ANCIENT MONUMENTS LABORATORY

REPORT

2438

SERIES/No	CONTRACTOR
AUTHOR	Dr D F Williams
TITLE	Petrology analysis of Spanish Armada Pottery

PETROLOGICAL ANALYSIS OF SPANISH ARMADA POTTERY

Samples of the unglazed red earthenware fabric from the Trinidad Valcencera (6) and the Santa Maria de la Rosa (3) were examined in thin section under the petrological microscope as part of a general study of Spanish red micaceous wares currently being undertaken by the writer. As the Armada glazed red earthenware fabric appeared in the hand-specimen to be very similar to the unglazed red wares (see p.), five samples from the Trinidad Valcencera were also included in the analysis.

All the samples, both glazed and unglazed, proved to be very similar in thin section, and argues strongly for a single source of origin for both types of fabric. The most prominant inclusions are made up of discrete grains of potash feldspar (orthoclase and microcline) and plagioclase feldspar, with numerous grains of subangular quartz and large flecks of white mica, set in an anisotropic matrix of fired clay. Brown tourmaline is present in some of the sections, and so are small fragments of granite. The mineralogy suggests that the inclusions have been derived from an area of granitic rocks.

Spanish red micaceous wares imported to England have generally been assumed to have been made at Merida (Platt and Coleman-Smith,1975, fig. 204, nos. 1279-80, fig. 205, nos. 1294,1297, fig.206, no. 1315, fig. 208, nos. 1334,1336,1343), though with little evidence for their production at that site. Indeed, analysis by the writer of a large number of red micaceous vessels thought to be imports from Spain reveals a wide variety of different fabrics indicating several different centres of production. None of the Armada pottery analyzed contains the volcanic glass inclusions suggested by Mannoni as being

diagnostic of 'Merida ware' (1972, Tabella I and II, nos. 136-7). However, the area around Merida appears unlikely to contain volcanic rocks, consisting mostly of granites and porphyries, with some sandstones, limestones and shales, and so the suggested petrological characteristics of 'Merida ware' are doubtful. However, as granitic inclusions appear in the thin sections of the Armada pottery, a Merida origin for these wares is therefore feasible, though as granite outcrops in a number of places in the Iberian Peninsula other sources are equally possible, and on documentary evidence a better case can perhaps be made below for this particular pottery to have been produced at Lisbon.

The itinerary for the Santa Maria de la Rosa immediately before the Armada expedition was San Sebastion and Lisbon, and for the Trinidad Valcencera, Venice, Sicily, San Lucar and Lisbon. As the unglazed red earthenware samples from both ships strongly suggest a common origin, it is likely that these wares were taken aboard at Lisbon, the only common port of call. The alternative view that this particular fabric in plain utility forms was available in bulk at widely separated parts of the country appears less attractive. Moreover, we know from documentary evidence that much of the Armada's ordinary glazed wares, such as those examined above, were ordered from the potteries of Lisbon and Seville (see p.). Samples of local clays from Seville appear to be quite different in thin section to the glazed sherds analyzed, which would seem to suggest the strong probability that the latter were made at Lisbon. If this is in fact so, it is likely that the unglazed samples also originated from Lisbon, as they are virtually identical in thin section to the glazed sherds. Moreover, although the geology of the Lisbon area is mainly Miocene, and

so non-granitic, the River Tejo, which flows out into the Bay of Lisbon, passes through granite areas in its upper courses, and it is perfectly possible for granitic material to have been brought down to Lisbon, which would account for this range of inclusions occurring in the local pottery.

D.F. Williams, Ph.D.,
Department of Archaeology,
University of Southampton.

Mannoni, T. (1972) 'Analisi mineralogiche e technologiche delle ceramiche medievali - Nota II', Atti V Convegno Internazionale della Ceramica, (1972), 107-128.

Platt, C. and Coleman-Smith, R. (1975) Excavations in Medieval Southampton 1953-1969 Vol. II The Finds (Leicester, 1975).