

# A Review Of Archaeological Pottery Shards Collected From Different Excavated Sites Of Tamilnadu, India.

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**Abstract:** In this paper, pottery shards which are collected from six important excavated archaeological sites namely Kanchipuram, Karur, Vallam, Kodumanal, Manappadu and Periyapattinam from different locations of Tamil Nadu, India are presented based on the nature of the potteries and the depth from which they are collected from the excavated sites with a view to have an insight of colour, texture, grains etc for evaluation of scientific investigations using different techniques of FTIR, XRD, Thin section and SEM analyses.

**Key words:** Pottery shards, Texture, grain, FTIR, XRD, Thin section, SEM.

## 1. INTRODUCTION

Archaeology reveals cultural sequence of the man's past through the materials remains in the societies. Among the many materials available from the past, Potshards are the most intriguing and most durable artifacts made by the ancient artisans. Potteries are made up of fired natural and heterogenic clays. These clay mixtures of the potteries are significant because they are economical raw materials which have been used since earliest times. These artifacts were used for many purpose including cooking, conserving the food. The analysis of the pottery will also lead to identify, understand and characterize civilizations. Besides, the historical period involved in making the potteries, the technological advancement made by the ancient artisans can also be revealed out. So, the knowledge of colour, texture, grain size, chemical and mineralogical compositions is most essential for characterization studies of potteries. The proportion of raw clay materials used, the selection of type of "fluxes", the type of the grains in the pottery are all indicators for the technical knowledge of ancient artisans in making quality pottery. Further the colour, texture and quality of pottery are also dependent upon the firing practices such as firing temperatures used, the mode of firing and the ability of the artisans to achieve controlled firing; these in turn will serve the indicators for the technical knowledge and skills of the artisans. So, in order to study all these things, 18 ancient pottery samples are collected from various archaeological excavated sites namely Kanchipuram, Karur, Vallam, Kodumanal, Manappadu and Periyapattinam of Tamil Nadu, India.

## 2. LOCATIONS AND MATERIALS

A brief account of the available history of the selected sites with their importance and the nature of the collected samples are given below.

**Kanchipuram:** Kanchipuram (12°05'03"N; 79°24'01"E) the historic capital city of the south, rich in ancient monuments and inscriptions glorified in ancient Tamil and Sanskrit literature. (7) Three agencies under took excavations in the city of Kanchipuram at various times. 1. The Archaeological Survey of India (ASI), Southern circle, Chennai in 1954 and 1962. 2. The Department of Archeology, Government of Tamilnadu in 1975 and 3. The Department of ancient history and Archeology, University of Madras between 1970 and 1976. (8) An important feature of the lay out of Kanchi is that there were smaller peripheral satellite villages or habitation units self-sufficient in themselves and having their individual names but integrated loosely with the Kanchi city in subsequent times.

**Karur:**

Karur is situated about 70 km from Tiruchirapalli of latitude 8°21'03"N and longitude 78°03'34"E in India. This historical place was excavated by Tamilnadu state department of Archaeology in three seasons-1973, 1977 and 1979. The results of excavations at Karur have shed much light on the identification of Karuvur-Vanchi. Further, the findings of large number of ancient Roman coins in Karur gives the evidence for its trade links with the Roman empire in the historical past. The excavations at Karur revealed a house-site with a brick-flooring and a drain joining a brick structure. Arretine ware and Kaolin (white clay) pot shreds were also found in the Karur excavations.

**Vallam:**

Vallam (10°43'01"N and 79°04'02"E) is a small village town 11 km south west of Thanjavur situated on the Thanjavur-Trichirapalli high way, occupying the north east-corner of what is called the low Vallam table land. The prominent land mark of this place at present is the ruined earthen fort on an elevated ground just on the eastern rim of the town. A number of pottery samples, Charcoal samples and ash were found during excavations. Vallam excavations can be grouped into three periods viz., Period I: 300BC to AD 400; Period II: ad 500 to AD 1400; and Period III: AD 1500 to AD 1800.

**Kodumanal:**

Kodumanal (11°6'01"N and 77°30'02"E) is located on the north bank of the river Noyyal, a tributary of the Kaveri. This habitation-cum-burial site covering an area of 150 acres was first excavated by the Department of Archaeology, Tamil University (Tamilnadu, India) in the year 1985. A large quantity of high quality beads of semi precious stones like beryl, quartz etc., iron spindles, crucibles, high quality arrows, pottery ware, copper ware were also found during excavations.

**Manappadu:**

Manappadu is a coastal village in Thuthukudi District down south of Periapattinam of latitude 8°21'03"N and longitude 78°03'34"E in India. According to Archaeologists<sup>4</sup> this place might have been a connecting port in the east-west sea as there was a light house in the village. Fishing was the occupation in this sea coast village and a large quantity of salted fish were sent to the interior and even shipped to Sri Lanka and other countries. Apart from pottery shreds, a few stone pillars carrying some inscriptions stand as the only evidences of Manappadu's past. Potteries collected by Archaeological survey of India, Southern circle, Chennai indicate that Manappadu could have been once a flourishing port.

**Periyapattinam**

Periyapattinam (09°14'01"N and 78°53'02"E) a small coastal village in Ramanathapuram District of South TamilNadu played the role of either a connecting port or a merchant colony on the East-West sea route where ships might have halted and where there could have been storage facilities. The Madurai sultanate had been established in the 13<sup>th</sup> century AD and there might have been a demand for porcelain from China. These porcelain might have been imported from China through this port as evidenced from a large deposit of porcelain ware excavated from here.

**Tables showing Depth of Collection and Nature of the Pottery samples**

**1.Kanchipuram (KCM)**

Sample	Depth below ground level(cm)	Nature
KCM 1	110-130	Black ware,Interior dark black colour,Slightly concave(4mm)
KCM 2	135-160	Red ware, uniform thickness, coarse(5mm)
KCM 3	170-200	Black and Red ware,Interior dark black, fine,designed on the outer surface, uniform thickness(10mm)

**2.Karur:(KRU)**

Sample	Depth below ground level(cm)	Nature
KRU 1	140-200	Dull red colour, slightly concave, fine texture( 6mm).
KRU 2	200-240	Redware,Uniform thickness, Interior dull red,coarse, outside reddish brown colour (7mm).
KRU 3	200-300	Black ware,Interior dark black colour,Slightly concave(4mm)

**3.Vallam(VLM)**

Sample	Depth below ground level(cm)	Nature
VLM 1	140-150	Red ware ,Neck portion slightly curved,both side red colour, rimmed,grooved(5mm)
VLM 2	160-180	Black ware , neck portion grooved,rimmed,interior slightly brown colour(5mm)
VLM 3	270-300	Dull red colour, slightly concave, fine texture( 7mm).

**4.Kodumanal(KDL)**

Sample	Depth below ground level(cm)	Nature
KDL 1	80-110	Redware, Uniform thickness, Interior dull red,coarse, outside reddish brown colour,fine texture (7mm).
KDL 2	115-130	Black ware,concave shaped,grooved,polished, fine texture(12mm)
KDL 3	155-175	Brown ware,Interior dull red colour,grooved with design(6mm)

**Manappadu(MPD)**

Sample	Depth below ground level(cm)	Nature
MPD 1	150-240	Black and Red ware,Interior dark black, fine,designed on the outer surface, uniform thickness(10mm)
MPD 2	240-270	Dull red colour, slightly concave, fine texture( 6mm).
MPD 3	300-310	Black ware , neck portion grooved,rimmed,interior slightly brown colour(5mm)

**Periyapattinam (PPM)**

Sample	Depth below ground level(cm)	Nature
PPM 1	140-200	Red ware,uniform thickness,fine texture(6mm)
PPM 2	200-240	Russet coated red ware, interior brown,fine(11mm)
PPM 3	200-300	Black and red ware, uniform thickness, interior light black coarse(8mm)

### 3. RESULTS AND DISCUSSION

From the collected pottery shards, it is to be observed that all the pottery shards are not of the same type. They have been collected from different locations, layers and depths. It is also observed that the collected samples having different texture, colour, thickness etc. Further, it indicates that selection of type of “fluxes” are also different for different locations. The colour, texture and quality of pottery are also dependent upon the firing practices such as firing temperatures used, the mode of firing and the ability of the artisans to achieve controlled firing; these in turn will serve the indicators for the technical knowledge and skills of the artisans.

### 4. CONCLUSION

In order to investigate different chemical and mineralogical compositions, the different period to which they belong and the different proportions in which raw materials are used for making quality potteries, different scientific techniques using FTIR, XRD, Thin section and SEM analyses would be carried out in future studies.

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