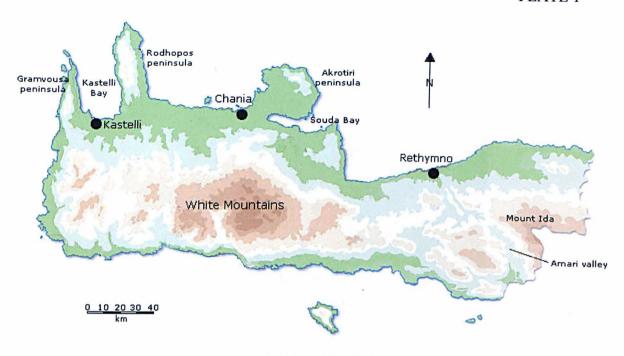


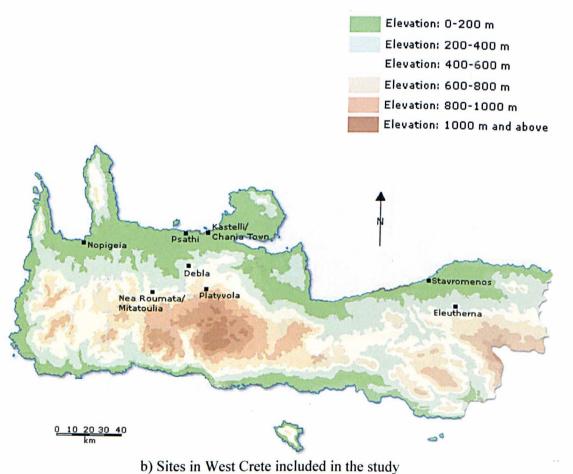
Fig. 26 Discriminant analysis comparing Helladic samples. C2= Chania (Kastelli and Chania Town), N= Nopigeia, P= Psathi

# PLATES

## PLATE 1

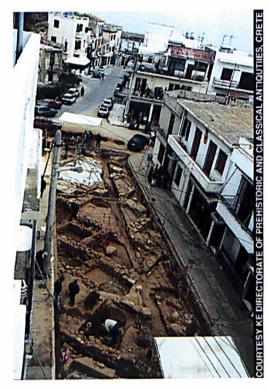


a) Geographical limits of the study area





a) Chania, the excavation at Agia Aikaterini Square



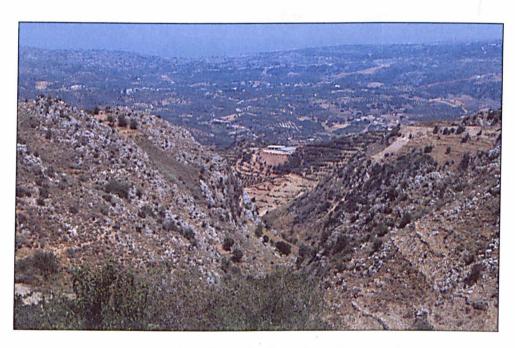
b) Chania, the excavation at Daskalogianni Street



c) Chania, the excavation of Kaniamos plot



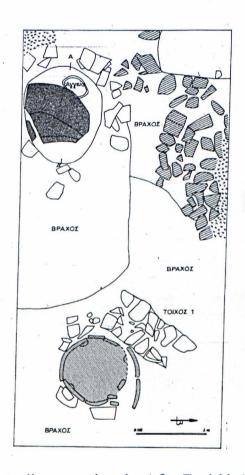
a) Platyvola Cave, the entrance



b) Platyvola Cave, the gorge



a) Nea Roumata, the tomb



b) Mitatoulia, excavation plan (after Tzedakis 1980b)

# PLATE 5



a) Debla, view from SE, from the plain of Varypetro



b) Debla, the site

c) Debla, the site



d) Debla, view to the north coast



a) The Gulf of Kissamos and the site of Nopigeia



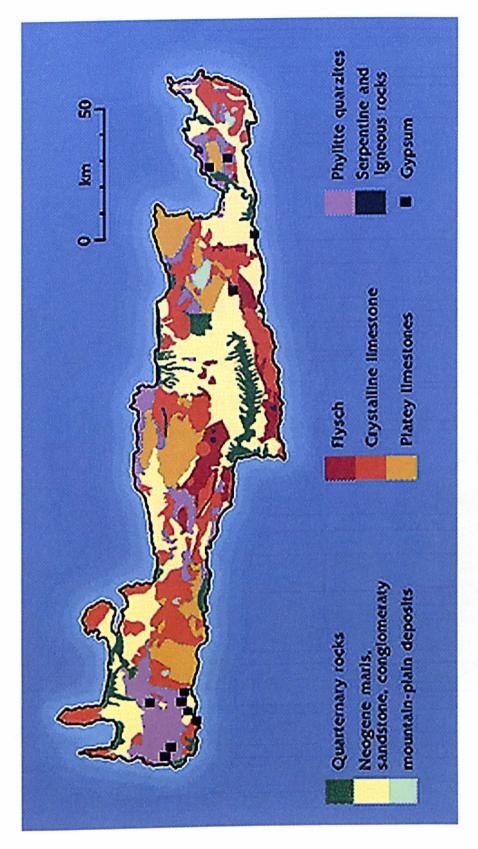
b) Nopigeia, the excavation on the hill of Troullia

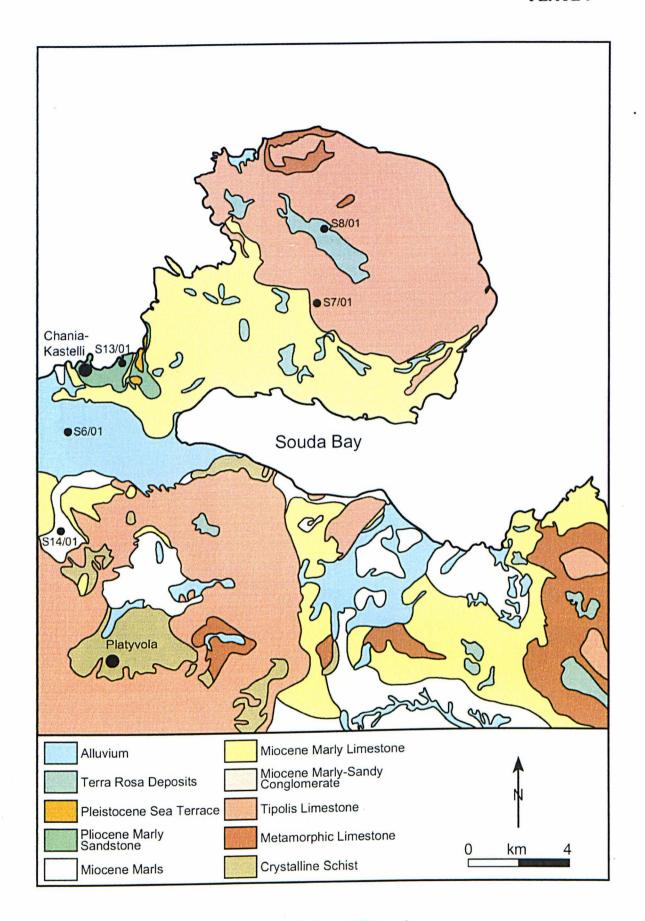


a) Psathi, the hill from SW

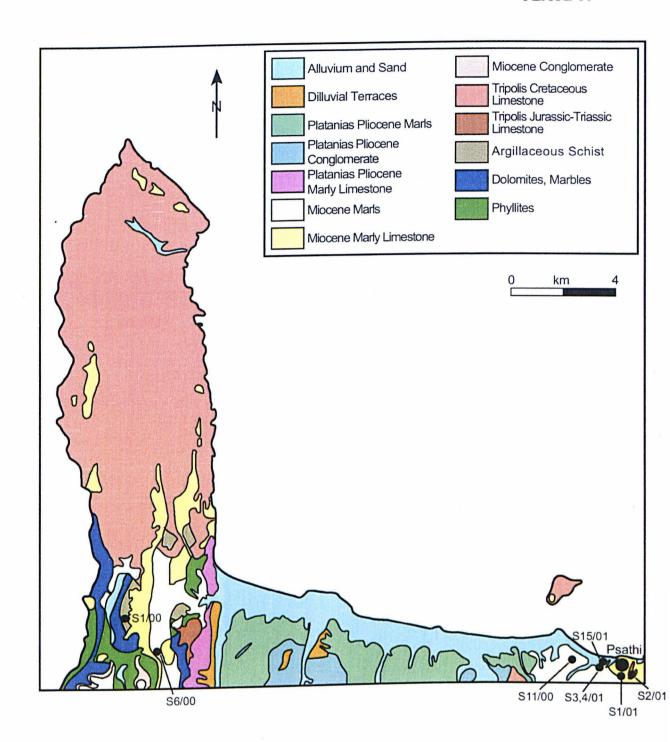


b) Psathi, view to NE

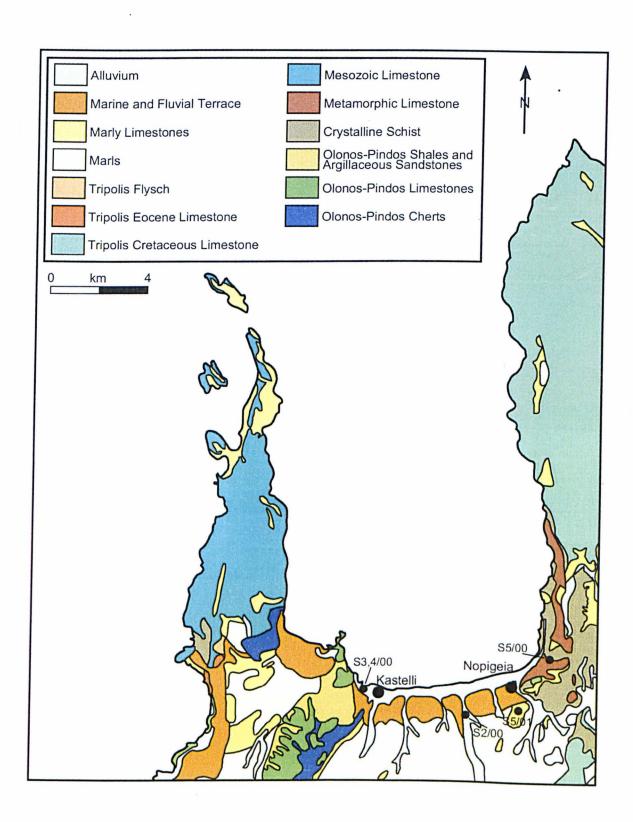




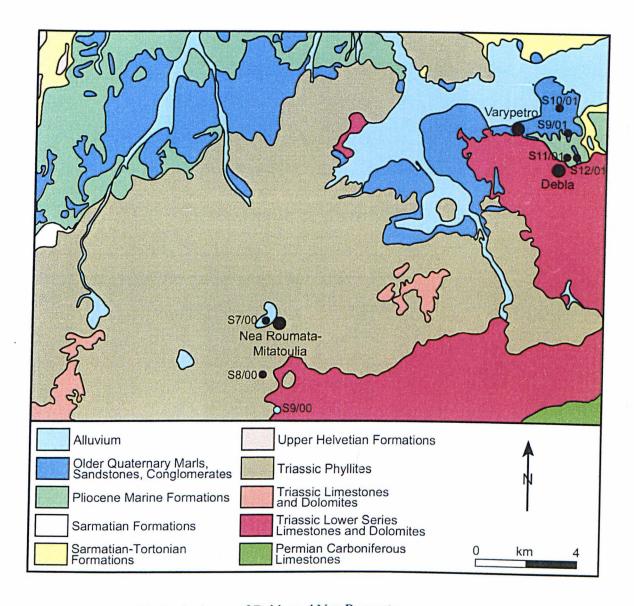
Geological map of Chania and Platyvola



Geological map of Psathi



Geological map of Nopigeia



Geological map of Debla and Nea Roumata



a) Akrotiri: Location of sample S7/2001



b) Chania: Location of sample S6/2001



c) Chania: Location of sample S6/2001



d) Chania: Location of sample S2/2001



e) Chania: Location of sample S15/2001



a) Debla: Location of sample S10/2001



b) Debla: Location of sample S10/2001



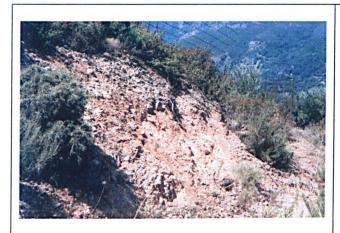
c) Debla: Location of sample S12/2001



d) Debla: Location of sample S9/2001



e) Debla: Location of sample S9/2001



a) Nea Roumata/Mitatoulia: Location of sample \$7/2000



b) Nea Roumata/Mitatoulia: Location of sample \$7/2000



c) Nea Roumata/Mitatoulia: Location of sample \$9/2000



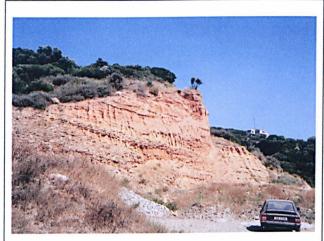
d) Nea Roumata/Mitatoulia: Location of sample S12/2001



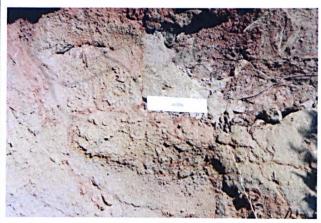
c) Nea Roumata/Mitatoulia: Location of sample \$8/2000



d) Nea Roumata/Mitatoulia: Location of sample \$88/2001



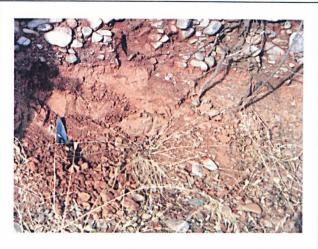
a) Nopigeia: Location of sample S1/2000



b) Nopigeia: Location of sample S1/2000



c) Nopigeia: Location of sample S2/2000



d) Nopigeia: Location of sample S2/2000



c) Nopigeia: Location of sample S5/2000



d) Nopigeia: Location of sample S5/2000



a) Nopigeia: Location of sample S3/2000



b) Nopigeia: Location of sample S4/2000



a) Debla: Location of sample S11/2001



b) Chania: Location of sample S1/2001



c) Chania: Location of sample S3/2001



d) Chania: Location of sample S3/2001



e) Chania: Location of sample S4/2001



f) Chania: Location of sample S4/2001



a) Chania: Location of sample S14/2001



b) Chania: Location of sample S14/2001



c) Chania: Location of sample S13/2001



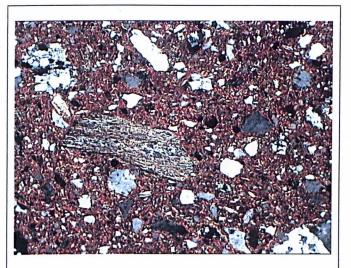
d) Chania: Location of sample S13/2001



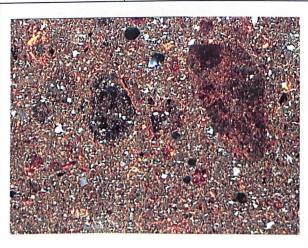
e) Nopigeia: Location of sample S13/2001



f) Nopigeia: Location of sample S13/2001



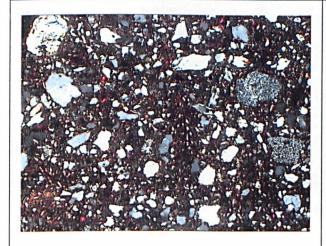
a) Group 1: Red with carbonates. S12/2001 x 40. Field of view: 2.5 mm



b) Group 2: S7/2001 x 40. Field of view: 2.5 mm



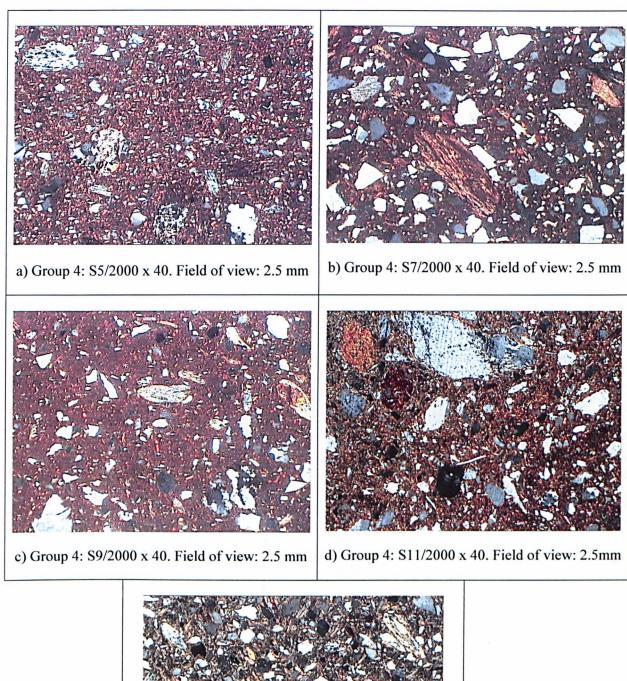
c) Group 2: S10/2001 x 40. Field of view: 2.5 mm



d) Group 3: S6/2001 x 40. Field of view: 2.5 mm

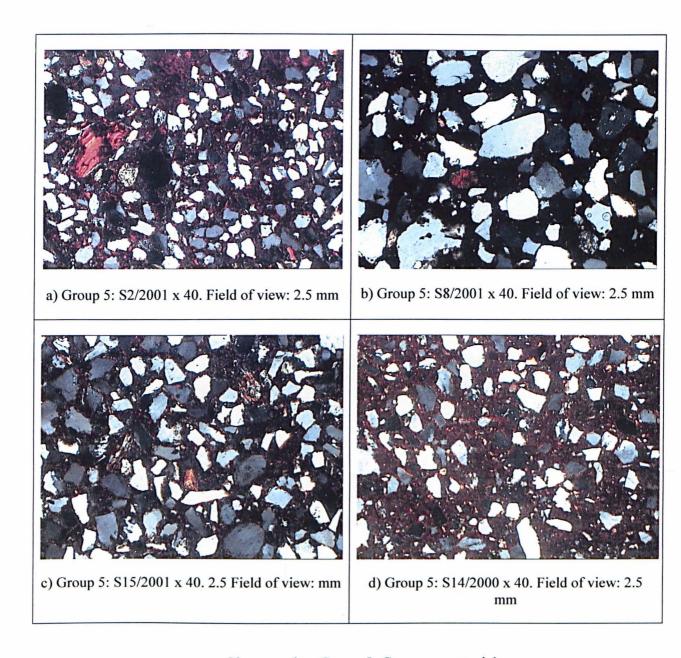


e) Group 3: S2/2000x 40. Field of view: 2.5 mm

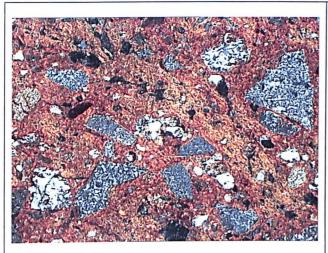


e) Group 4: S1/2000 x 40. Field of view: 2.5 mm

Clay samples, Group 4: Coarse quartz-rich with metamorphic rocks



Clay samples, Group 5: Coarse quartz-rich

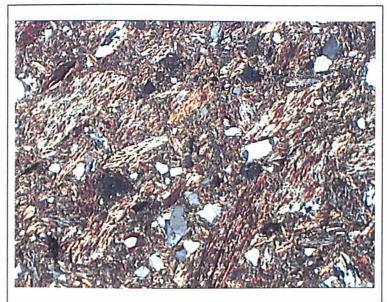




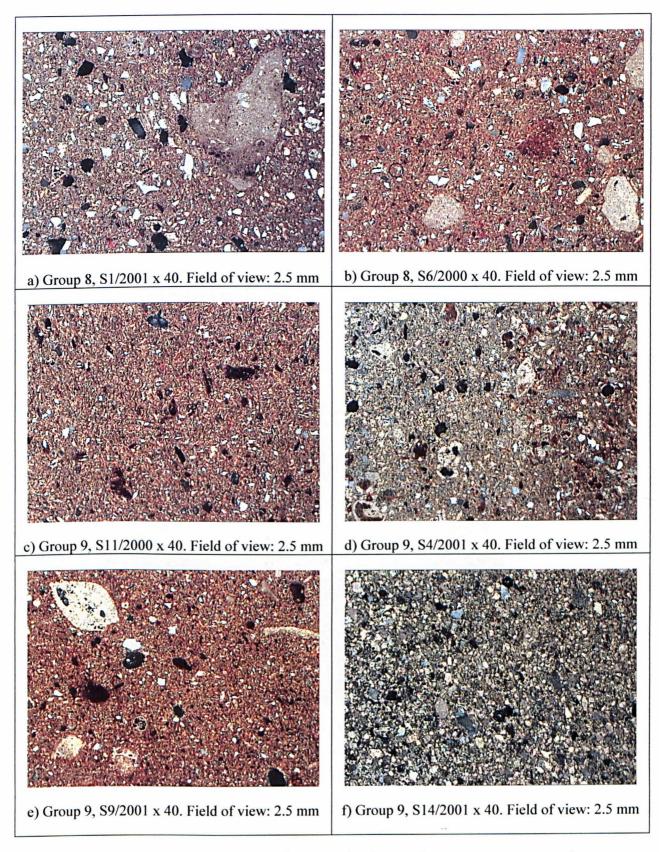


b) Group 6: S4/2000 x 40. Field of view: 2.5 mm

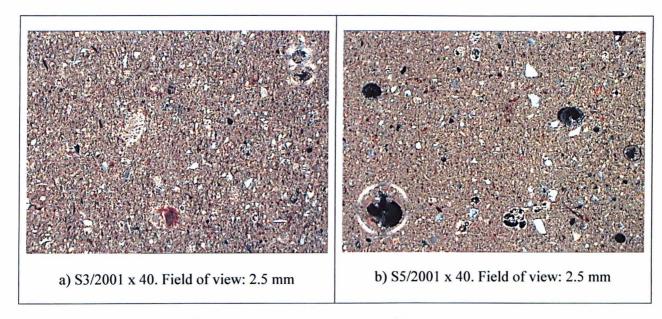
# Clay samples, Group 6: Chert-rich



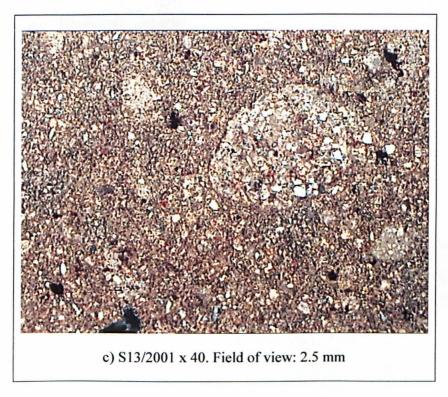
c) Clay Samples Group 7: Grey clay. S8/2000 x 40. Field of view: 2.5 mm



Clay samples Groups 8-9: Semi fine with fossils and fine with carbonates and fossils



Clay samples, Group 10: Very fine with carbonates



Clay samples, Group 11: Marly sandstone



b) Fragments of dgbw pedestalled chalices from Platyvola cave (after Tzedakis 1967a, 1968a)



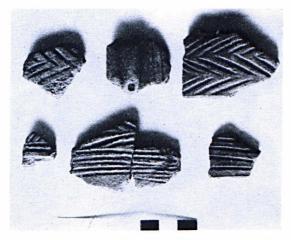
a) Fragments of Dark Burnished ware from Debla (after Warren and Tzedakis 1974)



b) Fragments of Dark Burnished ware from Kastelli Chania



c) Fragments of Dark Burnished ware from Chania Town



a) Fragments of Dark Burnished Incised ware from Debla (after Warren and Tzedakis 1974)



b) Dark Burnished Incised pyxis from Platyvola (after Tzedakis 1968a)



c) Dark Burnished Incised pyxis from Platyvola (after Tzedakis 1967a)



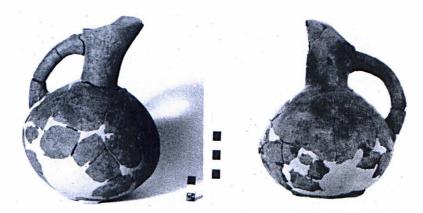
a) Black Slipped sauceboat from Platyvola (after Tzedakis 1968a)



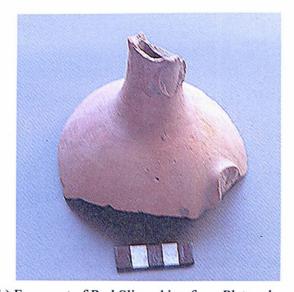
b) Fragments of Black Slipped sauceboat bases from Kastelli Chania



c) Fragments of Black Slipped Incised jugs from Kastelli Chania



a) Red Slipped jugs from Debla (after Warren and Tzedakis 1974)



b) Fragment of Red Slipped jug from Platyvola



c) Fragments of Red Slipped bowls and saucers from Kastelli Chania



a) Fragments of Red/Black Slipped goblets and sauceboats from Psathi



b) Fragments of Red/Black Slipped pyxides from Psathi



c) Fragments of Red/Black Slipped bowls and saucers from Psathi



a) Fragments of Dark-on-Light jugs from Psathi





b) Mottled ware footed goblets from Platyvola (after Tzedakis 1967a)



c) Mottled ware footed goblet from Perivolia cave (after Tzedakis 1968d)



a) Fragments of Scored ware from Debla (after Warren and Tzedakis 1974)



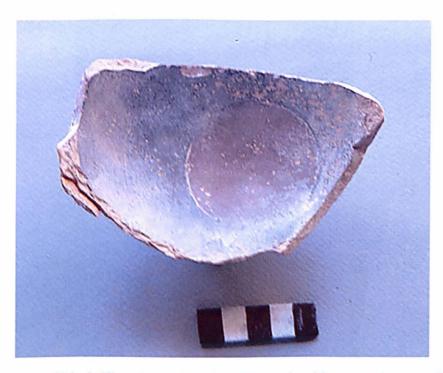
b) Fragment of Scored ware jug from Platyvola (after Alexiou 1964)



c) Fragments of Scored ware from Nopigeia (after Karantzali 1997)



a) Black Slipped sauceboat from Platyvola



b) Fragment of Black Slipped sauceboat from Platyvola with traces of uneven firing



a) Fragments of Dark Grey Burnished ware from Mitatoulia



b) Fragments of Dark Burnished Incised ware from Mitatoulia



c) Fragments of Scored ware from Mitatoulia

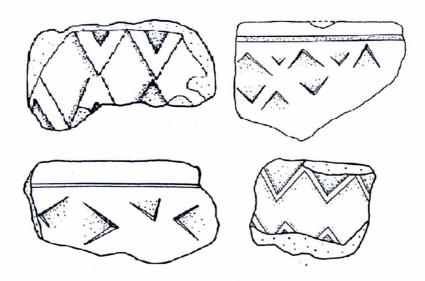




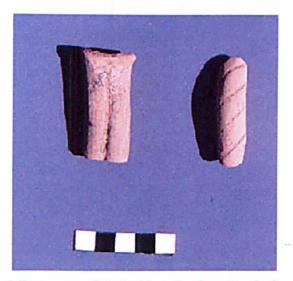
d) Vessels from the tomb of Nea Roumata (after Tzedakis 1984)



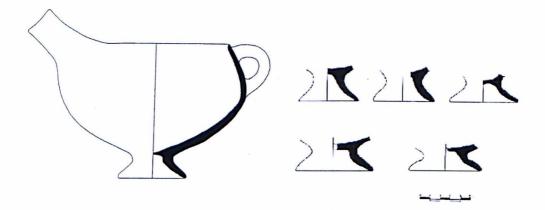
a) Fragments of Dark grey burnished ware from Nopigeia (after Karantzali 1997)



b) Fragments of Coarse ware hearths from Nopigeia (after Karantzali 1997)



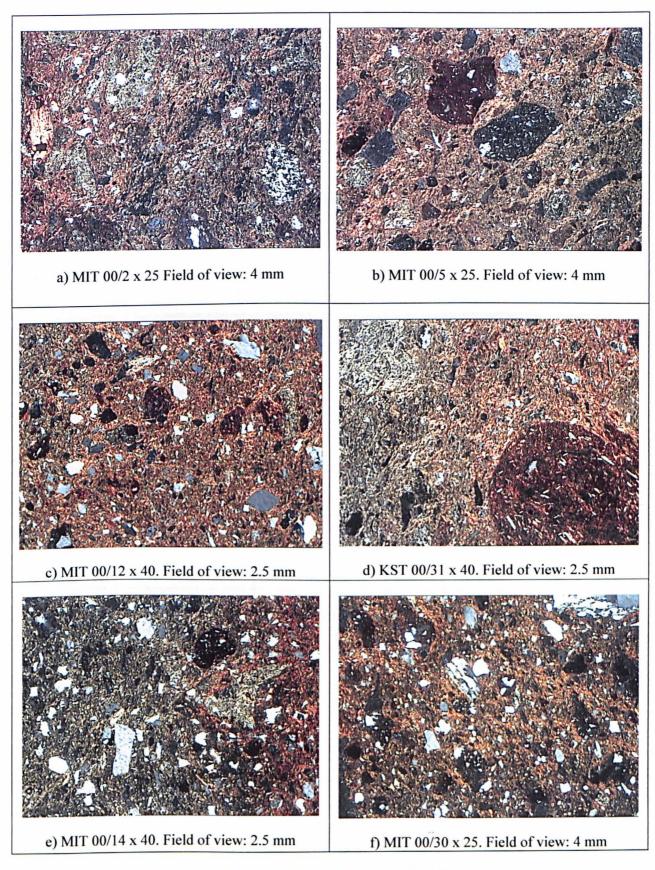
c) Fragments of slashed handles from Nopigeia



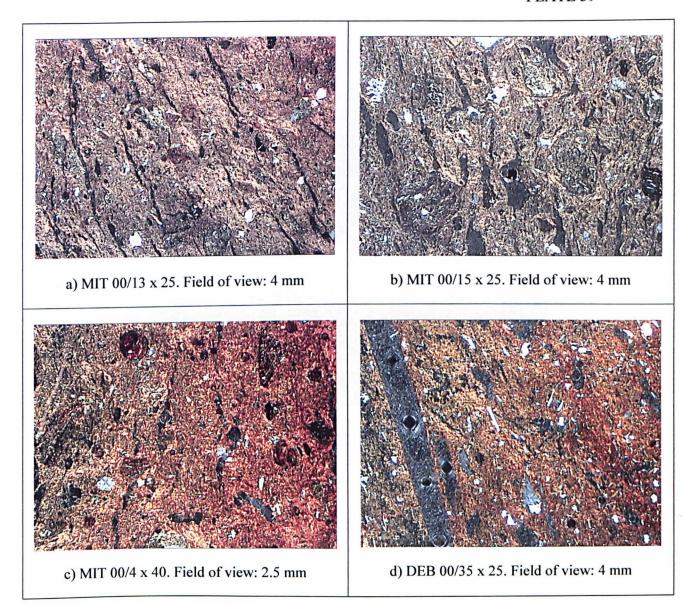
a) Sauceboat from Platyvola (after Karantzali 1996, not to scale); footed goblets (upper row) and pedestal feet from sauceboats (lower row) from Nopigeia (after Karantzali 1997)



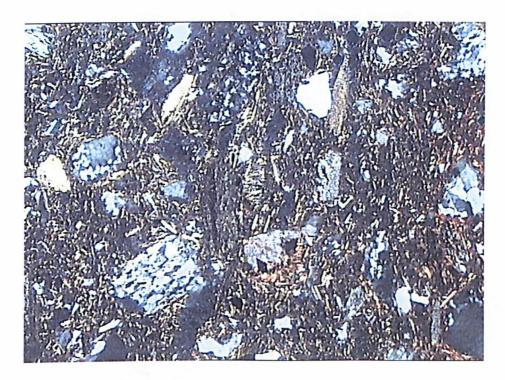
b) Frying pan from Platyvola and jug from Debla, both with pellet feet (after Karantzali 1996)



Mitatoulia Fabric A1: Red with grog and white mica a-d: Subgroup a; e-f: Subgroup b

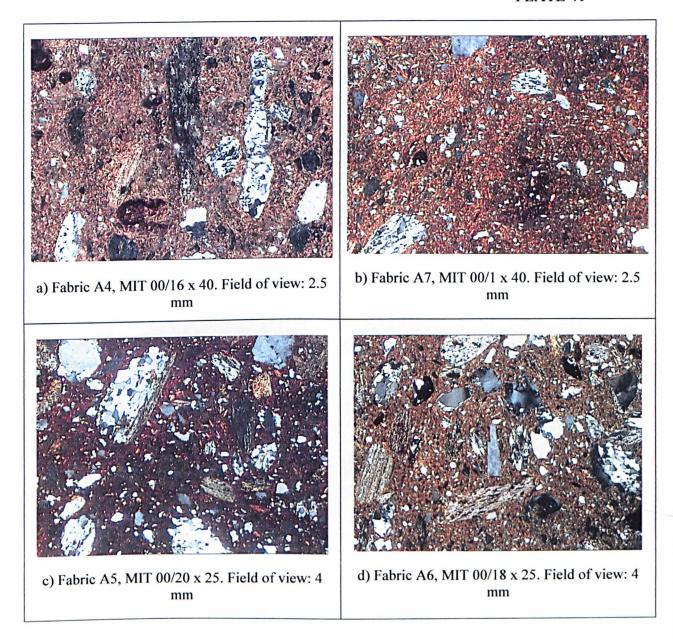


Mitatoulia, Fabric A2, Red with grog and organic temper

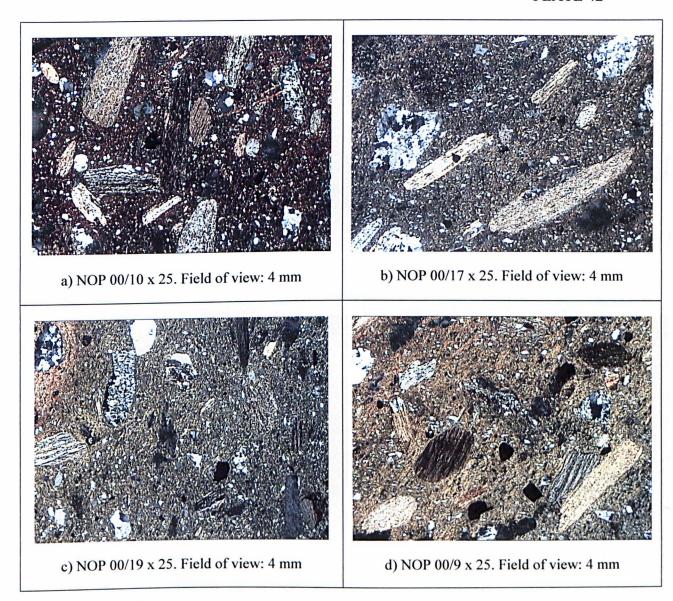


MIT 00/17 x 25. Field of view: 4 mm

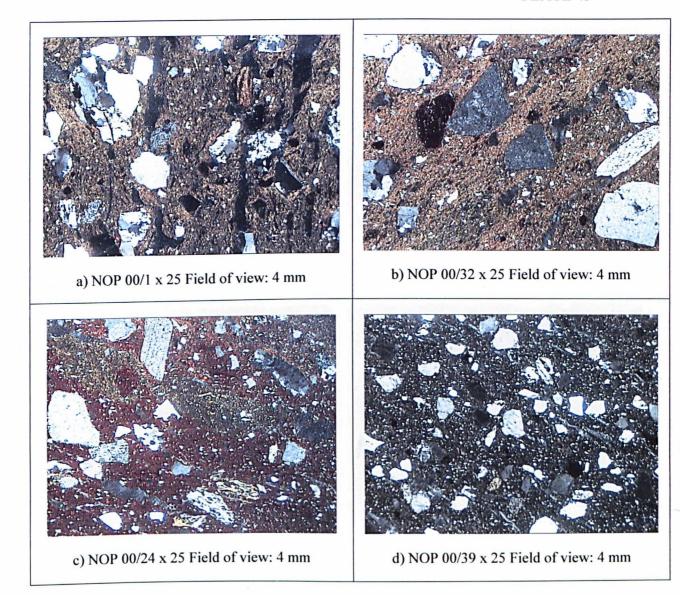
Mitatoulia, Fabric A3: Phyllite and white mica



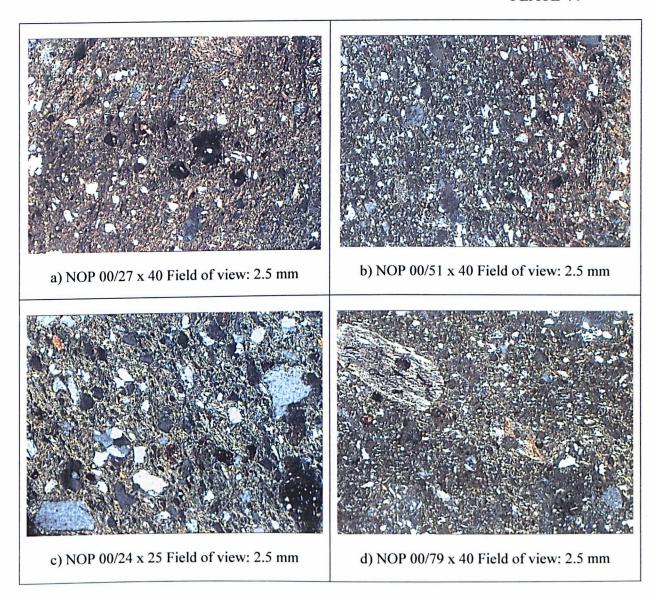
Fabrics related to Mitatoulia: A4-A7.



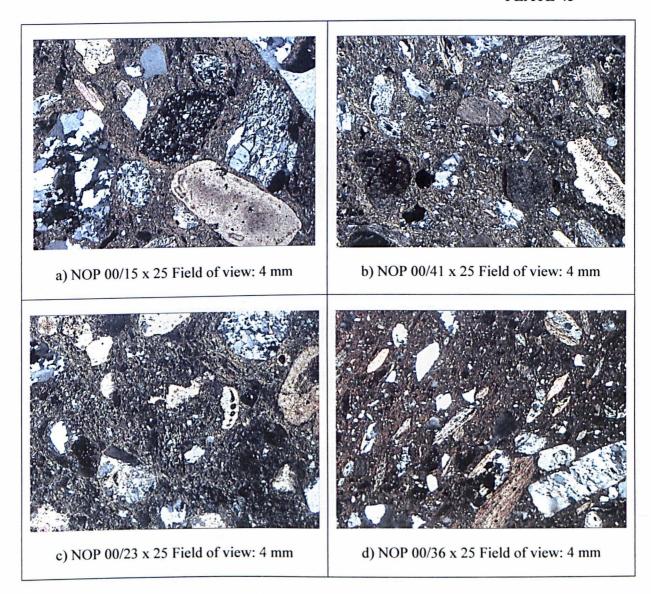
Nopigeia Fabric B1: Coarse Phyllite



Nopigeia Fabric B2: Coarse quartz-rich with metamorphic rocks a, b: Subgroup a (low-fired) c, d: Subgroup b (high-fired)



Nopigeia Fabric B3: Semi-coarse, quartz-rich with metamorphic rocks



Nopigeia Fabric B4: Coarse phyllite with micrite/sand and fossils



a) NOP 00/57 x 40. Field of view: 2.5 mm

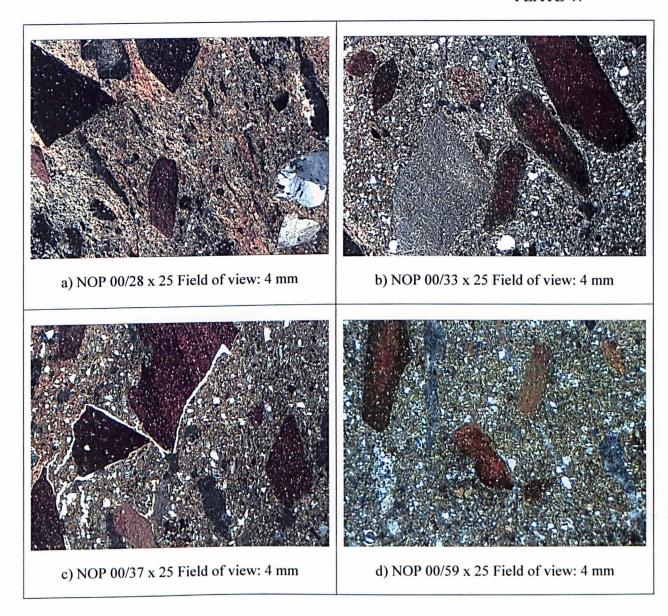


b) NOP 00/50 x 40. Field of view: 2.5 mm

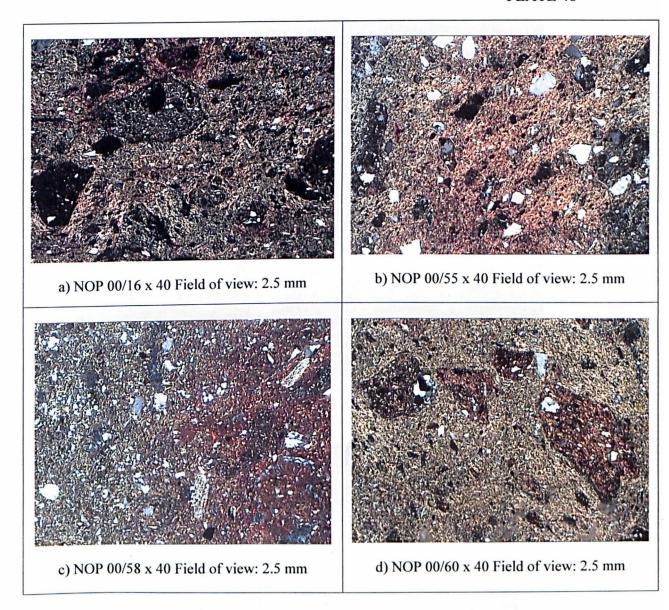


c) NOP 00/38 x 40 Field of view: 2.5 mm

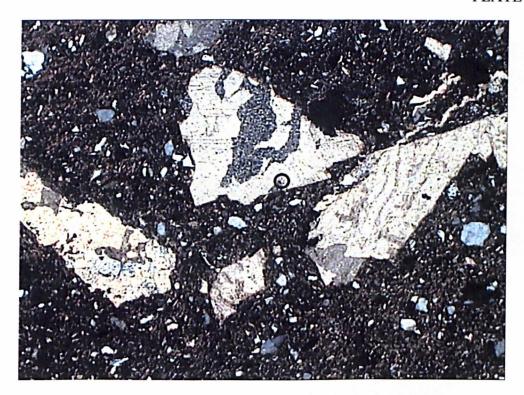
Nopigeia Fabric B5: Semi-coarse with micrite/sand



Nopigeia Fabric B6: Semi-coarse with siltstone



Nopigeia Fabric B7: Fine with pellets and grog

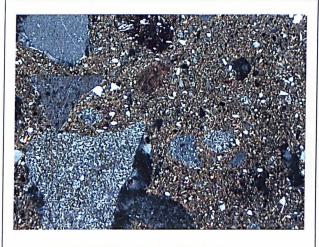


a) NOP 00/7 x 40 Field of view: 2.5 mm

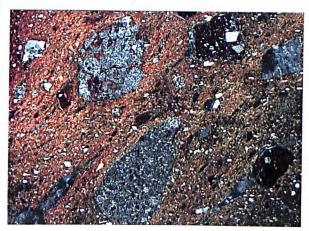


b) NOP 00/18 x 40 Field of view: 2.5 mm

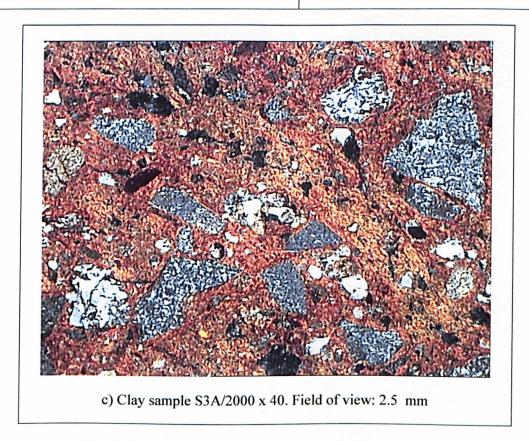
Nopigeia Fabric B8: Calcite-tempered



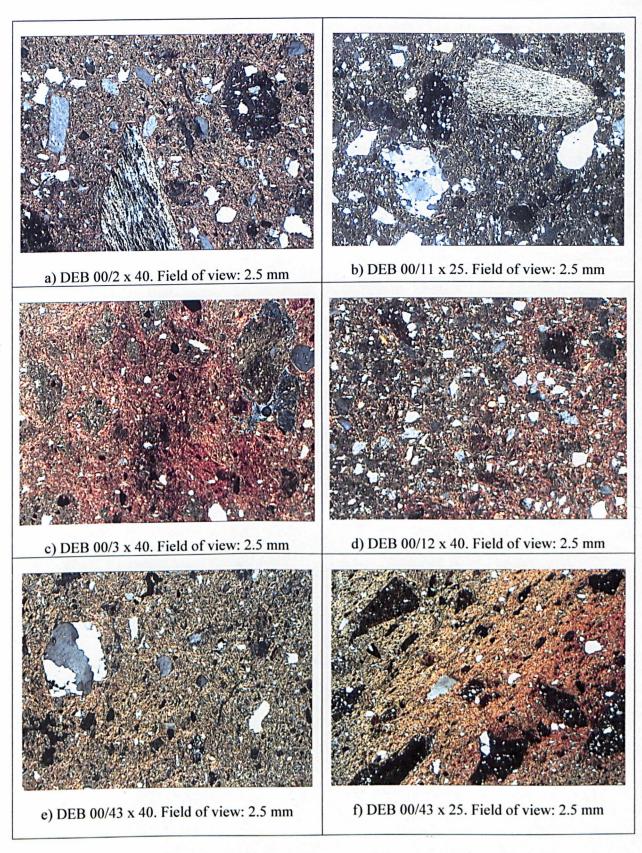
a) NOP 00/14 x 25. Field of view: 4 mm



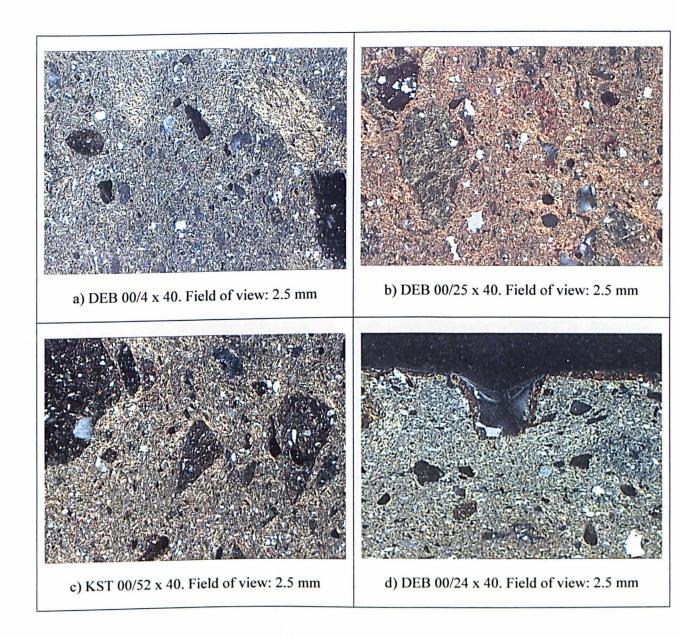
b) NOP 00/31 x 25. Field of view: 4 mm



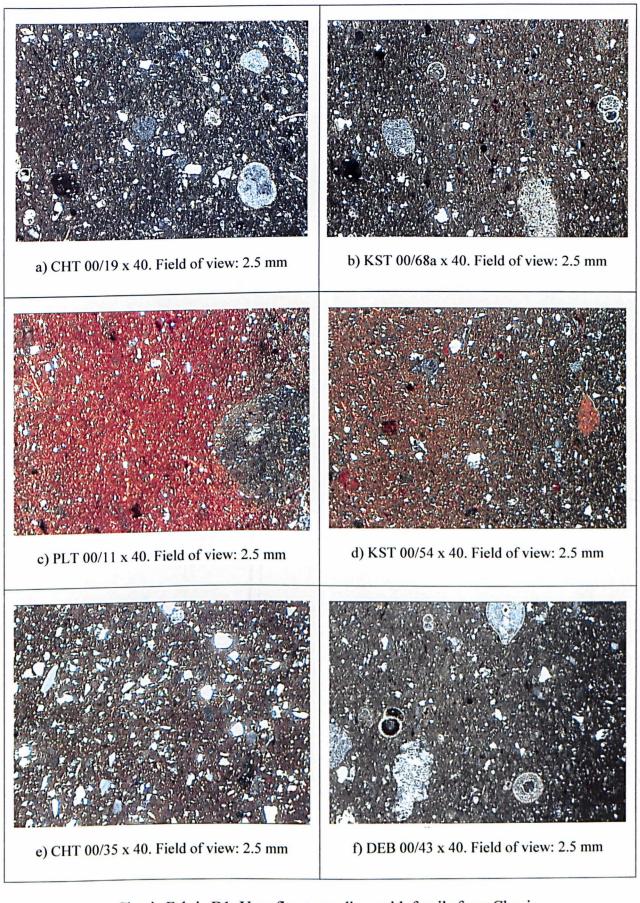
Nopigeia Fabric B9: Chert-rich, and related clay sample



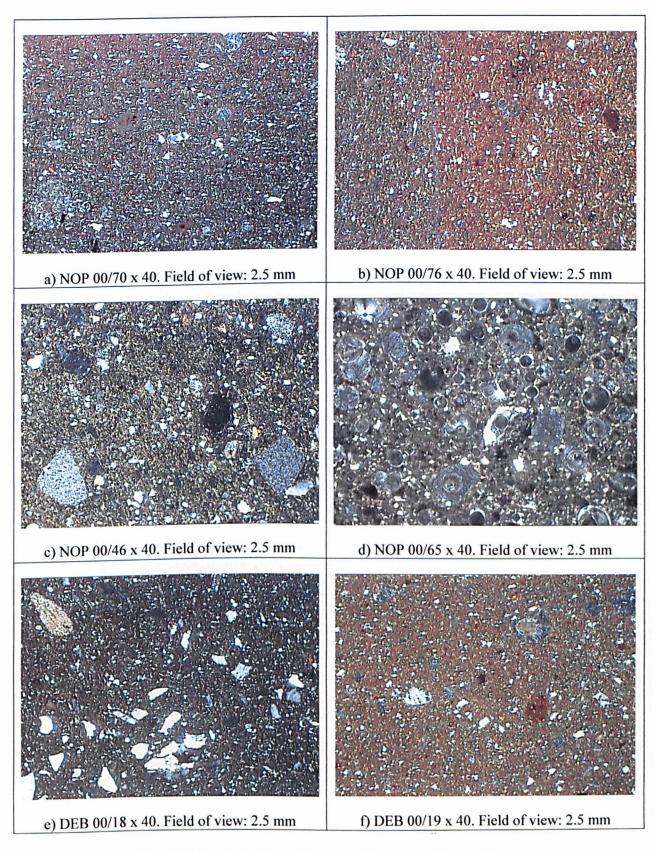
Debla Fabric C1: Red with quartz, grog and metamorphic rocks. a-b: subgroup a; c-f: subgroup b



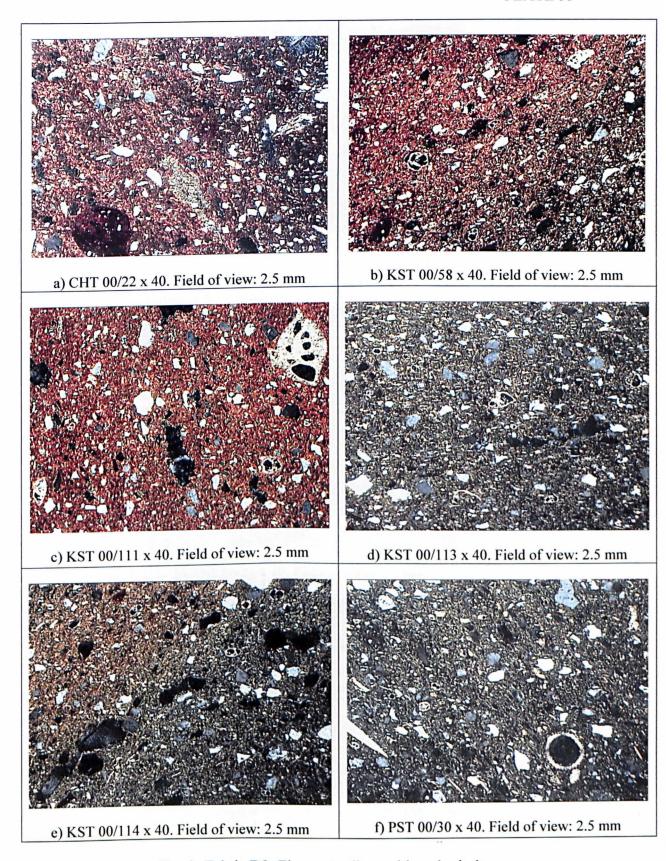
Debla, Fabric C2: Fine red with quartz and grog



Chania Fabric D1: Very fine to medium with fossils from Chania. a-d: fine, e-f: medium



Chania Fabric D1: Very fine to semi-coarse with fossils from Nopigeia and Debla



Chania Fabric D2: Fine to medium with and micrite



a) KST 00/22 x 40. Field of view: 2.5 mm

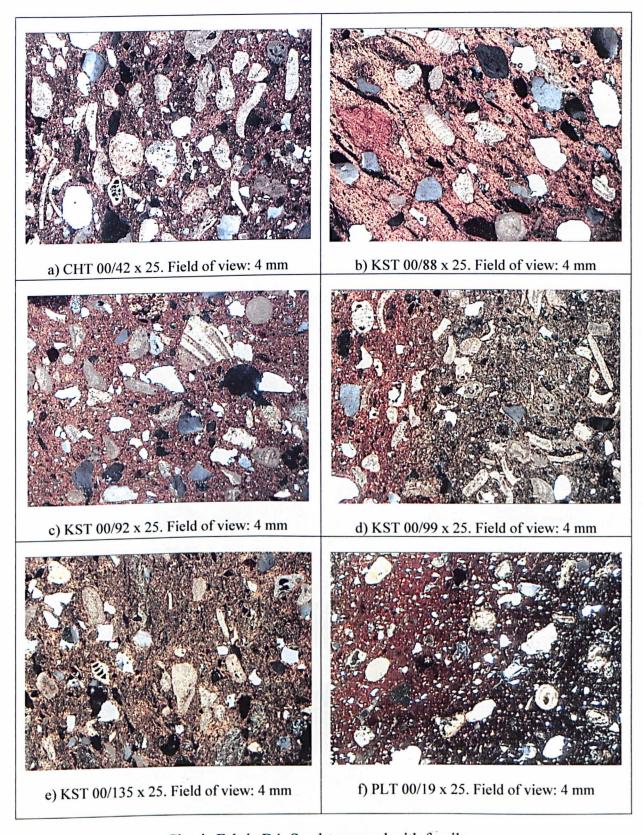


b) KST 00/24 x 40. Field of view: 2.5 mm



c) KST 00/27 x 40. Field of view: 2.5 mm

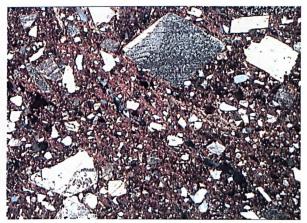
Chania Fabric D3: Fine with fossils and grog



Chania Fabric D4: Sand-tempered with fossils



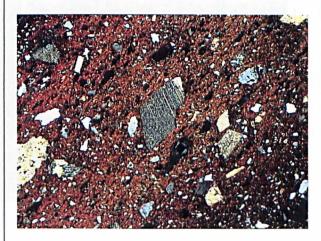
a) CHT 00/37 x 25. Field of view: 4 mm



b) CHT 00/46 x 25. Field of view: 4 mm



c) KST 00/44 x 25. Field of view: 4 mm

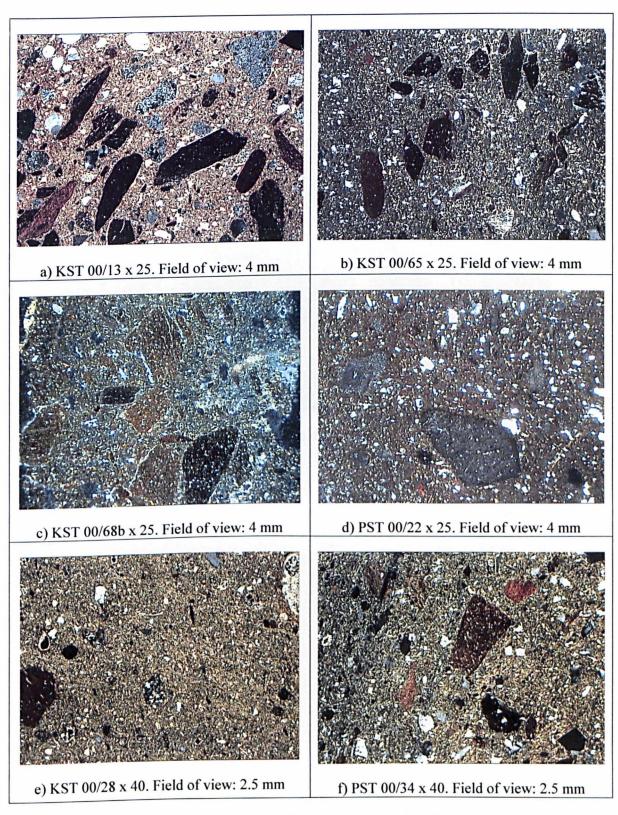


d) DEB 00/31 x 25. Field of view: 4 mm



e) PLT 00/16 x 25. Field of view: 4 mm

Chania Fabric D5: Calcite-tempered

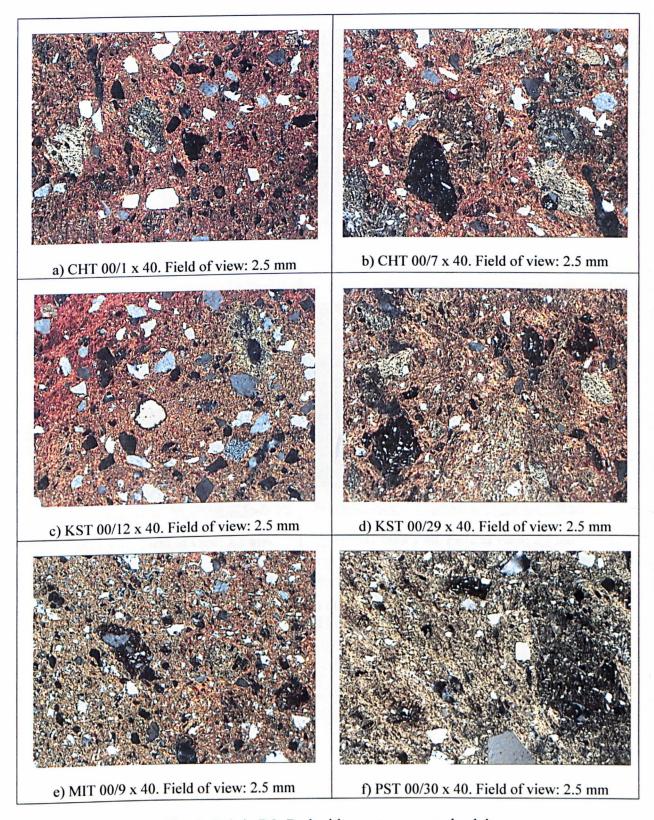


Chania Fabric D6: Siltstone and fossils a-d: coarse; e-f: semi-coarse to fine

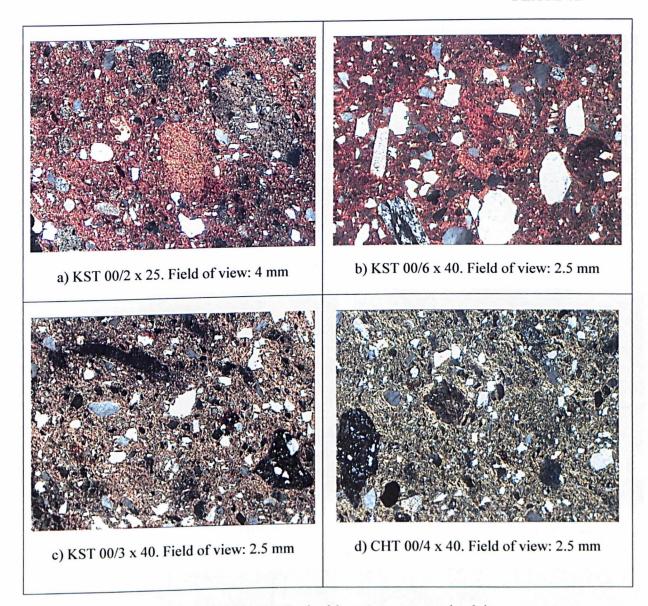


KST  $00/122 \times 25$ . Field of view: 4 mm

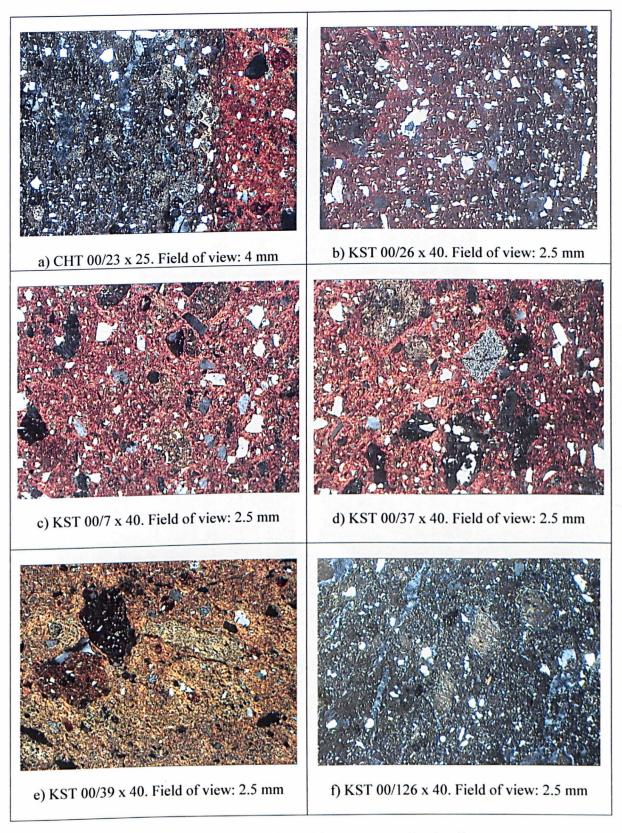
Chania fabric D7: Siltstone II



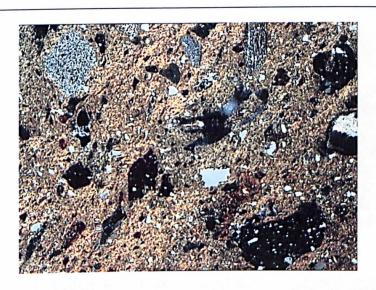
Chania Fabric D8: Red with quartz, grog and calcite



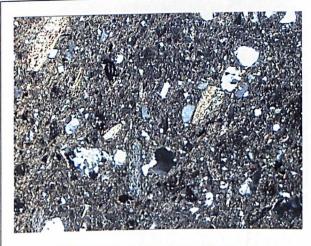
Chania Fabric D8: Red with quartz, grog and calcite The EM I subgroup



Chania Fabric D9: Red with quartz, grog and pellets



a) KST 00/32 x 25. Field of view: 4 mm

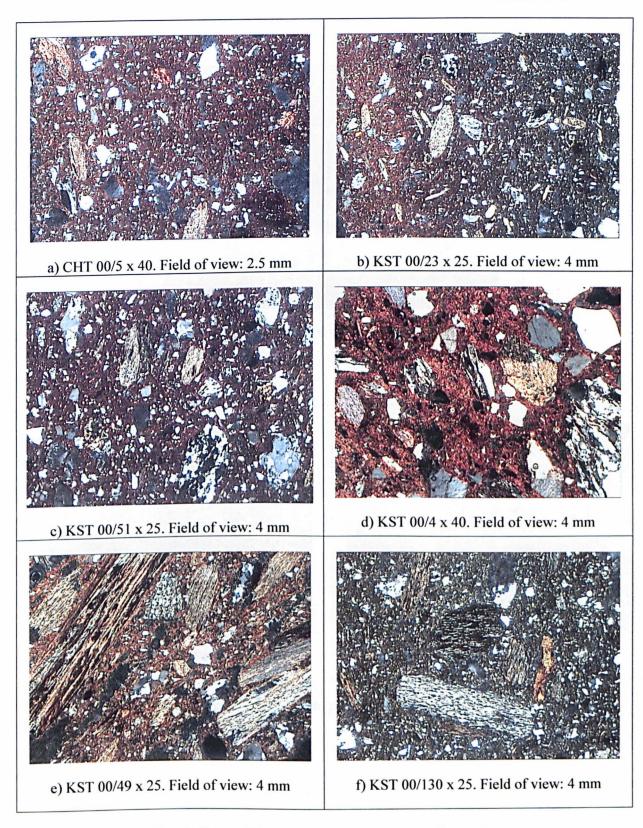


b) KST 00/108 x 25. Field of view: 4 mm

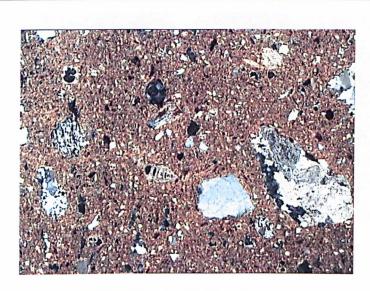


c) KST 00/110 x 25. Field of view: 4 mm

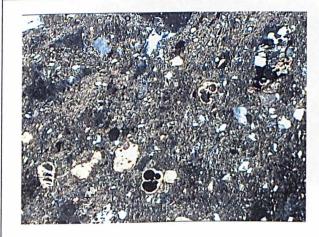
Chania Fabric D10, subgroup a: Coarse phyllite, buff



Chania Fabric D10, subgroup b: Coarse phyllite, red



a) CHT 00/27 x 25. Field of view: 4 mm

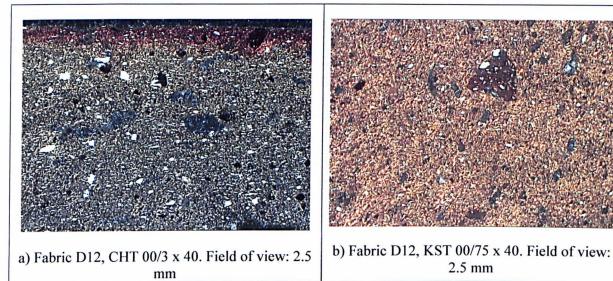


b) KST 00/127 x 40. Field of view: 2.5 mm



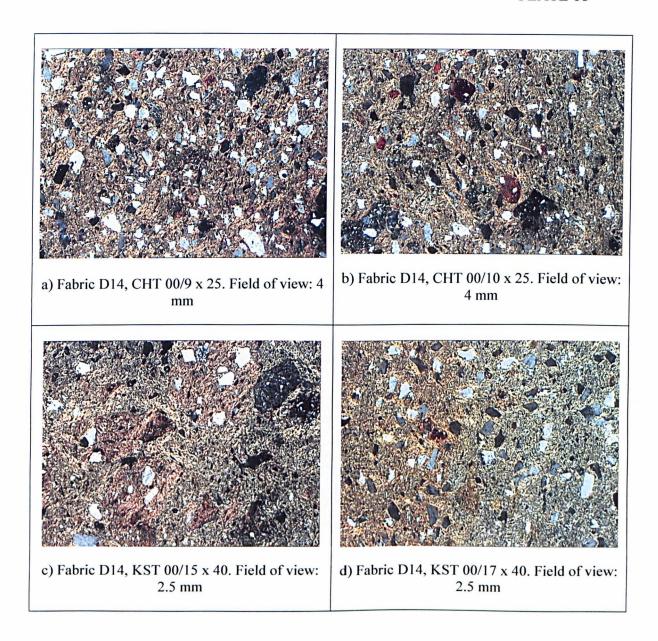
c) KST 00/129 x 25. Field of view: 4 mm

Chania Fabric D11: Coarse phyllite, sand and fossils

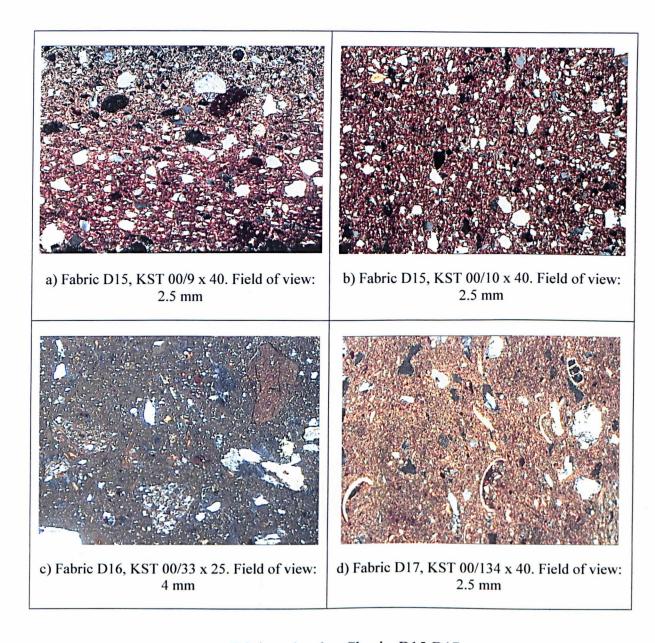


c) Fabric D13, KST 00/1 x 25. Field of view: 4 mm

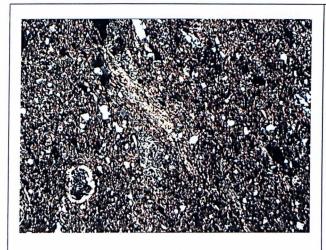
Fabrics related to Chania D12-D13.



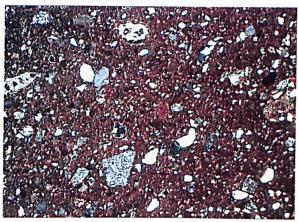
Fabric related to Chania, D14



Fabrics related to Chania, D15-D17



a) Fabric D18, CHT 00/26 x 40. Field of view: 2.5 mm

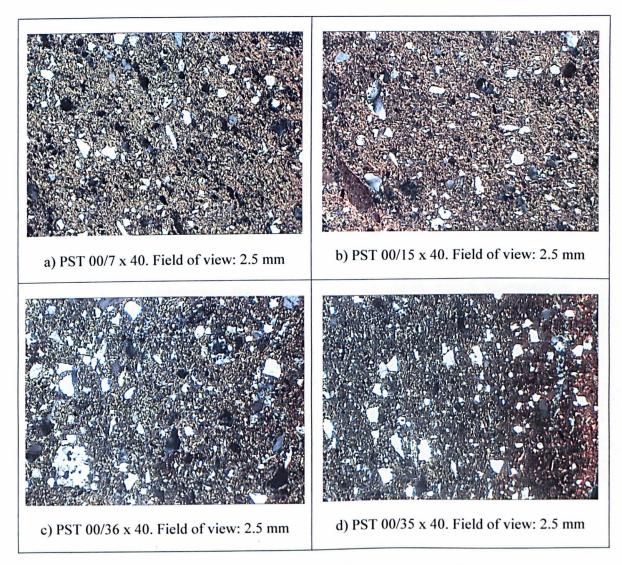


b) Fabric D18, KST 00/137 x 40. Field of view: 2.5 mm

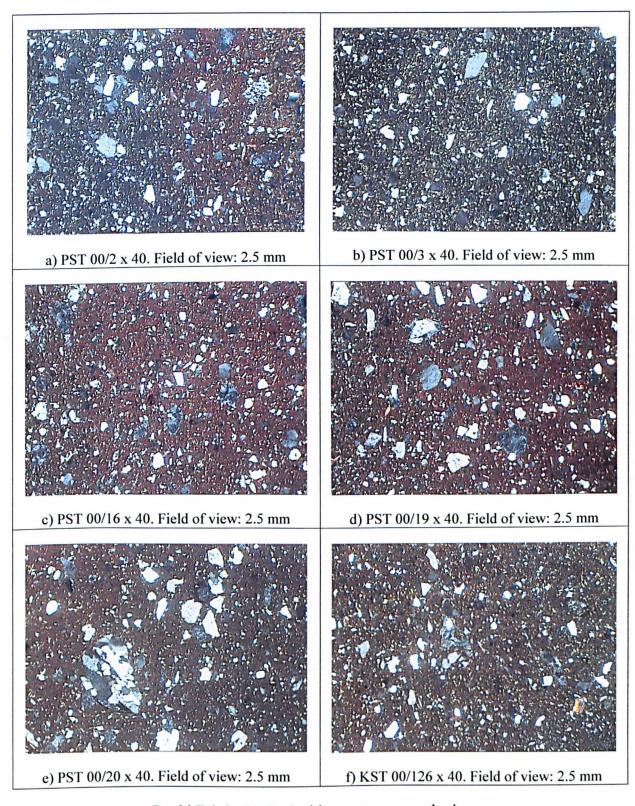


c) Fabric D19, CHT 00/47 x 25. Field of view: 4 mm

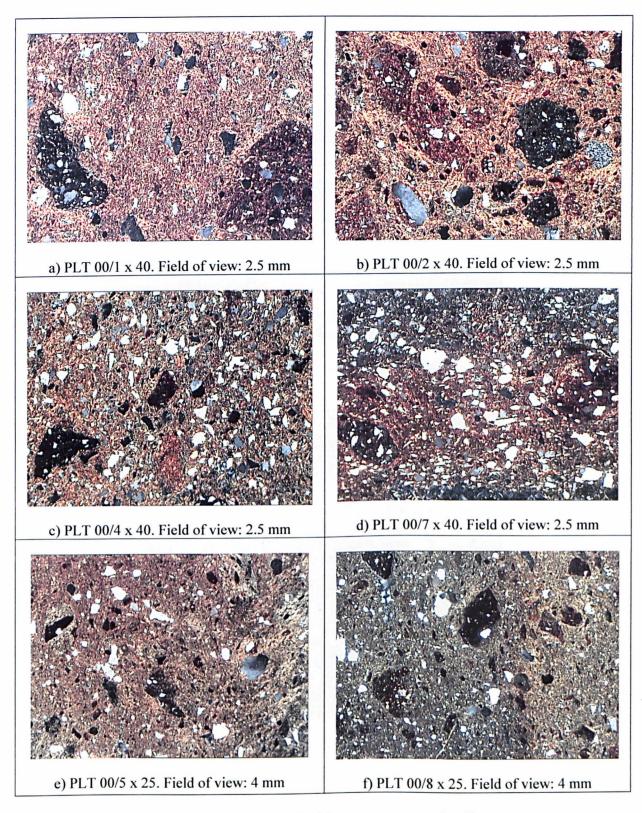
Fabrics related to Chania, D18-D19



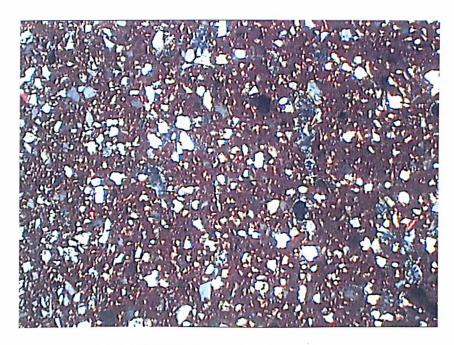
Psathi Fabric E1: Red with quartz, grog and mica, Subgroup a: low-fired



Psathi Fabric E1: Red with quartz, grog and mica, Subgroup b: high fired



Platyvola Fabric F1: Red with quartz, grog and pellets

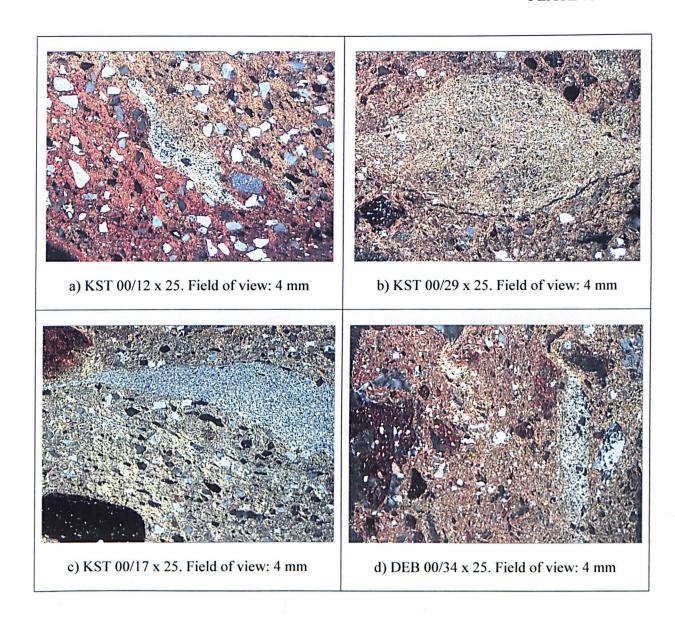


a) Fabric F2, PLT 00/9 x 40. Field of view: 2.5 mm

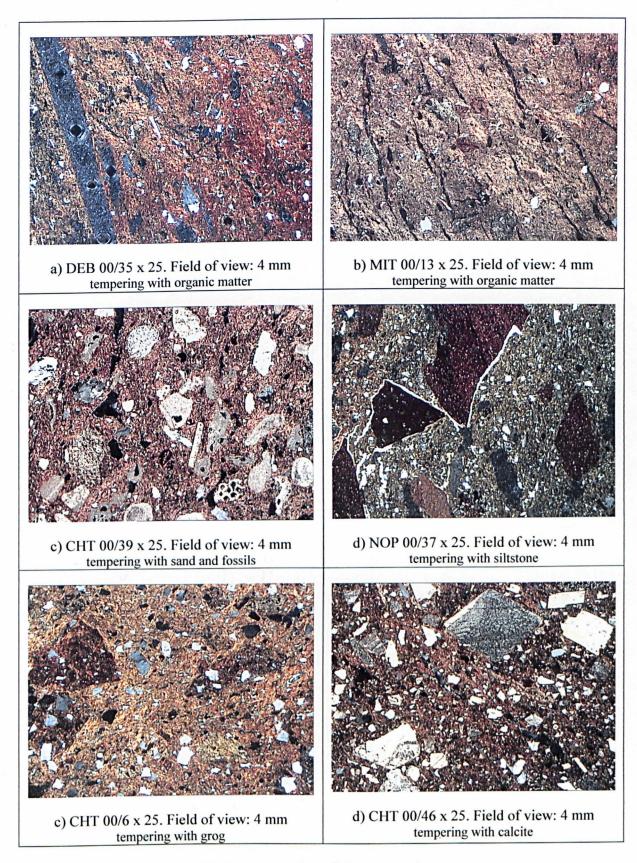


b) Fabric F3, PLT 00/15 x 40. Field of view: 2.5 mm

Fabrics related to Platyvola, F2-F3

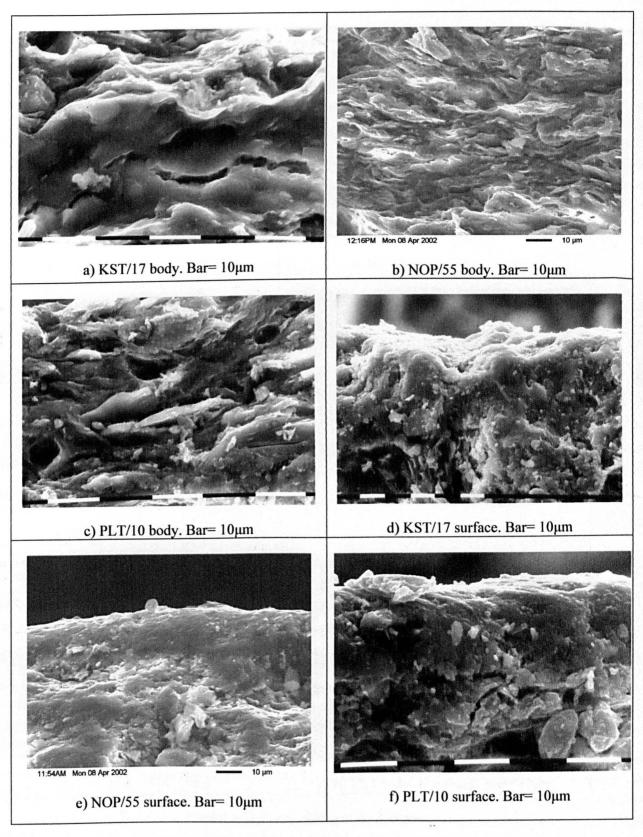


Clay porphyroclasts as evidence of clay mixing

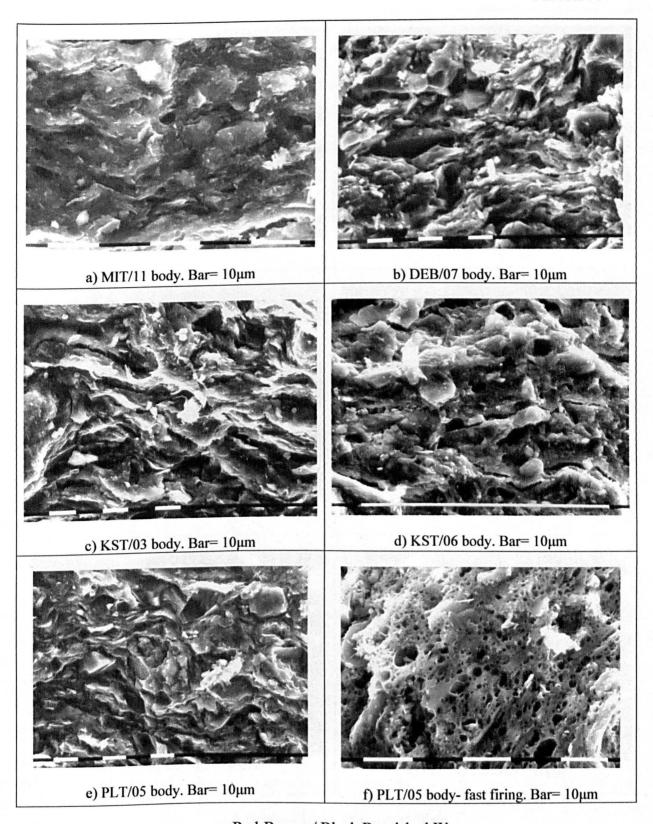


Various examples of clay tempering

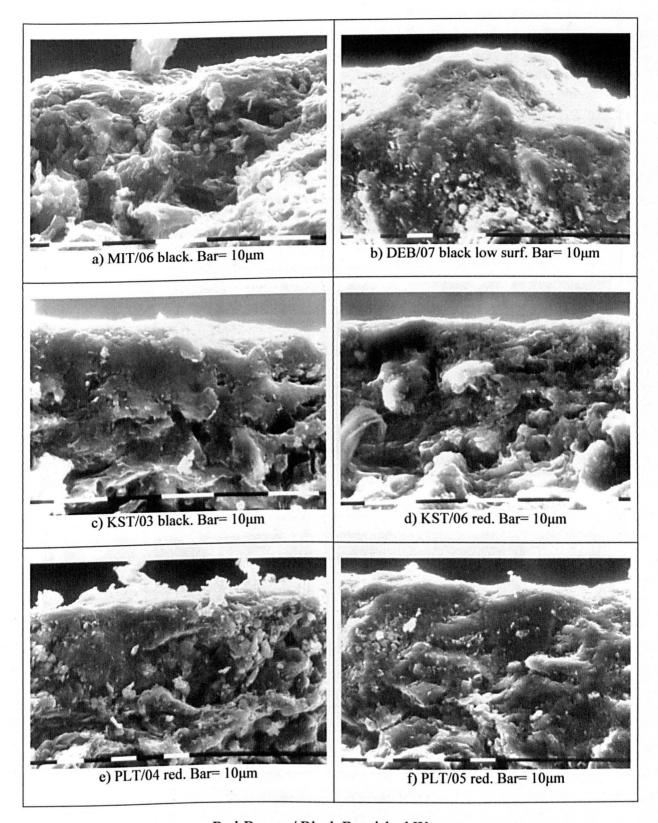
## **PLATE 77**



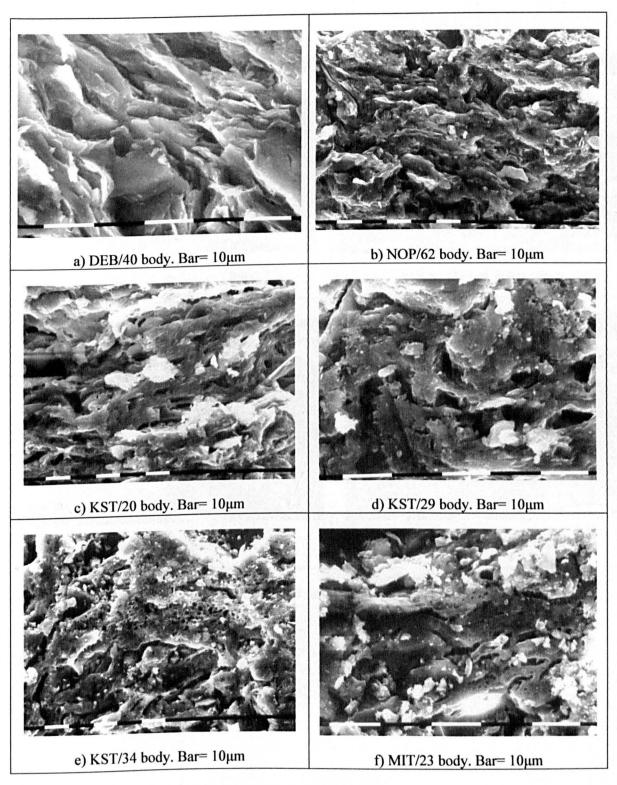
Dark Grey Burnished Ware



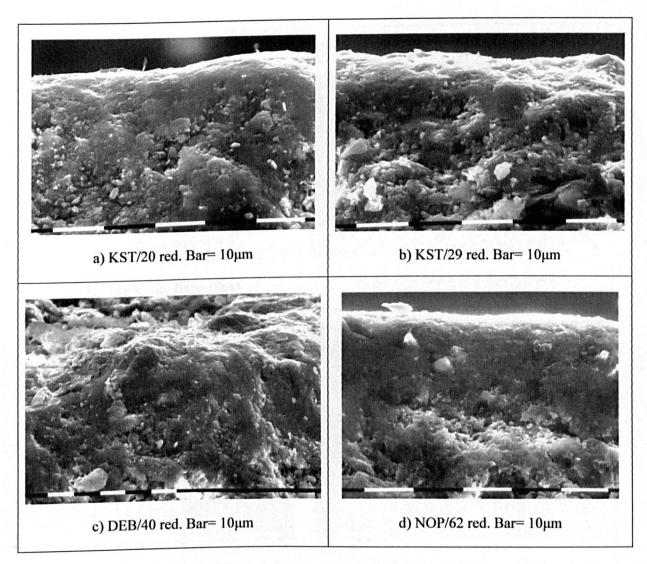
Red-Brown / Black Burnished Ware



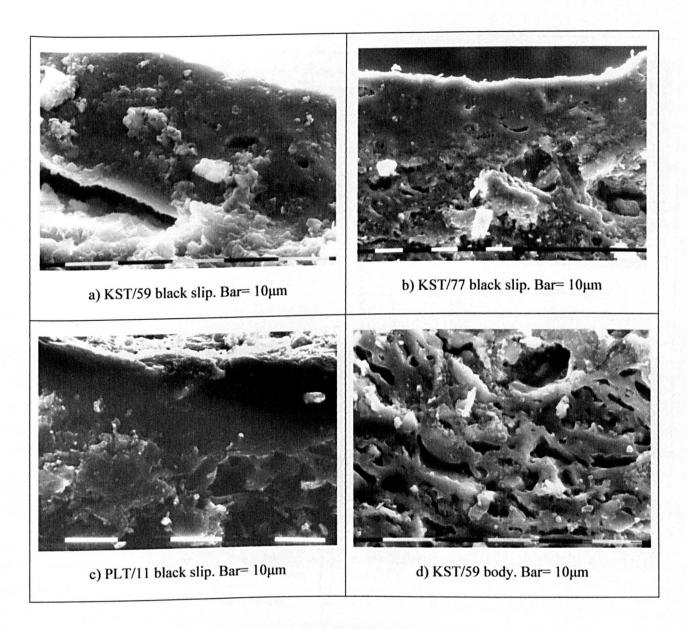
Red-Brown / Black Burnished Ware



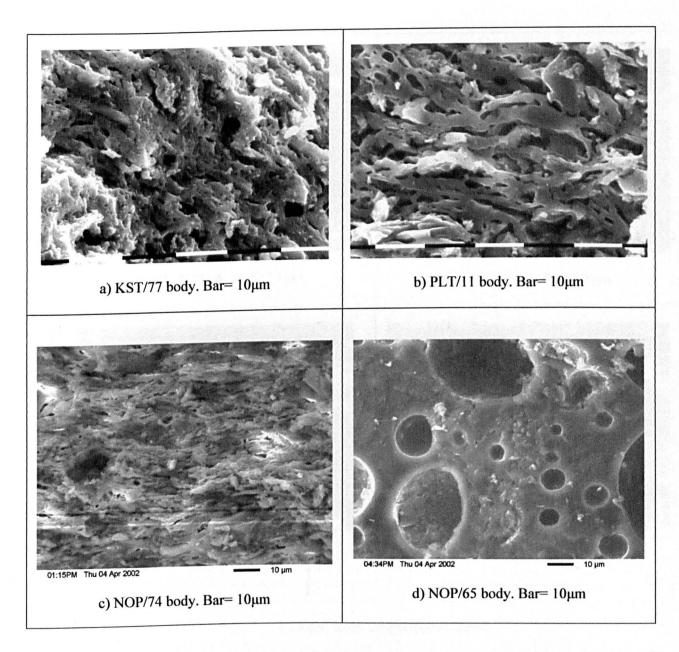
Red Slipped and Burnished Ware



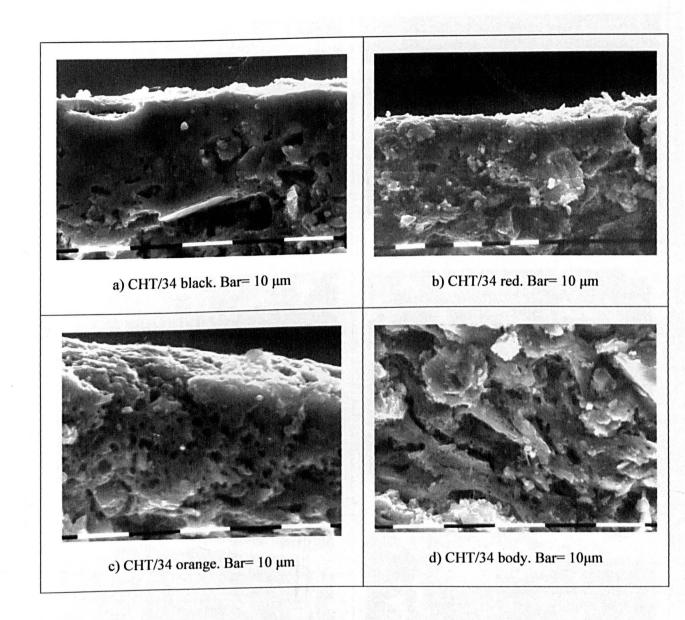
Red slipped and burnished ware



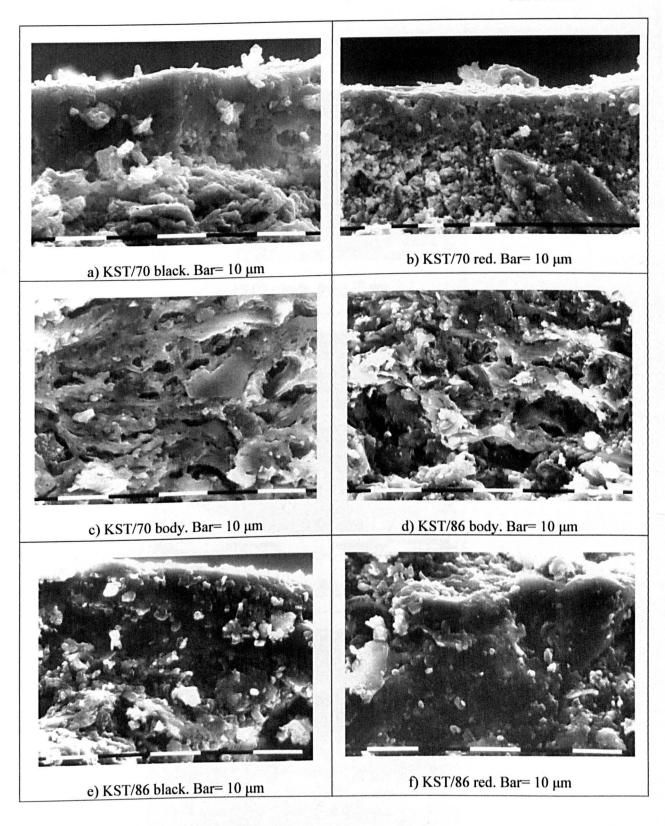
Black Sipped Ware



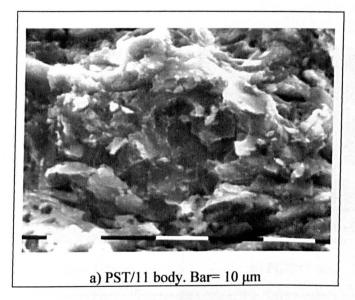
Black Slipped Ware

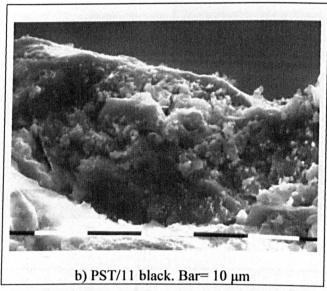


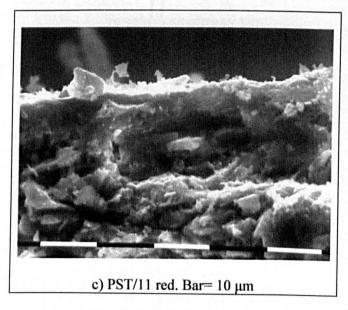
Mottled ware from Chania Town



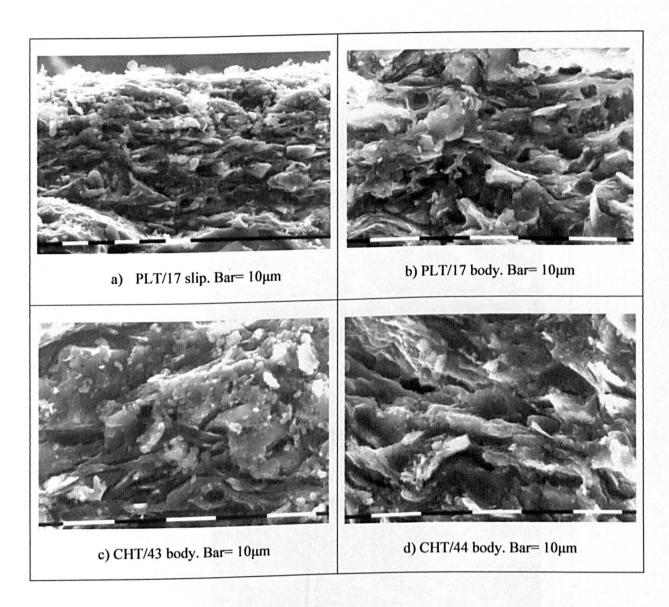
Mottled Ware from Kastelli Chania



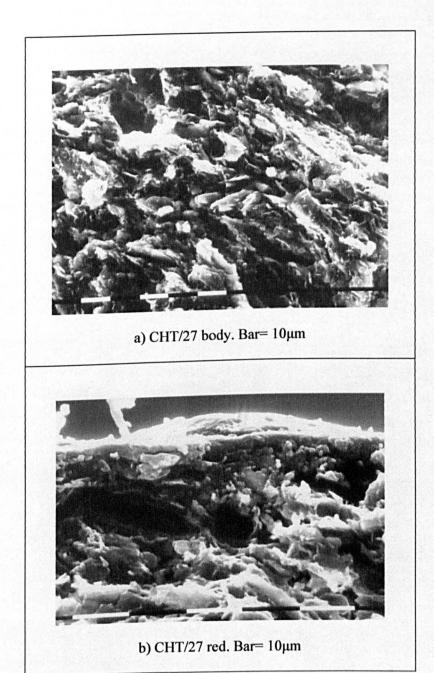




Mottled Ware from Psathi



Vessels with creamy slip



Dark-on-Light Painted Ware