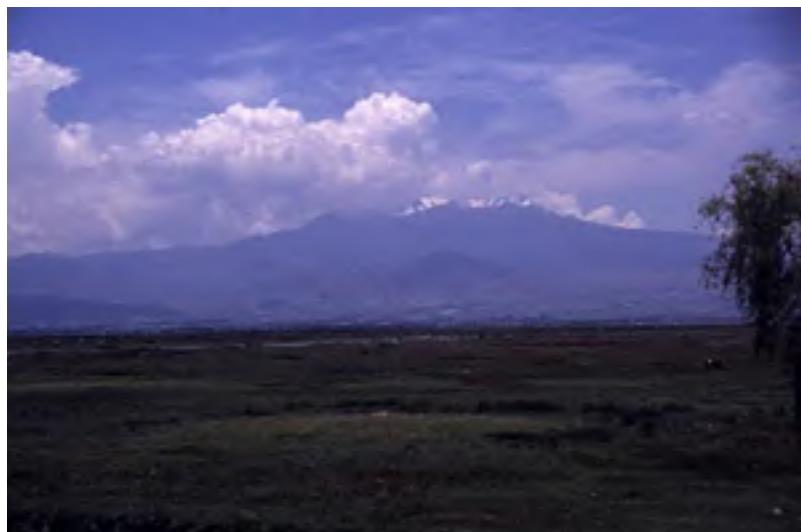


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**Prehispanic Life in a Man-made Island Habitat in Chignahuapan Marsh, Santa Cruz Atizapan, State of México, México**



**Research Year:** 1999

**Culture:** Teotihuacán

**Chronology:** Pre-Classic to Epi-Classic

**Location:** Santa Cruz Atizapan, México

**Site:** Chignahuapan Marsh

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## Introduction

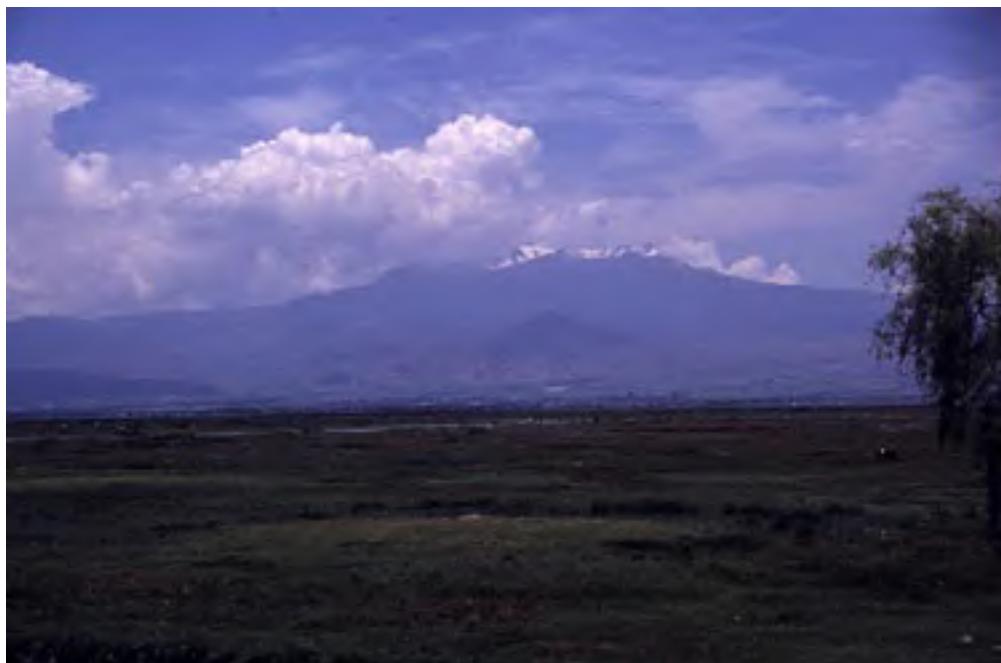
The Valley of Toluca ([Figure 1](#)), located to the west of the Basin of México, is the highest of the Republic of México (minimum elevation: 2572 m), extending across approximately 1600 km<sup>2</sup>. As in the Basin of México, several shallow lakes and marshes played an important role throughout the long history of the Valley of Toluca. The lacustrine zone, referred to as the "Ciénagas del Alto Lerma", consists of three marshes and adjacent lakeshore areas covering approximately 300 km<sup>2</sup>, delimited by the "badlands" (*malpais*) of San Mateo Texcalyacac to the south, the piedmont of the Sierra de las Cruces to the east, a series of young volcanos to the north and the alluvial plain to the west. Normally, the three marshes form separate bodies of water connected by the Lerma River. However, when the water table rises, one huge swamp is formed, occasionally flooding the adjacent area as well, and covering an area which extends approximately 30 km N-S and 10 km E-O. The southernmost marsh is referred to as Almoloya or Chignahuapan ([Figure 2](#), shown below). Lerma or Chimaliapán Marsh is situated in the middle and the northernmost marsh is named San Bartolo or Chiconahuapan.

In contrast with the Basin of México which today is a closed hydrographic unit, volcanic and tectonic activity during the Early Holocene opened the Valley of Toluca. Numerous springs situated along the western piedmont of Las Cruces and the Sierra del Ajusco, together with rivers and tributaries that descend from the surrounding slopes feed the marshes and the Lerma River, the source of which is located at Almoloya del Rio, flowing north ultimately to the Pacific via the hydrological system known as Lerma-Chapala-Santiago. Rather than conforming a single ecosystem, the lacustrine zone constitutes a complex mosaic of microenvironments: lakeshore, marsh and deep water, an extensive area of "floating earth" (locally called *plancha*) probably formed by decomposing aquatic and semi-aquatic vegetation in relatively shallow sectors, an area affected by the constant surge of spring water, and anthropogenic features such as canals and other waterways, laundry areas and docks. Open water was restricted to a relatively small sector.

The extensive marshes, including areas covered either by *plancha* or communities of aquatic, semi-aquatic and floating vegetation constitutes the major ecological zone. However, in spite of the abundance of faunal and floral resources in this community, it represents an unstable, immature ecosystem. Ecosystemic stability is greatly affected by seasonal rains and fluctuations in the water table caused by regional climatic episodes.

Recent ethnoarchaeological research in the Valley of Toluca indicates that the settlement history of the study area is directly related to role of lacustrine resources in the subsistence system of the lakeshore communities (Sugiura 1998), as recently as three decades ago when the drainage, and consequent desiccation, of the marshes was completed. Inhabitants of the area practiced a generalized adaptive strategy with respect to the resources available, characterized by the indiscriminate exploitation of diverse biotic resources, broad flexibility in subsistence activities and the simultaneous articulation of several subsistence systems. Neither complex technology nor a high degree of specialization, but rather individual skill and experience together with a profound familiarity with the surroundings is required. This flexible, loosely-structured system facilitates the exploitation of available resources.

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**Figure 2. Chignahuapan Marsh, Santa Cruz Atizapan, State of México.**

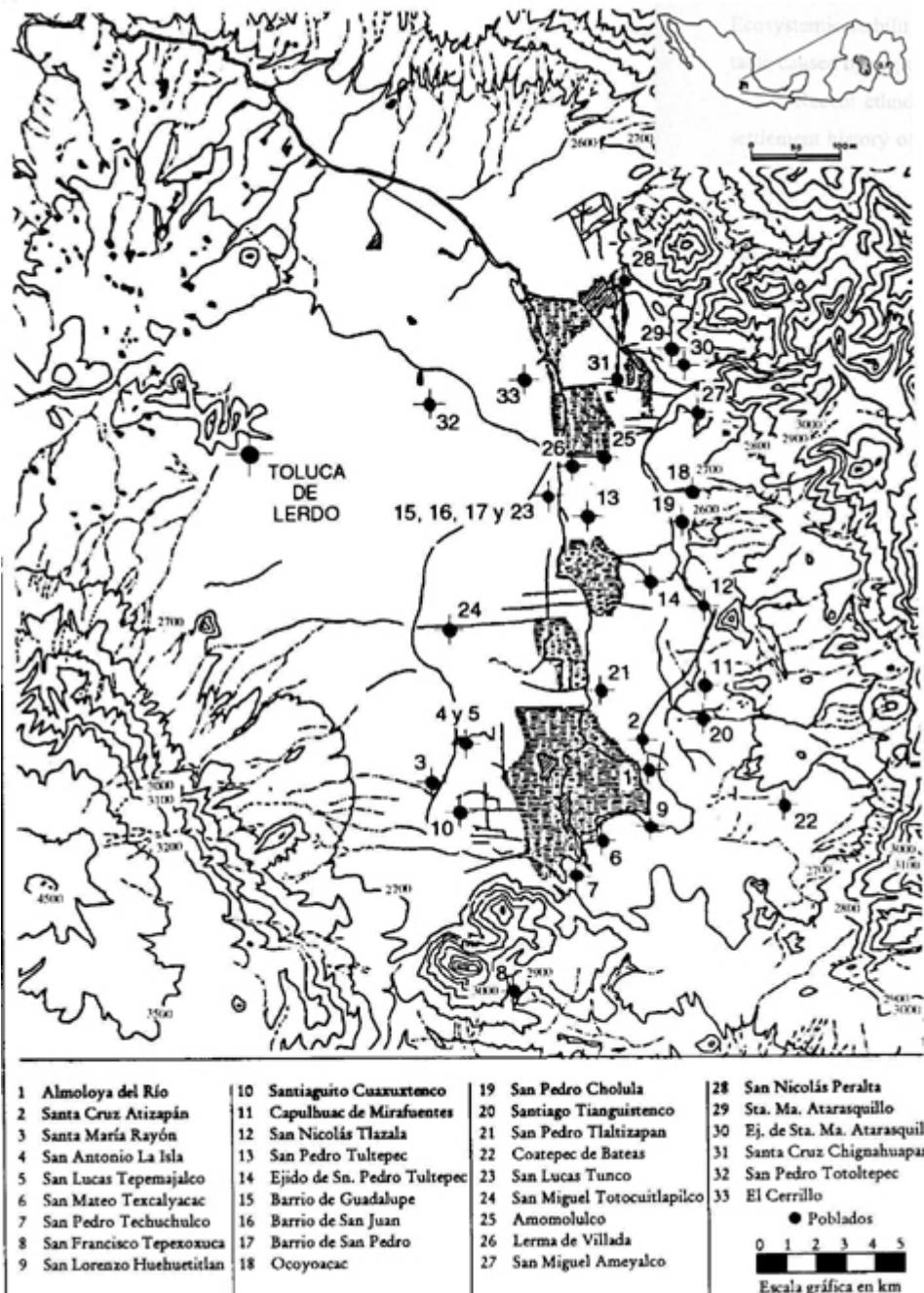


Figure 1. Valley of Toluca, State of México, México (based on Sugiura 1998:36).

## Paleoenvironmental studies in the Valley of Toluca

Metcalfe *et al.* (1991) mentioned the overall alkalinity of the lacustrine zone throughout its evolution. Alkaline marshy conditions developed following the eruption known as "Pómez Toluca Superior" (approximately 11,600 BP). Based on dates for the Tres Cruces tefra, situated to the south of San Mateo Texcalyacac (Bloomfield 1975) these authors propose a transgression period characterized by partially obstructed alkaline waters. By 6000 BP the lake appears to have drained freely although it was associated with slightly more acidic marsh conditions. A lacustrine environment was re-established by around 3600 BP. By 1600 BP the lake waters were alkaline although somewhat turbid or fresh and transgression reached its maximum. Between 11400-900 BP, the Chignahuapan lake underwent desiccation provoked by regression as a result of increased sedimentation.

## Settlement in the Lacustrine Zone

Adaptation to the lacustrine zone is already evident during the Early Formative period (Ocotitlán and Mextepec phases, ca. 1200-1000 B.C.), by a limited number of sites, mainly represented by small, dispersed houses. Colonization in the Valley of Toluca, particularly in the zones adjacent to the principal rivers, expanded during the Middle Formative (Cuauhtenco phase, 1000-500 B.C.). However, the occupation of the lacustrine zone, indicated by a few low-level sites, continued to be relatively insignificant during this period and most communities were situated in the middle piedmont (2600-2800 m) of the west-central sector of the valley where the risk of frosts and consequences for agricultural production were slightly lower. A long period of virtual depopulation followed during the Late and Terminal Formative in the Valley, until the Atizapan phase of the Middle Classic period (A.D. 200-400), corresponding to the Tlamimilolpa phase of Teotihuacán in the northeastern Basin of México. Population increase is indicated by the appearance of numerous new settlements in the region, particularly in the lacustrine zone. The fact that a vast area of the valley, however available, was still unoccupied at this time suggests that the lakeshore area was an attractive source of springs, abundant and diverse aquatic resources, easily accessible by means of fluvial transportation. Archaeological evidence suggests that the basic structure of lacustrine adaptation was in place by this time.

Population continued to grow throughout the subsequent Azcapotzaltongo phase (A.D. 400-600), corresponding to the Xolalpan phase of Teotihuacán, and the number of lakeshore settlements increased. The construction of artificial islands in the Chignahuapan and Chimaliapán marshes, low mounds known today in the area as *bordos*, began during this phase and reached their maximum extension during the Epiclassic period (ca. A.D. 650-900). Although bordos vary greatly in size, none are sufficiently large to permit agricultural activities, thus implying that inhabitants exploited the natural lacustrine resources to obtain food and raw materials for the elaboration of craft products, both of which could be exchanged for additional products available in other parts of the valley ([Figure 3](#), shown below).



Figure 3. Bordos in Chignahuapan Marsh, Santa Cruz Atizapan.

Around A.D. 600, during the Metepec phase, Teotihuacán's political and economic power had declined significantly, and the disarticulation of its system intensified. As a consequence, massive population movements were provoked, some of which reached the Valley of Toluca. During this period, the civic-ceremonial center of La Campana-Tepozoco developed on the northeastern shore of the Chignahuapan marsh although initial construction at this site may have begun during the previous phase. This regional center may have controlled the circulation of goods obtained from the southern part of the Valley, especially lacustrine products. Several public structures were built on three levels of artificial terraces constructed at the shallow edge of the marsh, implying both engineering skill and a considerable volume of well-organized labor. Public buildings were rectangular and built with dressed stone. The development of this site coincided with a notable increase in the construction of artificial islands, *bordos*, distributed to the south and southwest of the center, conforming a significant part of the sustaining area of the site itself. Size may be an indicator of function with respect to the *bordos*, the smaller ones being used for domestic habitation while larger ones may have had a public function. At least one was built to support a public structure with stone walls of considerable size.



Figure 4. *Bordos*. Santa Cruz Atizapan.

Coincident with the decline of Teotihuacán, a new ceramic tradition known as Coyotlatelco was introduced into the Valley of Toluca, and constitutes the diagnostic cultural element of the Epiclassic period. During the Atenco phase (approx. A.D. 700-900) the number of sites in the valley doubled with respect to the Terminal Classic occupation (Tilapa phase, beginning about A.D. 650). Many Classic period sites located in the alluvial plain and lakeshore zones continued to be occupied. The civic/ceremonial center of La Campana-Tepozoco reached its maximum extension and similar sites appeared in other parts of the Upper Lerma lacustrine region. The construction of *bordos* accelerated in the surrounding marsh; as many as 100 may have been occupied during the Epiclassic, including some of those used during the previous period. Most appear to have been domestic habitation units, containing one or at most two houses, although others apparently served public functions, perhaps as community gathering places or other type of public space ([Figure 5](#) and [Figure 6](#), shown below). Thus, the size of the *bordos*, the construction technique and the type of structure associated with them may be indicators of function. These differences were also manifest in material cultural remains such as ceramics and lithics as well as in the burials: apparently, individuals of different ages were buried in different *bordos*.



**Figure 5. South sector. Floor 3 of Mound 20. Circular structure with foundation.**



**Figure 6. Mound 20. Foundation of later circular structure surrounding earlier rectangular structure.**

Prior to the construction of a *bordo*, it was necessary to prepare a considerable area of the marshbed, by strategically placing pine, oak or, possibly, willow piles of variable

size. A layer of lacustrine sediment was positioned among the piles and overlain with additional sequential layers of sediment and volcanic stone from nearby. Some modifications of the construction techniques used for both *bordos* and structures on them during the earlier occupations were evident. However, the main concerns of the inhabitants continued to be focused on how to control sinking and erosion of the *bordos* as well as the effects of fluctuations of the water table, thus requiring repairs and elevation of the floors by the superpositioning of sediment and volcanic materials. On occasion it was apparently necessary to correct uneven surfaces caused by sinking for which greater volumes of volcanic stone were transported from the surrounding region.

With regard to the structures destined for habitation, the main difference between them and other structures consisted of the type of floor and material presumably used for the walls. Foundations rarely displayed a double alignment of stones, suggesting that walls were made of lightweight materials such as tule (*Scirpus* sp.) or thin wooden slats called *tejamanil*. The Epiclassic public structure differed from that corresponding to the Classic period occupation in that it was circular in form with a diameter of over 10 m. Its perimeter was delineated by equidistant spaced wooden posts with a diameter of 10 to 15 cm. that supported the walls, probably made of *bajareque* (wattle and daub) or other perishable materials. In contrast to the floors of domestic structures, the public structure has a level cement floor overlying several layers of subfloor materials. Layers of volcanic scoria such as *tezontle* from the eastern lakeshore and pumice, brought in from the eastern piedmont of the Nevado de Toluca, were used to avoid the filtration of humidity to the upper floor surface.

The fundamental subsistence activities of *bordo* inhabitants during the Epiclassic period continued to be based largely on fishing, hunting and recollection of lacustrine resources with little apparent modification.

As the Epiclassic period came to a close, the site of La Campana-Tepozoco stopped functioning as a regional center. The construction of new *bordos* ceased, those that had been occupied were abandoned, and the area was never re-settled. Multiple causes are apparently involved in the phenomenon of abandonment. Climate change beginning at the end of the Classic, continuing through the Epiclassic and, probably, the beginning of the subsequent Postclassic period that seriously affected lacustrine ecology in the region is indicated by diatom analyses from the marsh sediments. The marsh zone continued to provide an important resource base for the region's populations, however, from the Matlazinca during the Postclassic up to the present.

## **Objectives**

The general objective of the research undertaken during 1999 was to study the relationship of the prehispanic inhabitants of the area of Santa Cruz Atizapan, Valley of Toluca, State of México, to their lacustrine environment through the analysis of resource exploitation, at the end of the Classic and the Epiclassic periods (approximately A.D. 600-900). In order to better characterize the lacustrine way of life in this area, the

analysis of direct evidence for resources—botanical and faunal remains—from one of the man-made bordos, Mound 20, was undertaken. In addition, other indicators of resource utilization and related subsistence behavior were considered, including possible evidence for nutritional levels and pathologies in human osteological remains and chemical analysis of residues from occupation floors and ceramic vessels.

### **Macrobotanical analyses**

A total of 557 sediment samples from the 1997 excavation season were processed in the Laboratorio de Paleoetnobotánica y Paleoambiente, IIA-UNAM during March–December 1999. Flotation, separation and identification was carried out by Enrique Méndez and Alberto Ruiz. Macrobotanical remains were not abundant; even in samples that showed greater diversity in the number of taxa represented, frequencies were very low. Of the samples, 371 (66.7%) were found to contain no macrobotanical remains at all. Materials were frequently uncarbonized and the same taxa were found to occur both carbonized and uncarbonized in the deposits.

Substantial amounts of charcoal, as yet unidentified, were also recovered from many excavation contexts, especially from the area of *tlecuiles* (hearts) in the southwestern sector of the mound and from a concentration of burned material (Element 24-NE) from square I12 in the NE sector (Mound 20b) in association with Floor 5, Structure 4.

One of the original hypotheses assumed that the excavated mound represented one of many domestic contexts presumably associated with each *bordo* in the marsh area. An area of *tlecuiles*, mainly rectangular hearths delineated by stones with which cooking vessels known as *cazuelas* were associated, was thought to indicate food preparation and, possibly, consumption. However, as the analysis of macrobotanical materials proceeded, it became clear that these particular contexts were very rarely associated with macrobotanical remains. In an attempt to associate the degree of preservation of macrobotanical specimens with types of archaeological contexts it was found that lower levels of stratigraphic test pits (unit C7, for example) provided greater amounts of better preserved plant materials, whereas floors, *tlecuiles* (hearts) and burials contained minimal quantities.

**Table 1.**  
**Predominant plant genera recovered among the macrobotanical remains**

Amaranthaceae	<i>Amaranthus</i> sp.
	<i>A. hybridus</i>
Chenopodiaceae	<i>Chenopodium</i> sp.
	<i>C. ambrosioides</i>
	<i>Suaeda</i> sp.

Compositae	<i>Madia</i> sp.
	<i>Melampodium perfoliedum</i> (?)
Cyperaceae	<i>Carex</i> sp.
	<i>Cyperus</i> sp.
	<i>Eleocharis</i> sp.
	<i>Scirpus</i> sp.
Gramineae	<i>Digitaria</i> sp.
Leguminosae	
Malvaceae	<i>Malva</i> sp.
Najadaceae	<i>Najas</i> sp.
Oxalidaceae	<i>Oxalis corniculata</i>
	<i>O. stricta</i>
Papaveraceae	<i>Argemone</i> sp.
Polygonaceae	<i>Polygonum</i> sp.
	<i>Rumex</i> sp.
Portulacaceae	<i>Portulaca oleracea</i>
Solanaceae	<i>Solanum</i> sp.
	<i>Solanum rostratum</i>
	<i>Physalis</i> sp.

In general terms, surprisingly few subsistence plants were well preserved in either of the excavated sectors. None of the "traditional" plants such as maize (*Zea mays*), frijol (*Phaseolus vulgaris*, *P. coccineus*) or squash (*Cucurbita* spp.) were recovered from the samples. Edible but probably non-domesticated taxa include *Chenopodium* spp., *Amaranthus* sp, *Physalis* sp., *Solanum* sp. and *Portulaca* sp. Potentially economic taxa include the Cyperaceae listed above. However, all of these taxa are potential components of lacustrine and lakeshore vegetation as well as frequent opportunists in cultivated plots and may not represent subsistence elements at all. Because they have not generally been recovered from archaeological contexts where other data indicate potential uses, we are unable to determine their functions at this time. It is also important to mention the possibility that botanical material suffers from the extreme variability in humidity throughout the annual cycle of fluctuations in the water level. Also, the apparent public function of the excavated structure may also explain the absence of many subsistence plants.

## Pollen analysis

Twenty-six pollen samples were processed from the northeast sector of Mound 20 by Josefina Tavera, representing units G9-12, G14, G17, H9-10, I9-10 and I9-J9. Fifty-one genera distributed in 33 families were identified ([Table 2](#), shown below).

Extraction was carried out by means of acetolysis of samples. *Lycopodium clavatum* markers were employed in order to evaluate recovery rates. Pollen was generally more abundant in surface layers, diminishing gradually with depth ([Figure 3](#)). Large quantities of pteridophyte spores (particularly Polypodiaceae) were observed among the samples and are associated with the humid conditions characteristic of the marsh zone. Significant herbaceous taxa included the families Compositae (Asteraceae), Gramineae (Poaceae), both of which include genera adapted to disturbed conditions such as habitation areas, transit zones and cultivated fields. *Zea mays* is minimally represented in many of the samples studied to date but cannot be definitely associated with prehispanic activities. Arboreal genera include gymnosperms such as *Cupressus*, *Pinus*, *Abies*, and *Larix*, and angiosperms such as *Prunus*, *Salix*, *Alnus*, *Fraxinus* and *Ulmus*. *Pinus*, *Quercus* and *Alnus* in that order are predominant among the pollen samples and represent components of the forest characteristic of the Sierra de las Cruces and Ajusco-Chichinautzin regions that separate the Valley of Toluca from the Basin of México to the east. In general, the evidence recovered so far from the small number of samples initially studied reflects elements of the surrounding flora with no clear indications for plant use by the site's prehispanic inhabitants.

Table 2. Taxonomic identifications of pollen recovered from Mound 20, Santa Cruz Atizapan. (*Spores)	
Family	Genus/species
Amaryllidaceae	
Aspleniaceae	<i>Asplenium monanthes</i> *
Betulaceae	<i>Alnus</i> sp.
Caryophyllaceae	<i>Arenaria</i> sp.
Compositae	<i>Sonchus</i> sp.
Compositae	tipo <i>Eupatorium</i>
Compositae	tipo <i>Helianthus</i>
Compositae	tipo <i>Ambrosia</i>
Cupressaceae	<i>Cupressus</i> sp.
Cyperaceae	
Chenopodiaceae	<i>Chenopodium</i>
Deuteromycete	
Equisetaceae	<i>Equisetum hyemale</i> *

Fagaceae	<i>Quercus</i> sp.
Gramineae	<i>Zea mays</i>
Gramineae	tipo <i>Dactylis</i>
Gramineae	tipo <i>Hordeum</i>
Hamamelidaceae	<i>Liquidambar styraciflua</i>
Isoetaceae	<i>Isoetes</i> sp.*
Leguminosae	
Lycopodiaceae	<i>Lycopodium selago</i> *
Malvaceae	
Myrtaceae	<i>Eucalyptus globulus</i>
Onagraceae	
Ophioglossaceae	<i>Botrychium virginianum</i> *
Papaveraceae	
Pinaceae	<i>Abies</i> sp.
Pinaceae	<i>Larix</i> sp.
Pinaceae	<i>Pinus</i> sp.
Polygonaceae	<i>Polygonum</i> sp.
Polypodiaceae	<i>Adiantum</i> sp.*
Polypodiaceae	<i>Anemia</i> sp.*
Polypodiaceae	<i>Campyloneuron phyllitidis</i> *
Polypodiaceae	<i>Elaphoglossum gratum</i> *
Polypodiaceae	<i>Pellaea allosuroides</i> *
Polypodiaceae	<i>Pellaea sagittata</i> *
Polypodiaceae	<i>Trichomanes speciosum</i> *
Polypodiaceae	<i>Cheilanthes notholaenoides</i> *
Polypodiaceae	<i>Cyctopteris fragilis</i> *
Polypodiaceae	<i>Dryopteris spinulosa</i> *
Polypodiaceae	<i>Phlebodium areolatum</i> *
Polypodiaceae	<i>Pleopeltis</i> sp.*
Polypodiaceae	<i>Polypodium dissimile</i> *
Polypodiaceae	<i>Polypodium rhodopleuron</i> *
Polypodiaceae	<i>Pteridium aquilinum</i> *
Polypodiaceae	<i>Pteris</i> sp.*
Primulaceae	<i>Primula</i> sp.
Ranunculaceae	<i>Ranunculus</i> sp.
Rosaceae	<i>Prunus</i> sp.
Salicaceae	<i>Salix</i> sp.

Saxifragaceae	<i>Fraxinus udhei</i>
Typhaceae	<i>Typha latifolia</i>
Ulmaceae	<i>Celtis</i> sp.
Ulmaceae	<i>Ulmus</i> sp.
Urticaceae	<i>Urtica dioica</i>
Valerianaceae	<i>Valeriana</i> sp.

### Human osteological evidence from burials

A detailed study of the human remains by Liliana Torres Sanders of the Laboratorio de Osteología Humana, Instituto de Investigaciones Antropológicas, UNAM included macroscopic and microscopic observations and measurements of long bones, with emphasis on the recovery of data related to sex, age, pathologies and evidence for ritual practices. Ten infant burials representing 14 individuals were recorded during the 1997 excavations in Mound 20. In addition, the analysis included three adult burials recovered during a earlier test excavation carried out in Santa Cruz Atizapan in 1979. Descriptive data is provided in [Table 3](#) and [Table 4](#).

**Table 3.**  
**Infant and child burials recovered from Santa Cruz Atizapan (1997 excavation season).**

No.	Location	Approx. Age	Sex	Observations
1	E6	Infant, 6 yrs.	NI	Primary, bluish tone of teeth, incision in left humerus, collapsed 5° cervical vertebra
2	E6, below Burial 1	Infant, 1-1.5 yrs.	NI	Primary, possible incrustations of obsidian in vertebrae
3	E6, SW sector	Infant, 4-5 yrs	NI	Secondary
4	E6/D6	Infant, 10.5 yrs.	F?	Primary, remains of 2 mm gray obsidian blade between ribs, collapsed vertebrae
5	E2, below Floor 3	Infant, 8 yrs.	NI	Secondary, obsidian incrustations in clavicle and cubitus
5A		Infant, 1-1.5 yrs	NI	Possible obsidian incrustation in vertebrae
5B		Infant, 3-4 yrs.	NI	Bluish tone in teeth
6	E3-E4, next to Burial 7	Newborn, 10-11 lunar months	F?	Incisions in left and right cubitus, left ischium and left and right femurs
6A		Unborn, 7 lunar months	NI	Primary, Obsidian incrustations
7	E3-E4	Infant, 4-5 yrs	F	Bluish tone of teeth, obsidian incrustations
7A		Unborn	NI	Primary?, incisiones in left humerus, obsidian incrustations in scapula, vertebrae and left humerus

8	E5	Infant, 3-4 yrs	NI	Obsidian incrustations in cranium, cervical vertebrae and ribs, both femurs
9	E5-E6, 15 cm NE of Burial 8	11±2.5 yrs.	F?	Collapsed 3 <sup>rd</sup> -7 <sup>th</sup> cervical vertebrae, obsidian incrustations in cranium, left humerus, cervical vertebrae, left femur and right fibula
10	D3, NE sector	NEWBORN, 9.5-10 mos.	NI	Secondary?, Cranium, some teeth, possible fragments of long bones

The marked presence of incisions in some bones and minute incrustations of what appears to be obsidian in vertebrae or long bones of the majority of the individuals among the burials uncovered during this season, together with the fact that no adults are represented, suggests that ritual practices involving offerings of sacrificed children are represented here ([Figure 7](#) and [Figure 8](#), shown below). The evidence for collapsed vertebrae in individuals 1, 4 and 9 are related to excessive pressure from carrying heavy loads. Some evidence for cranial deformation is present (most clearly in Individual 7).



**Figure 7. Burial 1, Mound 20, Santa Cruz Atizapan. Infant of approximately 6 years of age.**

The adult burials from a prior excavation show no signs of specific cause of death and no associated ritual activities are indicated although some bones pertaining to individuals 1, 2 and 3 show traces of burning. Individuals 2 and 3 show distortions of metatarsals and phalanges of both feet, suggesting prolonged activity involving a flexed position.



**Figure 8. Burial 2, Mound 20, Santa Cruz Atizapan. Infant between 1 and 1.5 years of age.**

**Table 4.  
Adult burials from Santa Cruz Atizapan (1979 excavation season).**

No.	Approx. Age	Sex	Observations
1	21-23 yrs.	F	Height: 160 cm., Internal bluish color in teeth, numerous collapsed vertebrae
1A	21-35 yrs.	NI	Incomplete, poor preservation
2	38-42 yrs.	F	Height: 157 cm., osteoarthritis in vertebrae
3	36-40 yrs.	F	Height: 144 cm., exposed to fire

### **Chemical analysis of residues in ceramics**

A total of 412 ceramic sherds were analyzed in order to detect evidence for possible uses. Rim, body and base sherds representing 24 forms associated with 6 different pastes were studied. The following analyses were undertaken by María del Carmen Pérez Ortíz de Montellano in the Laboratorio de Arqueometría, Instituto de Investigaciones Antropológicas, UNAM: pH, carbonates ( $\text{CO}_3$ ), phosphates ( $\text{PO}_4$ ), albumin (protein) and fatty acids. Qualitative analyses of the residues were undertaken using techniques traditionally applied to floors in archaeological excavations in order to detect evidence for the use of vessels in food preparation and consumption, storage, etc.

Sherds were ground and qualitative analyses applied as described by Barba (1990) and Sánchez and Cañabate (1998). The following paste types were included:

- Pasta fina (65 sherds)
- Inclusiones café (88 sherds)
- Arenosa (56 sherds)
- Intermedia (66 sherds)
- Pasta con feldespatos (65 sherds)
- Pasta con mica (65 sherds)

Phosphates ( $\text{PO}_4$ ). Phosphorous is concentrated in rim and body when a vessel is used for cooking foods because as boiling liquids evaporate, condensation takes place and organic substances are deposited immediately above the surface of the liquid. On the other hand, if a vessel is used for liquid storage, phosphorous will accumulate in the bottom. If the phosphorous content is due to contamination by the surrounding matrix (of the deposit), it would be concentrated more or less evenly throughout the vessel. (Sánchez and Cañabate 1998:91-3).

Calcium carbonate ( $\text{CO}_3$ ) reflects the addition of ash to the content of a vessel to counteract the effect of hard water (Rodríguez and García 1989) and the elaboration of *nixtamal* (Bressani, Paz and Scrimshaw 1958).

Hydrogen potential (pH) reflects the application of heat in cooking and indicates the degree to which a vessel was subjected to direct heat (Barba, Rodríguez and Cordoba 1991:25).

Fatty acids (lipids) are deposited in the clay matrix of ceramic vessels and are normally associated with food preparation in cooking areas as well as ritual activities where substances such as resins are employed in offerings. In rims and bodies their presence indicates boiling liquids containing either animal or vegetal fats that are deposited on the contact surface. Fats are stable over the long term as well as being heat-resistant (Sánchez and Cañabate 1998:109).

Protein. In archaeological floors, the presence of protein residues suggests activities associated with food preparation areas, including butchering, as well as ritual activities such as sacrificial offerings. In ceramic vessels such residues can be indicators of food preparation and, particularly, meat consumption as well as rituals in which blood is involved. Protein is unstable when exposed to high temperatures, however, and tends to diminish over time.

The analysis of residues in ceramic vessels from the 1997 field season is summarized in [Appendix 1](#). However, the analysis of the spatial distribution of these sherds in association with specific features and other arqueological materials has yet to be completed. Statistical summaries with respect to the average concentrations of each residue in the pastes described previously are provided. However, a meaningful interpretation of these data will be possible only when a more detailed statistical analysis based on forms and related to spatial associations is undertaken.

## **Analysis of residues in floors**

Pablo Bautista undertook the analysis of the chemical residues from four floors of the area excavated during 1997 in the Laboratorio de Arqueometría, Instituto de Investigaciones Antropológicas, UNAM. The preliminary results of the qualitative analyses are presented in [Appendix 2](#), together with statistical summaries for each floor.

## **Faunal remains identified from Santa Cruz Atizapan**

María de la Paz Gil Nuncio carried out the identification of faunal materials recovered from the 1997 excavations in the Laboratorio de Paleozoología, Instituto de Investigaciones Antropológicas, UNAM. These materials together with their proveniences are summarized in [Appendix 3](#). In general terms, the presence of *Odocoileus virginianus* and diverse fowl ([Figure 9](#), shown below), particularly *Anas* spp., indicate the exploitation of woodland fauna together with local lacustrine resources such as migratory waterfowl. The diversity of fowl is notable even though frequencies are relatively low. Poor preservation of many specimens limited the possibility of obtaining more precise identifications in many cases, but the frequency of bones pertaining to medium and large mammals suggest greater diversity. On the other hand, the apparent absence of significant quantities of lacustrine resources such as fish and amphibians is surprising although inadequate recovery techniques cannot be ruled out ([Figure 10](#), [Figure 11](#), and [Figure 12](#), shown below). Dogs (*Canis familiaris*) are frequent as well.



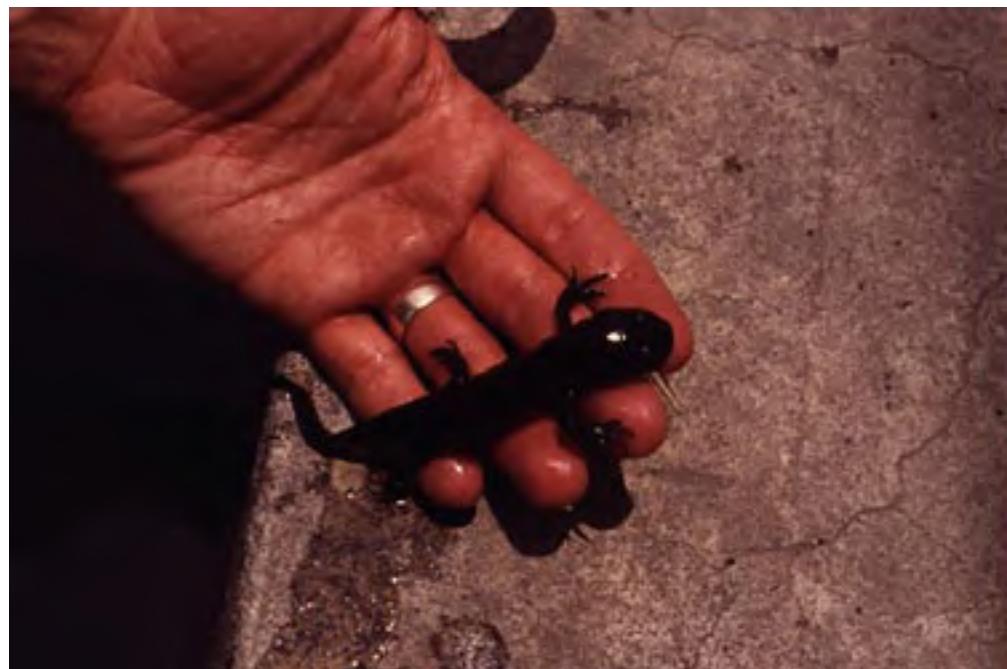
**Figure 9. Cuachililla joven (*Larus atricilla*, gaviota).** Seasonal waterfowl characteristic of the Santa Cruz Atizapan marsh.



**Figure 10. Prietito (*Lermichthys multiradiatus*).**



**Figure 11. Frog (*Hyla eximia*).**



**Figure 12. Ajolote (*Ambystoma* sp.).**

Once again the reconsideration of these materials in association with features and other archaeological materials as well as the evidence for chemical residues will provide a more meaningful interpretation of the possible uses of faunal resources by the prehispanic population of Santa Cruz Atizapan.

## Conclusion

The time required for completing the kinds of analyses that are described in this preliminary report precludes a comprehensive study of these materials over the short term. More detailed studies and interpretations based on the analyses described here are currently underway and form the basis for several undergraduate and Master's level theses in Archaeology and Biology. A study of regional vegetation through time based on pollen analysis is not yet available, and diatom studies were only recently initiated. Hypotheses related to possible climatic fluctuations depend upon the results of these investigations and, consequently, the possibility of providing a more detailed discussion of environmental conditions is limited at this time. Furthermore, the macrobotanical and pollen analyses carried out on samples obtained from the excavated zone appear to reflect the degree of human impact in the region and, probably, modern influences rather than prehispanic conditions or activities, although fluctuation of the water table at the site may have affected preservation of organic materials as well.

An integrated interpretation, based also on complementary materials obtained during the 1999-2000 field season, will permit the development of a model of lacustrine adaptation in the Valley of Toluca during the Epiclassic period which will contribute in turn to the characterization of prehispanic lacustrine lifeways in the central Mexican highlands in general. The detailed ethnographic study of lacustrine adaptation undertaken by Yoko Sugiura (1998) provides an important basis for the development of hypotheses with respect to particular manifestations of prehispanic traditions. In addition, the overwhelming evidence for a largely civic-ceremonial rather than domestic function of Mound 20 at Santa Cruz Atizapan offers a unique opportunity to study this aspect of Epiclassic populations in the region.

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**Appendix 1.**  
**Chemical residues in ceramic vessels, Santa Cruz Atizapan, Estado de México.**

PASTA CON MICA																
BAG	C-L	C-#	LAYER	LEVEL	FORM	PART	MUE	CO <sub>3</sub>	P.H.	PO <sub>4</sub>	ALB	A.G.	COLOR	NOMBRE COLOR		
2316	I	7	1	2	C. CURVO CONVERGENTE C/DEC.	BORDE	1	1	7.2	2	8	1	10YR5/3	BROWN		
2316	I	7	1	2	C. CURVO CONVERGENTE C/DEC.	CUERPO	2	1	7.2	1	8	1	7.5YR5/4	BROWN		
2316	I	7	1	2	C. CURVO CONVERGENTE C/DEC.	FONDO	3	0	7.42	2	8	1	7.5YR5/4	BROWN		
2305	I	8	2	1	C. CURVO CONVERGENTE S/DEC.	BORDE	4	0	7.76	4	7.5	0	10YR5/4	YELLOWISH BROWN		
2305	I	8	2	1	C. CURVO CONVERGENTE S/DEC.	CUERPO	5	1	7.4	2	7.5	1	10YR5/4	YELLOWISH BROWN		
2305	I	8	2	1	C. CURVO CONVERGENTE S/DEC.	FONDO	6	1	7.2	2	7.5	0	10YR5/4	YELLOWISH BROWN		
1295	F	4	2	1	CAZUELA	BORDE	7	1	7.62	4	7.5	0	10YR5/4	YELLOWISH BROWN		
2262	F	8	1	1	CAZUELA	BORDE	8	1	7.68	2	7.5	1	10YR4/4	DARK YELLOWISH BROWN		
3287	F	5			CAZUELA	CUERPO	9	0	7.99	4	7	0	7.5YR5/6	STRONG BROWN		
2172	I	9	2	1	CAZUELA	CUERPO	10	1	7.6	3	7.5	0	7.5YR5/4	BROWN		
3134	C	7	FLOOR 1 gravilla		CAZUELA	FONDO	11	1	8	4	7	1	10YR5/4	YELLOWISH BROWN		
2138	H	6	SUP	2	CAZUELA	FONDO	12	1	7.7	2	7	0	7.5YR5/4	BROWN		
2250	H	8	1	1	C. SEMIESFERICO S/DECORACION	BORDE	13	0	7.36	3	7.5	0	2.5Y4/2	DARK GRAYISH BROWN		
2250	H	8	1	1	C. SEMIESFERICO S/DECORACION	CUERPO	14	0	7.54	3	7.5	0	10YR5/3	BROWN		
2250	H	8		1	C. SEMIESFERICO S/DECORACION	FONDO	15	0	7.69	3	8	0	10YR6/4	LIGHT YELLOWISH BROWN		
2250	H	8	1	1	C. SEMIESFERICO C/DECORACION	BORDE	16	0	7.73	3	7.5	0	2.5Y5/4	LIGHT OLIVE BROWN		

2250	H	8	1	1	C. SEMIESFERICO C/DECORACION	CUERPO	17	0	8.06	4	7.5	0	2.5Y5/4	LIGHT OLIVE BROWN
2250	H	8	1	1	C. SEMIESFERICO C/DECORACION	FONDO	18	0	8.13	3	7.5	1	2.5Y5/4	LIGHT OLIVE BROWN
3265	G	7			C. SEMIESFERICO S/DECORACION	FONDO	19	0	7.86	4	8	0	10YR5/3	BROWN
2172	I	9	2	1	C. SEMIESFERICO S/DECORACION	FONDO	20	0	7.93	3	7.5	0	10YR4/4	DARK YELLOWISH BROWN
3151	E	7	2	2	C. DIVERGENTE C/DECORACION	BORDE	21	1	7.94	3	7	1	2.5Y5/4	LIGHT OLIVE BROWN
3151	E	7	2	2	C. DIVERGENTE C/DECORACION	CUERPO	22	0	8.08	4	7.54	1	10YR5/4	YELLOWISH BROWN
3151	E	7	2	2	C. DIVERGENTE C/DECORACION	FONDO	23	1	7.93	4	7.5	1	7.5YR5/4	BROWN
4295	G	11	4	4	C. DIVERGENTE C/DECORACION	BORDE	24	2	8.22	4	7.5	0	10YR5/3	BROWN
4295	G	11	4	4	C. DIVERGENTE C/DECORACION	CUERPO	25	0	8.16	5	7.5	0	10YR5/3	BROWN
4295	G	11	4	4	C. DIVERGENTE C/DECORACION	FONDO	26	1	8.16	3	7.5	0	10YR5/3	BROWN
2250	H	8	1	1	SAHUMADOR C/DECORACION	BORDE	27	0	7.94	5	8	0	10YR5/4	YELLOWISH BROWN
2250	H	8	1	1	SAHUMADOR C/DECORACION	BORDE	28	2	7.86	3	8	1	10YR6/3	PALE BROWN
2350	H	8	2	1	SAHUMADOR S/DECORACION	BORDE	29	0	8.17	2	7.5	0	10YR4/2	DARK GRAYISH BROWN
3301	D	9			SAHUMADOR S/DECORACION	BORDE	30	0	8.39	3	7.5	0	10YR5/3	BROWN
3258	F	7			SAHUMADOR C/DECORACION	CUERPO	31	0	7.93	4	7.5	0	10YR6/4	LIGHT YELLOWISH BROWN
3258	F	7			SAHUMADOR C/DECORACION	FONDO	32	1	7.36	3	8	0	10YR6/4	LIGHT YELLOWISH BROWN
3258	F	7			SAHUMADOR S/DECORACION	CUERPO	33	0	7.48	4	8	0	10YR5/3	BROWN
3258	F	7			SAHUMADOR S/DECORACION	FONDO	34	0	7.85	3	7	0	10YR6/4	LIGHT YELLOWISH BROWN
2332	G	9, 10	BAS		CAZUELA C/DECORACION	BORDE	35	1	7.33	6	8	0	10YR5/4	YELLOWISH BROWN
2332	G	9, 10	BAS		CAZUELA C/DECORACION	CUERPO	36	1	7.47	4	7	0	10YR5/4	YELLOWISH BROWN

2332	G	9, 10	BAS		CAZUELA C/DECORACION	FONDO	37	1	7.57	5	7.5	0	10YR5/4	YELLOWISH BROWN
2157	H	5	2		VASO SIN DECORACION	BORDE	38	0	7.59	4	7.5	0	10YR5/3	BROWN
2157	H	5	2		VASO SIN DECORACION	CUERPO	39	0	7.72	3	7.5	1	10YR5/3	BROWN
3306	D	9			VASO SIN DECORACION	BORDE	40	0	7.86	4	7.5	0	10YR6/4	LIGHT YELLOWISH BROWN
3306	D	9			VASO SIN DECORACION	CUERPO	41	0	7.31	4	7.5	0	10YR5/3	BROWN
2229	G	10	1	1	OLLA SIN DECORACION	BORDE	42	2	7.71	4	7.5	0	2.5Y4/2	DARK GRAYISH BROWN
2088	F	10	SUP	2	OLLA SIN DECORACION	BORDE	43	0	7.53	2	7.5	0	10YR5/4	YELLOWISH BROWN
2102	G	5	SUP	2	OLLA SIN DECORACION	BORDE	44	0	7.87	3	7.5	0	10YR5/4	YELLOWISH BROWN
2160	I	8	2		OLLA SIN DECORACION	BORDE	45	0	7.53	4	8	0	7.5YR5/4	BROWN
2233	G	9	1	1	OLLA SIN DECORACION	CUERPO	46	2	7.75	4	7.5	0	10YR5/3	BROWN
2157	H	5	2		OLLA SIN DECORACION	CUERPO	47	1	8.09	4	7	1	7.5YR5/6	STRONG BROWN
2088	F	10	SUP	2	OLLA SIN DECORACION	FONDO	48	0	7.97	4	8	1	10YR5/4	YELLOWISH BROWN
3035	E	8	1		OLLA SIN DECORACION	FONDO	49	0	8.16	5	7.5	0	7.5YR4/6	STRONG BROWN
3271	G	5			COMAL	BORDE	50	1	7.85	5	7.5	0	10YR5/4	YELLOWISH BROWN
3271	G	5			COMAL	CUERPO	51	1	7.89	4	8	0	10YR5/4	YELLOWISH BROWN
3271	G	5			COMAL	FONDO	52	1	7.89	6	7.5	0	10YR5/4	YELLOWISH BROWN
2272	F	10	1	1	COMAL	BORDE	53	2	7.89	4	7.5	1	7.5YR4/4	BROWN
2272	F	10	1	1	COMAL	CUERPO	54	2	7.89	4	7.5	1	7.5YR4/6	STRONG BROWN
2272	F	10	1	1	COMAL	FONDO	55	1	7.46	4	8	1	7.5YR4/6	STRONG BROWN
2332	G	9, 10	BAS		COMAL	BORDE	56	0	7.89	6	7.5	0	10YR5/3	BROWN
2332	G	9, 10	BAS		COMAL	CUERPO	57	0	7.53	5	8	0	10YR5/3	BROWN
4040					CAZUELA- COMAL	BORDE	58	3	8.06	4	8	1	10YR5/4	YELLOWISH BROWN
3054	D	7	SUP		CAZUELA- COMAL	BORDE	59	0	8.36	4	7.5	0	10YR6/4	LIGHT YELLOWISH

															BROWN
4299	G	13		4	MANGO DE CUCHARON S/DEC.	BORDE	60	0	7.98	6	7.5	0	10YR6/4	LIGHT YELLOWISH BROWN	
4299	G	13		4	MANGO DE CUCHARON S/DEC.	CUERPO	61	0	8.31	6	7	0	10YR6/4	LIGHT YELLOWISH BROWN	
4299	G	13		4	MANGO DE CUCHARON S/DEC.	FONDO	62	0	8.09	5	7.5	0	10YR6/4	LIGHT YELLOWISH BROWN	
3152	E	7		2	MANGO DE CUCHARON S/DEC.	BORDE	63	0	8.11	5	7	0	10YR6/4	LIGHT YELLOWISH BROWN	
3152	E	7		2	MANGO DE CUCHARON S/DEC.	CUERPO	64	0	8.25	5	7	0	10YR6/4	LIGHT YELLOWISH BROWN	
3152	E	7		2	MANGO DE CUCHARON S/DEC.	FONDO	65	0	8.06	6	7	0	10YR6/4	LIGHT YELLOWISH BROWN	
2316	I	7	1	2	CUCHARON S/ DECORACION	BORDE	66	0	7.59	4	7.5	0	10YR6/4	LIGHT YELLOWISH BROWN	
2316	I	7	1	2	CUCHARON S/ DECORACION	CUERPO	67	0	7.6	3	8	0	10YR6/4	LIGHT YELLOWISH BROWN	
2316	I	7	1	2	CUCHARON S/ DECORACION	FONDO	68	0	7.45	5	7.5	0	10YR6/4	LIGHT YELLOWISH BROWN	
3151	E	7		2	CUCHARON S/ DECORACION	BORDE	69	0	7.47	5	7.5	0	10YR6/3	PALE BROWN	
3151	E	7		2	CUCHARON S/ DECORACION	CUERPO	70	0	7.78	6	7	0	2.5Y5/2	GRAYISH BROWN	
3151	E	7		2	CUCHARON S/ DECORACION	FONDO	71	0	7.62	6	7.5	0	2.5Y5/2	GRAYISH BROWN	
					MINIMO		0	7.2	1	7	0				
					MAXIMO		3	8.39	6	8	1				
					PROMEDIO		0.50	7.78	3.88	7.53	0.25				
					DESV.EST AND.		0.71	0.29	1.18	0.31	0.43				
					PASTA CON INCLUSIONES CAFES										
BAG	C-L	C-#	LAYER	LEVEL	FORM	PART	MUE	CO <sub>3</sub>	P.H.	PO <sub>4</sub>	ALB	A.G.	COLOR	NOMBRE COLOR	
2268	F	9	1	2	C. SEMIESFERICO C/DECORACION	BORDE	1	0	7.98	3	7.5	1	10YR6/4	LIGHT YELLOWISH BROWN	

2268	F	9	1	2	C. SEMIESFERICO C/DECORACION	CUERPO	2	0	8.02	5	8	0	10YR6/4	LIGHT YELLOWISH BROWN
2268	F	9	1	2	C. SEMIESFERICO C/DECORACION	FONDO	3	0	8.06	3	8	0	10YR6/4	LIGHT YELLOWISH BROWN
3257	F	7			C. SEMIESFERICO C/DECORACION	BORDE	4	0	8.1	3	8.5	0	10YR6/3	PALE BROWN
3257	F	7			C. SEMIESFERICO C/DECORACION	CUERPO	5	0	8.02	4	8	0	10YR6/3	PALE BROWN
3257	F	7			C. SEMIESFERICO C/DECORACION	FONDO	6	0	8.07	3	7.5	0	10YR6/3	PALE BROWN
3092	C	4	SUP Y GRAVILLA		COMAL	CUERPO	7	0	8.33	3	7.5	0	7.5YR6/6	REDDISH YELLOW
3092	C	4	SUP Y GRAVILLA		COMAL	FONDO	8	0	8.42	3	8	2	7.5YR6/6	REDDISH YELLOW
4253					COMAL	FONDO	9	2	8.33	3	7.5	0	2.5YR6/3	LIGHT YELLOWISH BROWN
2138	H	6	SUP	2	COMAL	FONDO	10	0	8.06	6	8	0	10YR6/4	LIGHT YELLOWISH BROWN
2111	I	6	SUP	2	COMAL	FONDO	11	0	7.93	3	8.5	1	7.5YR5/6	STRONG BROWN
3301	D	9			PLATO C/DECORACION	BORDE	12	0	8.23	5	8	0	10YR6/4	LIGHT YELLOWISH BROWN
3301	D	9			PLATO C/DECORACION	CUERPO	13	0	8.23	6	8.5	1	2.5YR7/4	PALE YELLOW
3107	E	4	gravilla/lajas	2	PLATO S/DECORACION	BORDE	14	0	8.2	6	8	1	10YR7/3	VERY PALE BROWN
3107	E	4	gravilla/lajas	2	PLATO S/DECORACION	CUERPO	15	0	8.33	5	8.5	1	10YR6/4	LIGHT YELLOWISH BROWN
1729	D	2	2		CAZUELA	CUERPO	16	0	7.94	3	8	1	7.5YR6/6	REDDISH YELLOW
1405	D	4	3	2	CAZUELA	CUERPO	17	0	8.48	5	8	1	10YR6/3	PALE BROWN
2268	F	9	1	2	CAZUELA	BORDE	18	0	8.68	5	8.5	0	10YR6/4	LIGHT YELLOWISH BROWN
3024	E	7	SUP		CAZUELA	BORDE	19	0	7.66	2	8.5	0	10YR6/4	LIGHT YELLOWISH BROWN
2272	F	10	1	1	C. CURVO CONVERGENTE C/DECORACION	BORDE	20	0	8.44	5	8	2	10YR6/4	LIGHT YELLOWISH BROWN

2272	F	10	1		1	C. CURVO CONVERGENTE C/DECORACION	CUERPO	21	1	8.28	6	8	0	2.5Y6/4	LIGHT YELLOWISH BROWN
2272	F	10	1		1	C. CURVO CONVERGENTE C/DECORACION	FONDO	22	0	8.2	3	8	2	2.5Y6/4	LIGHT YELLOWISH BROWN
2299	F	12	3		2	C. CURVO CONVERGENTE C/DECORACION	BORDE	23	0	8.29	5	7.5	0	2.5Y6/3	LIGHT YELLOWISH BROWN
2299	F	12	3		2	C. CURVO CONVERGENTE C/DECORACION	CUERPO	24	0	8.5	6	8.5	0	10YR6/3	PALE BROWN
2299	F	12	3		2	C. CURVO CONVERGENTE C/DECORACION	FONDO	25	0	8.48	3	8	0	2.5Y5/3	LIGHT OLIVE BROWN
2160	I	8	2			C. CURVO RECTO S/DECORACION	BORDE	26	1	7.8	4	8.5	0	7.5YR6/6	REDDISH YELLOW
2160	I	8	2			C. CURVO RECTO S/DECORACION	CUERPO	27	2	7.82	5	8	0	10YR6/6	BROWNISH YELLOW
2160	I	8	2			C. CURVO RECTO S/DECORACION	FONDO	28	0	7.8	6	8.5	0	10YR7/4	VERY PALE BROWN
1298	G	3	3		1	C. CURVO RECTO S/DECORACION	BORDE	29	1	7.5	5	9	0	10YR6/3	PALE BROWN
1298	G	3	3		1	C. CURVO RECTO S/DECORACION	CUERPO	30	1	7.66	3	8.5	0	10YR6/3	PALE BROWN
3261	G	6	3			VASO CON DECORACION	BORDE	31	0	8.11	3	7.5	1	10YR7/3	VERY PALE BROWN
3261	G	6	3			VASO CON DECORACION	CUERPO	32	0	8.2	5	7.5	0	10YR6/4	LIGHT YELLOWISH BROWN
3261	G	6	3			VASO CON DECORACION	FONDO	33	0	8.25	5	7.5	0	10YR6/4	LIGHT YELLOWISH BROWN
4334	G	13			4	VASO CON DECORACION	BORDE	34	0	8.43	6	8	0	2.5Y6/3	LIGHT YELLOWISH BROWN
4334	G	13			4	VASO CON DECORACION	CUERPO	35	0	8.45	5	8	0	2.5Y6/3	LIGHT YELLOWISH BROWN
4334	G	13			4	VASO CON DECORACION	FONDO	36	0	8.33	6	8	0	10YR7/4	VERY PALE BROWN
2250	H	8	1		1	VASO CON DECORACION	BORDE	37	0	8.22	3	8	0	2.5Y6/3	LIGHT YELLOWISH BROWN
2250	H	8	1		1	VASO CON	CUERPO	38	0	8.24	5	8	0	2.5Y5/2	GRAYISH

					DECORACION										BROWN
2258	G	8	1	2	VASO CON DECORACION	BORDE	39	0	8.07	4	8	0	10YR7/3	VERY PALE BROWN	
2258	G	8	1	2	VASO CON DECORACION	CUERPO	40	0	8.2	5	7.5	0	10YR6/3	PALE BROWN	
1098	I	6	SUP		C. DIVERGENTE C/DECORACION	BORDE	41	0	7.5	5	8.5	0	10YR5/4	YELLOWISH BROWN	
1098	I	6	SUP		C. DIVERGENTE C/DECORACION	CUERPO	42	0	7.8	5	8	0	2.5Y5/4	LIGHT OLIVE BROWN	
1098	I	6	SUP		C. DIVERGENTE C/DECORACION	FONDO	43	0	7.8	5	7.5	0	10YR6/3	PALE BROWN	
1285	F	5	1		C. DIVERGENTE C/DECORACION	BORDE	44	0	8.15	6	7.5	0	10YR6/3	PALE BROWN	
1285	F	5	1		C. DIVERGENTE C/DECORACION	CUERPO	45	0	8.11	6	8.5	0	10YR6/4	LIGHT YELLOWISH BROWN	
1285	F	5	1		C. DIVERGENTE C/DECORACION	FONDO	46	1	8.33	5	8.5	1	10YR6/4	LIGHT YELLOWISH BROWN	
1292	H	3	1	2	C. DIVERGENTE S/DECORACION	BORDE	47	0	7.93	3	8.5	0	10YR7/3	VERY PALE BROWN	
1292	H	3	1	2	C. DIVERGENTE S/DECORACION	CUERPO	48	0	7.93	5	8.5	0	10YR6/3	PALE BROWN	
2109	F	6	SUP	2	C. DIVERGENTE S/DECORACION	BORDE	49	0	8.09	4	8	0	10YR6/4	LIGHT YELLOWISH BROWN	
2109	F	6	SUP	2	C. DIVERGENTE S/DECORACION	CUERPO	50	1	8.37	5	8	0	10YR6/4	LIGHT YELLOWISH BROWN	
2320	H	8	2	1	OLLA S/DECORACION	BORDE	51	0	8.33	3	8	0	10YR6/4	LIGHT YELLOWISH BROWN	
2320	H	8	2	1	OLLA S/DECORACION	CUERPO	52	1	8.2	3	8	0	10YR6/6	BROWNISH YELLOW	
2284	F	11	1	1	OLLA S/DECORACION	BORDE	53	0	8.78	4	7.5	0	10YR6/4	LIGHT YELLOWISH BROWN	
2284	F	11	1	1	OLLA S/DECORACION	CUERPO	54	1	8.79	3	7.5	0	10YR5/3	BROWN	
3054	D	7	SUP		OLLA S/DECORACION	CUERPO	55	1	8.82	5	7.5	0	10YR6/4	LIGHT YELLOWISH BROWN	
3129	C	8	1 a 2 gravilla		OLLA S/DECORACION	CUERPO	56	0	8.62	6	7.5	0	10YR6/4	LIGHT YELLOWISH BROWN	
3209	D	3			OLLA COYO S/DECORACION	CUERPO	57	0	8.54	4	8.5	0	10YR5/3	BROWN	

4334	G	13		4	OLLA COYO S/DECORACION	CUERPO	58	0	8.6	5	8	0	10YR5/3	BROWN
2160	I	8	2		OLLA COYO S/DECORACION	FONDO	59	0	8.34	2	7.5	0	10YR6/6	BROWNISH YELLOW
3265	G	7			OLLA COYO S/DECORACION	FONDO	60	0	8.24	3	8	0	10YR5/4	YELLOWISH BROWN
3271	G	5			SAHUMADOR SIN DECORACION	BORDE	61	0	7.63	3	8	0	10YR6/3	PALE BROWN
3271	G	5			SAHUMADOR SIN DECORACION	CUERPO	62	1	8.26	3	8	0	10YR7/4	VERY PALE BROWN
2183	I	9	2	2	SAHUMADOR SIN DECORACION	BORDE	63	0	8.32	4	8.5	1	10YR6/4	LIGHT YELLOWISH BROWN
2183	I	9	2	2	SAHUMADOR SIN DECORACION	CUERPO	64	0	7.75	3	8	0	10YR7/4	VERY PALE BROWN
1281	H	3	1	1	SAHUMADOR SIN DECORACION	BORDE	65	0	8.22	4	8	0	10YR6/3	PALE BROWN
1281	H	3	1	1	SAHUMADOR SIN DECORACION	CUERPO	66	0	8.57	4	7	0	10YR6/3	PALE BROWN
3257	F	7			SAHUMADOR SIN DECORACION	BORDE	67	0	8.37	4	7	1	7.5YR6/6	REDDISH YELLOW
3178	E	6			SAHUMADOR SIN DECORACION	FONDO	68	0	8.38	4	8	0	2.5Y6/3	LIGHT YELLOWISH BROWN
3271	G	5			SAHUMADOR SIN DECORACION	FONDO	69	0	8.37	3	8	0	10YR6/4	LIGHT YELLOWISH BROWN
2284	F	11	1	1	SAHUMADOR CON DECORACION	BORDE	70	0	8.37	4	8	0	10YR7/3	VERY PALE BROWN
2284	F	11	1	1	SAHUMADOR CON DECORACION	CUERPO	71	0	7.91	4	7.5	0	10YR7/4	VERY PALE BROWN
2305	I	8	2	1	SAHUMADOR CON DECORACION	BORDE	72	0	7.61	5	8.5	0	10YR6/3	PALE BROWN
2305	I	8	2	1	SAHUMADOR CON DECORACION	CUERPO	73	0	7.89	4	8	0	10YR6/3	PALE BROWN
2268	F	9	1	2	SAHUMADOR CON DECORACION	CUERPO	74	0	8.25	4	8.5		10YR6/4	LIGHT YELLOWISH BROWN
2118	F	5	SUP	2	SAHUMADOR CON	CUERPO	75	0	8.2	5	8	0	10YR6/4	LIGHT YELLOWISH

					DECORACION										BROWN
2168	I	9	1	2	SAHUMADOR CON DECORACION	CUERPO	76	0	8.09	4	8	0	10YR7/3	VERY PALE BROWN	
2141	H	6	1	1	SAHUMADOR SELLADO	BORDE	77	0	8.25	4	8	1	10YR6/6	BROWNISH YELLOW	
2250	H	8	1	1	SAHUMADOR SELLADO	BORDE	78	0	8.28	5	8	2	7.5YR5/6	STRONG BROWN	
1284	H	3	1	1	SAHUMADOR SELLADO	CUERPO	79	0	8.53	4	8.5	1	10YR6/3	PALE BROWN	
2015	F	13	SUP		SAHUMADOR SELLADO	CUERPO	80	0	9.15	4	8	0	10YR6/4	LIGHT YELLOWISH BROWN	
3149	E	8		2	SAHUMADOR SELLADO	FONDO	81	0	8.37	2	7.5	1	7.5YR7/4	PINK	
1249	F	4		1	SAHUMADOR SELLADO	FONDO	82	0	7.68	4	8	0	10YR6/4	LIGHT YELLOWISH BROWN	
2119	F	5	SUP	2	CUCHARON S/DECORACION	BORDE	83	1	8.03	4	8	0	10YR7/4	VERY PALE BROWN	
2119	F	5	SUP	2	CUCHARON S/DECORACION	CUERPO	84	1	8.47	5	8	0	10YR7/4	VERY PALE BROWN	
2119	F	5	SUP	2	CUCHARON S/DECORACION	FONDO	85	1	8.03	5	8	1	10YR7/4	VERY PALE BROWN	
3080	C	6	gravilla		CUCHARON S/DECORACION	BORDE	86	1	8.25	3	7.5	0	10YR6/3	PALE BROWN	
3080	C	6	gravilla		CUCHARON S/DECORACION	CUERPO	87	0	8.08	5	8	0	10YR6/3	PALE BROWN	
3080	C	6	gravilla		CUCHARON S/DECORACION	FONDO	88	0	8.2	5	8	0	10YR6/3	PALE BROWN	
2258	G	8	1	2	MANGO DE CUCHARON S/DECORACION	CUERPO	89	0	7.86	5	8	1	10YR6/4	LIGHT YELLOWISH BROWN	
2258	G	8	1	2	MANGO DE CUCHARON S/DECORACION	FONDO	90	0	8.31	3	8	0	10YR6/4	LIGHT YELLOWISH BROWN	
2138	H	6	SUP	2	MANGO DE CUCHARON S/DECORACION	BORDE	91	0	8.2	5	8.5	0	10YR7/4	VERY PALE BROWN	
2138	H	6	SUP	2	MANGO DE CUCHARON S/DECORACION	CUERPO	92	0	8.05	2	8.5	0	10YR6/4	LIGHT YELLOWISH BROWN	
2138	H	6	SUP	2	MANGO DE CUCHARON S/DECORACION	FONDO	93	0	8.07	3	8	0	10YR6/4	LIGHT YELLOWISH BROWN	
						MINIMO		0	7.5	2	7	0			
						MAXIMO		2	9.15	6	9	2			

					PROMEDIO		0.19	8.18	4.20	8.00	0.26			
					DESV. ESTAND.		0.44	0.29	1.10	0.37	0.53			
				PASTA ARENOSA										
BAG	C-L	C-#	LAYER	LEVEL	FORM	PART	MUE	CO <sub>3</sub>	P.H.	PO <sub>4</sub>	ALB	A.G.	COLOR	NOMBRE COLOR
2204	J	8	1		C. CURVO CONVERGENTE S/DECORACION	BORDE	1	0	7.78	3	8	0	10YR5/3	BROWN
2204	J	8	1		C. CURVO CONVERGENTE S/DECORACION	CUERPO	2	0	7.95	3	7.5	0	10YR6/4	LIGHT YELLOWISH BROWN
2204	J	8	1		C. CURVO CONVERGENTE S/DECORACION	FONDO	3	0	7.93	5	8	0	2.5Y4/2	DARK GRAYISH BROWN
4334	G	13		4	C. CURVO CONVERGENTE C/DECORACION	BORDE	4	1	8.37	6	7.5	0	2.5Y4/2	DARK GRAYISH BROWN
4334	G	13		4	C. CURVO CONVERGENTE C/DECORACION	CUERPO	5	0	8.9	5	8	1	10YR4/1	DARK GRAY
4334	G	13		4	C. CURVO CONVERGENTE C/DECORACION	FONDO	6	0	8.71	5	7.5	0	5Y4/1	DARK GRAY
3287	F	5			C. CURVO CONVERGENTE C/DECORACION	BORDE	7	0	8.53	3	7.5	0	2.5Y6/3	LIGHT YELLOWISH BROWN
3287	F	5			C. CURVO CONVERGENTE C/DECORACION	CUERPO	8	0	8.56	4	8	0	2.5Y5/2	GRAYISH BROWN
3287	F	5			C. CURVO CONVERGENTE C/DECORACION	FONDO	9	0	8.41	3	7.5	1	10YR6/3	PALE BROWN
2305	I	8	2	1	C. DIVERGENTE S/DECORACION	CUERPO	10	0	7.6	3	8	0	2.5Y5/2	GRAYISH BROWN
2305	I	8	2	1	C. DIVERGENTE S/DECORACION	FONDO	11	0	7.54	3	8	0	2.5Y5/2	GRAYISH BROWN
2320	H	8	2	1	C. DIVERGENTE C/DECORACION	BORDE	12	0	7.8	3	7.5	0	2.5Y5/2	GRAYISH BROWN
2320	H	8	2	1	C. DIVERGENTE C/DECORACION	CUERPO	13	0	7.58	3	8.5	0	2.5Y5/2	GRAYISH BROWN
2320	H	8	2	1	C. DIVERGENTE C/DECORACION	FONDO	14	0	7.74	4	8	0	2.5Y5/2	GRAYISH BROWN
1267	F	2	2		C. DIVERGENTE C/DECORACION	BORDE	15	0	7.37	3	7.5	0	10YR4/3	BROWN
1267	F	2	2		C. DIVERGENTE C/DECORACION	CUERPO	16	0	7	3	8	0	10YR5/3	BROWN

1267	F	2	2		C. DIVERGENTE C/DECORACION	FONDO	17	0	7.39	3	7.5	0	10YR5/3	BROWN
4197					C. SEMIESFERICO C/DECORACION	BORDE	18	0	8.76	4	7.5	0	2.5Y6/3	LIGHT YELLOWISH BROWN
4197					C. SEMIESFERICO C/DECORACION	CUERPO	19	0	9.15	4	8	0	2.5Y6/3	LIGHT YELLOWISH BROWN
4197					C. SEMIESFERICO C/DECORACION	FONDO	20	0	8.94	4	8	0	2.5Y6/3	LIGHT YELLOWISH BROWN
3276	F	6			C. SEMIESFERICO C/DECORACION	BORDE	21	0	8.43	2	7	0	5YR4/4	REDDISH BROWN
3276	F	6			C. SEMIESFERICO C/DECORACION	CUERPO	22	0	8.53	3	8	0	5YR5/4	REDDISH BROWN
3276	F	6			C. SEMIESFERICO C/DECORACION	FONDO	23	0	8.33	3	8	0	7.5YR6/6	REDDISH YELLOW
4138	J	15		1	PLATO S/DECORACION	BORDE	24	0	8.17	3	8.5	1	10YR6/3	PALE BROWN
4138	J	15		1	PLATO S/DECORACION	CUERPO	25	0	8.32	3	8.5	1	10YR6/3	PALE BROWN
4138	J	15		1	PLATO S/DECORACION	FONDO	26	0	8.3	4	8	0	10YR6/2	LIGHT BROWNISH GRAY
3270	G	5			PLATO S/DECORACION	BORDE	27	0	8.37	3	8.5	1	10YR6/3	PALE BROWN
3270	G	5			PLATO S/DECORACION	CUERPO	28	0	8.25	3	8.5	0	10YR6/3	PALE BROWN
3270	G	5			PLATO S/DECORACION	FONDO	29	1	8.37	3	7.5	0	10YR6/2	LIGHT BROWNISH GRAY
4138	J	15		1	PLATO S/DECORACION	BORDE	30	0	8.07	2	8	0	10YR6/2	LIGHT BROWNISH GRAY
4138	J	15		1	PLATO S/DECORACION	CUERPO	31	1	7.71	3	8	2	2.5Y6/2	LIGHT BROWNISH GRAY
4138	J	15		1	PLATO S/DECORACION	FONDO	32	1	7.98	4	8.5	2	2.5Y6/2	LIGHT BROWNISH GRAY
1400	D	3	3	2	VASO C/DECORACION	BORDE	33	0	8.56	3	7	0	10YR6/2	LIGHT BROWNISH GRAY
1400	D	3	3	2	VASO C/DECORACION	CUERPO	34	0	8.53	3	8	0	10YR7/2	LIGHT GRAY
2284	F	11	1	1	VASO C/DECORACION	BORDE	35	0	8.75	4	7.5	0	10YR5/2	GRAYISH BROWN

2284	F	11	1	1	VASO C/DECORACION	CUERPO	36	0	8.58	3	7.5	0	2.5Y5/2	GRAYISH BROWN
3151	E	7		2	OLLA S/DECORACION	BORDE	37	0	8.42	4	7	0	2.5Y6/2	LIGHT BROWNISH GRAY
3370	D	5			OLLA S/DECORACION	BORDE	38	0	8.73	3	7.5	0	10YR6/4	LIGHT YELLOWISH BROWN
4171	G	15, 16	LIMP		OLLA S/DECORACION	CUERPO	39	0	8.05	3	8.5	1	10YR6/4	LIGHT YELLOWISH BROWN
1250	G	4	2		OLLA S/DECORACION	CUERPO	40	0	7.99	4	7.5	0	10YR6/4	LIGHT YELLOWISH BROWN
4298	F	13		4	INCENSARIO C/DECORACION	BORDE	41	0	7.19	3	8.5	1	10YR7/3	VERY PALE BROWN
4298	F	13		4	INCENSARIO C/DECORACION	CUERPO	42	0	7.7	3	8	0	10YR6/3	PALE BROWN
4298	F	13		4	INCENSARIO C/DECORACION	FONDO	43	0	7.77	5	7.5	0	10YR6/2	LIGHT BROWNISH GRAY
4312	G	12		4	INCENSARIO C/DECORACION	BORDE	44	0	8.29	5	7.5	1	2.5Y6/3	LIGHT YELLOWISH BROWN
4312	G	12		4	INCENSARIO C/DECORACION	CUERPO	45	0	8.08	4	8	0	2.5Y6/3	LIGHT YELLOWISH BROWN
4312	G	12		4	INCENSARIO C/DECORACION	FONDO	46	1	8.37	4	7.5	0	2.5Y6/3	LIGHT YELLOWISH BROWN
2149					INCENSARIO C/DECORACION	FONDO	47	0	7.62	4	7.5	1	10YR6/4	LIGHT YELLOWISH BROWN
2272	F	10	1	1	INCENSARIO C/DECORACION	FONDO	48	1	7.91	3	8	0	10YR7/4	VERY PALE BROWN
1281	H	3	1	1	INCENSARIO S/DECORACION	BORDE	49	0	7.67	4	7.5	0	10YR6/3	PALE BROWN
1281	H	3	1	1	INCENSARIO S/DECORACION	CUERPO	50	0	7.58	3	7.5	0	10YR6/3	PALE BROWN
1098	I	6	SUP		INCENSARIO S/DECORACION	BORDE	51	0	7.58	5	8	1	10YR5/3	BROWN
1098	I	6	SUP		INCENSARIO S/DECORACION	CUERPO	52	0	7.78	5	7.5	1	10YR5/4	YELLOWISH BROWN
3270	G	5			INCENSARIO SELLADO MODELADO	BORDE	53	0	7.9	3	8	0	7.5YR6/6	REDDISH YELLOW
3270	G	5			INCENSARIO SELLADO MODELADO	CUERPO	54	1	7.92	4	8	0	7.5YR6/4	LIGHT BROWN

4073					INCENSARIO SELLADO MODELADO	BORDE	55	0	8.37	3	8	0	10YR5/2	GRAYISH BROWN
4073					INCENSARIO SELLADO MODELADO	CUERPO	56	0	8.17	4	8.5	0	10YR6/3	PALE BROWN
					MINIMO		0	7	2	7	0			
					MAXIMO		1	9.15	6	8.5	2			
					PROMEDIO		0.12	8.11	3.55	7.83	0.25			
					DES. ESTAND.		0.33	0.46	0.82	0.40	0.51			
					<b>PASTA FINA</b>									
BAG	C-L	C-#	LAYER	LEVEL	FORM	PART	MUE	CO <sub>3</sub>	P.H.	PO <sub>4</sub>	ALB	A.G.	COLOR	NOMBRE COLOR
2194	H	10	1	1	C. DIVERGENTE S/DECORACION	BORDE	1	0	8.04	5	8	0	2.5YR6/4	LIGHT REDDISH BROWN
2194	H	10	1	1	C. DIVERGENTE S/DECORACION	CUERPO	2	0	8.11	5	7.5	0	5YR5/3	REDDISH BROWN
2194	H	10	1	1	C. DIVERGENTE S/DECORACION	FONDO	3	0	7.97	5	7.5	0	7.5YR5/3	BROWN
3306	D	9			C. DIVERGENTE S/DECORACION	BORDE	4	0	8.31	6	8.5	0	2.5Y5/2	GRAYISH BROWN
3306	D	9			C. DIVERGENTE S/DECORACION	CUERPO	5	0	8.61	6	8	0	5Y4/1	DARK GRAY
3027	E	7	Gravilla		C. DIVERGENTE C/DECORACION	BORDE	6	0	8.42	2	8.5	0	10YR6/4	LIGHT YELLOWISH BROWN
3027	E	7	Gravilla		C. DIVERGENTE C/DECORACION	CUERPO	7	0	8.46	1	8.5	0	10YR5/4	YELLOWISH BROWN
2033					C. DIVERGENTE C/DECORACION	BORDE	8	0	7.19	3	8	0	10YR6/2	LIGHT BROWNISH GRAY
2033					C. DIVERGENTE C/DECORACION	CUERPO	9	1	7.77	3	8	0	10YR6/2	LIGHT BROWNISH GRAY
2250	H	8	1	1	C. DIVERGENTE C/DECORACION	CUERPO	10	0	8.04	6	8	0	10YR5/3	BROWN
2250	H	8	1	1	C. DIVERGENTE C/DECORACION	FONDO	11	0	8.01	5	8.5	0	10YR5/3	BROWN
2276	G	11	1	3	C. CURVO CONVERGENTE S/DECORACION	BORDE	12	1	8.18	3	8	0	10YR6/3	PALE BROWN
2276	G	11	1	3	C. CURVO CONVERGENTE S/DECORACION	CUERPO	13	0	8.36	3	8	0	2.5Y6/2	LIGHT BROWNISH GRAY

2276	G	11	1	3	C. CURVO CONVERGENTE S/DECORACION	FONDO	14	0	8.37	5	7	0	2.5Y6/2	LIGHT BROWNISH GRAY
3301	D	9			C. CURVO CONVERGENTE S/DECORACION	BORDE	15	0	8.69	2	8.5	0	5YR5/6	YELLOWISH RED
3301	D	9			C. CURVO CONVERGENTE S/DECORACION	CUERPO	16	0	8.59	3	8	0	5YR5/4	REDDISH BROWN
1090	I	4	SUP B		C. CURVO CONVERGENTE S/DECORACION	BORDE	17	1	7.67	3	8	1	7.5YR4/3	BROWN
1090	I	4	SUP B		C. CURVO CONVERGENTE S/DECORACION	CUERPO	18	0	7.5	6	8.5	0	10YR3/2	VERY DARK GRAYISH BROWN
3276	F	6			C. CURVO CONVERGENTE S/DECORACION	BORDE	19	0	8.18	3	8	0	2.5Y5/2	GRAYISH BROWN
3276	F	6			C. CURVO CONVERGENTE S/DECORACION	CUERPO	20	0	8.37	5	8	0	2.5Y5/2	GRAYISH BROWN
2316	I	7	1	2	C. CURVO CONVERGENTE C/DECORACION	BORDE	21	0	7.84	5	8.5	0	2.5Y5/2	GRAYISH BROWN
2316	I	7	1	2	C. CURVO CONVERGENTE C/DECORACION	CUERPO	22	1	7.84	5	8.5	0	5Y5/1	GRAY
2316	I	7	1	2	C. CURVO CONVERGENTE C/DECORACION	FONDO	23	0	7.47	5	9	0	5Y5/1	GRAY
3160	E	6	piso2		C. CURVO CONVERGENTE C/DECORACION	BORDE	24	0	8.45	5	7	1	2.5Y5/2	GRAYISH BROWN
3160	E	6	piso2		C. CURVO CONVERGENTE C/DECORACION	CUERPO	25	0	8.64	3	7	0	2.5Y5/2	GRAYISH BROWN
2194	H	10	1	1	C. CURVO CONVERGENTE C/DECORACION	CUERPO	26	0	8.32	3	8	0	2.5Y5/2	GRAYISH BROWN
2194	H	10	1	1	C. CURVO CONVERGENTE C/DECORACION	FONDO	27	0	8.15	3	7.5	0	2.5Y5/2	GRAYISH BROWN
2229	G	10	1	1	C. SEMIESFERICO C/DECORACION	BORDE	28	0	7.92	3	7.5	0	10YR6/4	LIGHT YELLOWISH BROWN
2229	G	10	1	1	C. SEMIESFERICO C/DECORACION	CUERPO	29	0	8.36	2	7.5	0	10YR6/3	PALE BROWN
2229	G	10	1	1	C. SEMIESFERICO C/DECORACION	FONDO	30	0	8.35	3	8	0	10YR6/3	PALE BROWN

3039	F	8	SUP	1	C. SEMIESFERICO S/DECORACION	BORDE	31	0	8	5	8	0	10YR6/3	PALE BROWN
3039	F	8	SUP	1	C. SEMIESFERICO S/DECORACION	CUERPO	32	0	7.98	3	8.5	0	10YR6/3	PALE BROWN
3039	F	8	SUP	1	C. SEMIESFERICO S/DECORACION	FONDO	33	0	8.02	3	8.5	0	10YR6/3	PALE BROWN
3039	F	8	SUP	1	PLATO S/DECORACION	BORDE	34	0	7.88	3	8	0	10YR5/4	YELLOWISH BROWN
3039	F	8	SUP	1	PLATO S/DECORACION	CUERPO	35	0	7.96	2	8	0	10YR6/4	LIGHT YELLOWISH BROWN
3039	F	8	SUP	1	PLATO S/DECORACION	FONDO	36	0	7.85	5	8	0	10YR5/3	BROWN
3072	C	8	SUP	PISO 1	PLATO S/DECORACION	BORDE	37	0	8.15	5	7.5	1	10YR5/3	BROWN
3072	C	8	SUP	PISO 1	PLATO S/DECORACION	CUERPO	38	0	8.34	2	8.5	0	10YR5/3	BROWN
2160	I	8		2	VASO C/DECORACION	BORDE	39	1	7.87	4	8	1	2.5Y5/2	GRAYISH BROWN
2160	I	8		2	VASO C/DECORACION	CUERPO	40	0	7.69	5	8	0	2.5Y5/2	GRAYISH BROWN
2160	I	8		2	VASO C/DECORACION	FONDO	41	0	7.68	5	8	0	10YR5/1	GRAY
2147	I	8	1	1	VASO C/DECORACION	BORDE	42	0	7.72	5	8.5	0	2.5Y5/2	GRAYISH BROWN
2147	I	8	1	1	VASO C/DECORACION	CUERPO	43	0	7.49	5	7.5	0	10YR5/1	GRAY
2147	I	8	1	1	VASO C/DECORACION	FONDO	44	0	7.61	3	8.5	0	2.5Y5/2	GRAYISH BROWN
2229	G	10	1	1	MANGO DE CUCHARON S/DECORACION	BORDE	45	0	8.15	3	7.5	0	10YR6/4	LIGHT YELLOWISH BROWN
2229	G	10	1	1	MANGO DE CUCHARON S/DECORACION	CUERPO	46	0	8.15	5	8	0	10YR6/3	PALE BROWN
2229	G	10	1	1	MANGO DE CUCHARON S/DECORACION	FONDO	47	0	8.28	3	7.5	0	10YR6/4	LIGHT YELLOWISH BROWN
3257	F	7			MANGO DE CUCHARON S/DECORACION	BORDE	48	0	8.28	2	8.5	0	10YR6/3	PALE BROWN
3257	F	7			MANGO DE CUCHARON S/DECORACION	CUERPO	49	1	8.34	4	7.5	0	2.5Y4/2	DARK GRAYISH BROWN
3257	F	7			MANGO DE CUCHARON	FONDO	50	0	8.34	6	8	0	2.5Y5/2	GRAYISH BROWN

					S/DECORACION											
2276	G	11	1	3	CUCHARON S/DECORACION	BORDE	51	0	8.36	3	7.5	0	2.5Y6/2	LIGHT BROWNISH GRAY		
2276	G	11	1	3	CUCHARON S/DECORACION	CUERPO	52	0	8.11	5	7.5	0	2.5Y5/2	GRAYISH BROWN		
2276	G	11	1	3	CUCHARON S/DECORACION	FONDO	53	0	8.22	5	7.5	0	2.5Y5/2	GRAYISH BROWN		
2276	G	11	1	3	CUCHARON C/DECORACION	BORDE	54	0	8.27	5	7.5	0	10YR6/3	PALE BROWN		
2276	G	11	1	3	CUCHARON C/DECORACION	CUERPO	55	0	8.34	5	7	1	2.5Y6/2	LIGHT BROWNISH GRAY		
2276	G	11	1	3	CUCHARON C/DECORACION	FONDO	56	0	8.33	5	7	0	2.5Y5/2	GRAYISH BROWN		
2463					MANGO DE SAHUMADOR C/DECORACION	CUERPO	57	0	8.82	3	8	0	5Y5/1	GRAY		
2126	I	7	1	2	MANGO DE SAHUMADOR C/DECORACION	CUERPO	58	0	7.43	2	8	0	2.5Y5/2	GRAYISH BROWN		
2147	I	8	1	1	MANGO DE SAHUMADOR S/DECORACION	CUERPO	59	0	7.73	5	8	1	2.5Y6/2	LIGHT BROWNISH GRAY		
2160	I	8	2		MANGO DE SAHUMADOR S/DECORACION	CUERPO	60	0	7.76	4	8.5	2	5Y4/1	DARK GRAY		
4069	I	7	1*		MANGO DE SAHUMADOR S/DECORACION	CUERPO	61	0	7.57	6	7	0	2.5Y4/2	DARK GRAYISH BROWN		
3016	E	5	SUP		SAHUMADOR S/DECORACION	BORDE	62	0	7.32	5	7.5	0	10YR5/3	BROWN		
3016	E	5	SUP		SAHUMADOR S/DECORACION	CUERPO	63	0	7.76	3	7	0	10YR5/3	BROWN		
1066	G	14	SUP		SAHUMADOR S/DECORACION	BORDE	64	1	8.15	3	7.5	1	2.5Y5/3	LIGHT OLIVE BROWN		
3513	F	7			SAHUMADOR S/DECORACION	CUERPO	65	0	7.76	5	8.5	1	2.5Y6/3	LIGHT YELLOWISH BROWN		
2147	I	8	1	1	SAHUMADOR C/DECORACION	CUERPO	66	0	7.57	3	8	2	2.5Y6/3	LIGHT YELLOWISH BROWN		
2229	G	10	1	1	SAHUMADOR C/DECORACION	CUERPO	67	0	8.15	5	8.5	0	2.5Y5/3	LIGHT OLIVE BROWN		
2276	G	11	1	3	SAHUMADOR SELLADO	BORDE	68	0	8.24	5	8.5	1	10YR6/3	PALE BROWN		
2294	F	12	3	1	SAHUMADOR	BORDE	69	1	8.03	6	8	0	10YR5/3	BROWN		

					SELLADO										
3080	C	6	gravilla		SAHUMADOR SELLADO	CUERPO	70	1	8.34	5	7.5	0	10YR6/4	LIGHT YELLOWISH BROWN	
1108	H	6	SUP		SAHUMADOR SELLADO	CUERPO	71	0	7.32	4	7.5	1	10YR6/4	LIGHT YELLOWISH BROWN	
2144	I	8	SUP	2	OLLA COYO S/DECORACION	BORDE	72	0	7.54	6	8	1	10YR4/3	BROWN	
1058	G	10	SUP		OLLA COYO S/DECORACION	BORDE	73	2	8.11	4	7.5	1	2.5Y4/3	OLIVE BROWN	
1188	H	2	SUP		OLLA COYO S/DECORACION	CUERPO	74	0	7.9	6	8.5	0	5Y4/1	DARK GRAY	
2272	F	10	1	1	OLLA COYO S/DECORACION	CUERPO	75	0	8.26	3	7.5	0	2.5Y5/2	GRAYISH BROWN	
2276	G	11	1	3	OLLA COYO S/DECORACION	FONDO	76	0	8.46	5	7.5	0	2.5Y5/2	GRAYISH BROWN	
					MINIMO		0	7.19	1	7	0				
					MAXIMO		2	8.82	6	9	2				
					PROMEDIO		0.14	8.05	4.09	7.90	0.21				
					DESV. ESTAND.		0.39	0.35	1.29	0.48	0.47				
					PASTA CON FELDESPATOS										
BAG	C-L	C-#	LAYER	LEVEL	FORM	PART	MUE	CO <sub>3</sub>	P.H.	PO <sub>4</sub>	ALB	A.G.	COLOR	NOMBRE COLOR	
2284	F	11	1	1	C. CURVO RECTO C/DECORACION	CUERPO	1	0	8.23	4	8	0	10YR6/3	PALE BROWN	
2118	F	5	SUP	2	C. CURVO RECTO S/DECORACION	CUERPO	2	0	7.89	2	7.5	0	10YR5/3	BROWN	
3172	E	5			C. CURVO RECTO S/DECORACION	CUERPO	3	0	8.84	5	7.5	0	10YR6/4	LIGHT YELLOWISH BROWN	
2289					C. CURVO RECTO S/DECORACION	CUERPO	4	0	8.75	5	7.5	0	2.5Y4/2	DARK GRAYISH BROWN	
3080	C	6	gravilla		C. DIVERGENTE C/DECORACION	BORDE	5	2	9.22	3	7.5	0	10YR5/4	YELLOWISH BROWN	
3080	C	6	gravilla		C. DIVERGENTE C/DECORACION	CUERPO	6	2	9.09	2	7.5	1	10YR5/4	YELLOWISH BROWN	
3080	C	6	gravilla		C. DIVERGENTE C/DECORACION	FONDO	7	0	8.94	4	7.5	0	10YR5/4	YELLOWISH BROWN	
3270	G	5			C. DIVERGENTE C/DECORACION	BORDE	8	0	8.17	5	8.5	0	10YR6/3	PALE BROWN	

3270	G	5			C. DIVERGENTE C/DECORACION	CUERPO	9	0	7.85	3	8	0	10YR6/3	PALE BROWN
3270	G	5			C. DIVERGENTE C/DECORACION	FONDO	10	0	7.09	1	7.5	1	10YR6/4	LIGHT YELLOWISH BROWN
3043	F	8	SUP	2	C. SEMIESFERICO C/DECORACION	BORDE	11	2	8.17	4	7.5	0	10YR5/4	YELLOWISH BROWN
3043	F	8	SUP	2	C. SEMIESFERICO C/DECORACION	CUERPO	12	1	8.24	4	7.5	0	2.5Y5/4	LIGHT OLIVE BROWN
3043	F	8	SUP	2	C. SEMIESFERICO C/DECORACION	FONDO	13	0	8.37	4	8	0	2.5Y5/4	LIGHT OLIVE BROWN
3155	D	6			C. SEMIESFERICO S/DECORACION	BORDE	14	0	8.54	2	7.5	0	5YR6/6	REDDISH YELLOW
3155	D	6			C. SEMIESFERICO S/DECORACION	CUERPO	15	0	8.53	4	7.5	0	10YR6/4	LIGHT YELLOWISH BROWN
3155	D	6			C. SEMIESFERICO S/DECORACION	FONDO	16	0	8.48	5	7.5	0	10YR6/2	LIGHT BROWNISH GRAY
2144	I	8	SUP	2	C. SEMIESFERICO S/DECORACION	BORDE	17	0	7.78	5	8	0	10YR5/4	YELLOWISH BROWN
2144	I	8	SUP	2	C. SEMIESFERICO S/DECORACION	CUERPO	18	0	7.73	4	8	0	7.5YR4/6	STRONG BROWN
2144	I	8	SUP	2	C. SEMIESFERICO S/DECORACION	FONDO	19	0	8.11	4	8	0	10YR5/4	YELLOWISH BROWN
2131	I	7	1	1	C. CURVO CONVERGENTE C/DECORACION	BORDE	20	0	7.95	4	7.5	0	2.5Y7/3	PALE YELLOW
2131	I	7	1	1	C. CURVO CONVERGENTE C/DECORACION	CUERPO	21	0	7.17	2	7.5	0	2.5Y6/2	LIGHT BROWNISH GRAY
2131	I	7	1	1	C. CURVO CONVERGENTE C/DECORACION	FONDO	22	0	7.52	2	8	0	2.5Y6/2	LIGHT BROWNISH GRAY
3140	D	8			C. CURVO CONVERGENTE C/DECORACION	BORDE	23	0	8.4	2	7.5	0	2.5Y7/3	PALE YELLOW
3140	D	8			C. CURVO CONVERGENTE C/DECORACION	CUERPO	24	0	8.26	5	7.5	0	2.5Y6/2	LIGHT BROWNISH GRAY
3140	D	8			C. CURVO CONVERGENTE C/DECORACION	FONDO	25	0	8.32	5	7.5	0	5Y5/2	OLIVE GRAY

3257	F	7			C. CURVO CONVERGENTE C/DECORACION	BORDE	26	0	8.15	4	7.5	0	2.5Y6/4	LIGHT YELLOWISH BROWN
3257	F	7			C. CURVO CONVERGENTE C/DECORACION	CUERPO	27	0	8.09	3	8	0	2.5Y6/3	LIGHT YELLOWISH BROWN
3257	F	7			C. CURVO CONVERGENTE C/DECORACION	FONDO	28	0	7.89	4	7.5	1	2.5Y6/3	LIGHT YELLOWISH BROWN
2250	H	8	1	1	C. CURVO CONVERGENTE C/DECORACION	BORDE	29	1	7.87	4	8	0	2.5Y5/3	LIGHT OLIVE BROWN
2250	H	8	1	1	C. CURVO CONVERGENTE C/DECORACION	CUERPO	30	0	7.87	2	8	0	2.5Y6/2	LIGHT BROWNISH GRAY
2250	H	8	1	1	C. CURVO CONVERGENTE C/DECORACION	FONDO	31	0	7.75	1	8	0	2.5Y6/2	LIGHT BROWNISH GRAY
2299	F	12	3	2	VASO SIN DECORACION	BORDE	32	1	7.7	4	7.5	1	10YR5/4	YELLOWISH BROWN
2299	F	12	3	2	VASO SIN DECORACION	CUERPO	33	0	7.96	4	7.5	0	10YR5/4	YELLOWISH BROWN
2299	F	12	3	2	VASO SIN DECORACION	FONDO	34	0	8.05	4	7.5	0	10YR3/2	VERY DARK GRAYISH BROWN
3266	G	7			VASO CON DECORACION	BORDE	35	0	7.87	5	7.5	1	2.5Y7/3	PALE YELLOW
3266	G	7			VASO CON DECORACION	CUERPO	36	0	7.78	4	7.5	1	2.5Y7/2	LIGHT GRAY
3266	G	7			VASO CON DECORACION	FONDO	37	0	7.52	5	7.5	0	2.5Y7/2	LIGHT GRAY
2168	I	9	1	2	VASO SIN DECORACION	BORDE	38	0	7.75	4	8	0	10YR5/4	YELLOWISH BROWN
2168	I	9	1	2	VASO SIN DECORACION	CUERPO	39	0	7.92	3	7.5	1	10YR6/4	LIGHT YELLOWISH BROWN
2131	I	7	1	1	VASO CON DECORACION	BORDE	40	0	7.87	4	7.5	0	2.5Y7/2	LIGHT GRAY
2131	I	7	1	1	VASO CON DECORACION	CUERPO	41	0	7.35	2	8	2	2.5Y7/2	LIGHT GRAY
3160	E	6	piso2		CAZUELA	CUERPO	42	0	7.63	5	8	1	10YR5/3	BROWN
3160	E	6	piso2		CAZUELA	FONDO	43	0	8	5	8	1	10YR6/4	LIGHT YELLOWISH BROWN
3140	D	8			CAZUELA	CUERPO	44	2	8.37	5	8	0	10YR5/3	BROWN
3140	D	8			CAZUELA	FONDO	45	0	8.38	5	8	0	2.5Y5/4	LIGHT OLIVE BROWN

1677	E	5			CAZUELA	BORDE	46	0	7	5	9	1	10YR5/3	BROWN
1677	E	5			CAZUELA	CUERPO	47	0	6.83	5	9	2	10YR5/3	BROWN
4229	G	13		3	CAZUELA	BORDE	48	0	7.54	5	7.5	0	10YR6/4	LIGHT YELLOWISH BROWN
4229	G	13		3	CAZUELA	CUERPO	49	0	7.87	5	7.5	1	10YR6/4	LIGHT YELLOWISH BROWN
2288	G	12	3	1	OLLA SIN DECORACION	BORDE	50	1	8.4	4	8	1	10YR6/4	LIGHT YELLOWISH BROWN
3180	D	5	3		OLLA SIN DECORACION	BORDE	51	0	8.23	4	8	0	10YR5/4	YELLOWISH BROWN
2144	I	8	SUP	2	OLLA SIN DECORACION	BORDE	52	0	7.87	4	7.5	0	2.5Y5/2	GRAYISH BROWN
1298	G	3	3	1	OLLA SIN DECORACION	BORDE	53	0	7.52	4	7.5	0	2.5Y6/2	LIGHT BROWNISH GRAY
4192	F	15			OLLA SIN DECORACION	CUERPO	54	1	7.7	5	7.5	0	10YR4/4	DARK YELLOWISH BROWN
2299	F	12	3	2	OLLA SIN DECORACION	CUERPO	55	0	7.83	4	7.5	1	10YR5/4	YELLOWISH BROWN
2035					OLLA SIN DECORACION	CUERPO	56	0	7.35	5	8	1	10YR4/2	DARK GRAYISH BROWN
3071					OLLA SIN DECORACION	CUERPO	57	0	8.05	5	8	1	10YR6/6	BROWNISH YELLOW
4010	I	10	1*		MANGO DE CUCHARON C/DECORACION	BORDE	58	1	7.81	5	8	1	2.5Y6/3	LIGHT YELLOWISH BROWN
4010	I	10	1*		MANGO DE CUCHARON C/DECORACION	CUERPO	59	2	7.95	4	7.5	1	2.5Y6/2	LIGHT BROWNISH GRAY
4010	I	10	1*		MANGO DE CUCHARON C/DECORACION	FONDO	60	2	7.94	6	7.5	1	2.5Y5/3	LIGHT OLIVE BROWN
2305	I	8	2	1	MANGO DE CUCHARON C/DECORACION	BORDE	61	0	7.35	2	8	0	10YR6/3	PALE BROWN
2305	I	8	2	1	MANGO DE CUCHARON C/DECORACION	CUERPO	62	0	7.04	2	8.5	1	10YR6/2	LIGHT BROWNISH GRAY
2305	I	8	2	1	MANGO DE CUCHARON C/DECORACION	FONDO	63	0	7.17	4	8	0	10YR5/2	GRAYISH BROWN
3184	C	4			CUCHARON CON DECORACION	BORDE	64	0	7.5	4	8	0	10YR6/4	LIGHT YELLOWISH BROWN

3184	C	4			CUCHARON CON DECORACION	CUERPO	65	1	7.72	5	7.5	0	10YR6/4	LIGHT YELLOWISH BROWN
3184	C	4			CUCHARON CON DECORACION	FONDO	66	1	7.87	5	8	1	10YR6/4	LIGHT YELLOWISH BROWN
3276	F	6			CUCHARON SIN DECORACION	BORDE	67	1	8.2	6	8	1	5Y4/1	DARK GRAY
3276	F	6			CUCHARON SIN DECORACION	CUERPO	68	1	7.88	6	8	1	5Y3/1	VERY DARK GRAY
3276	F	6			CUCHARON SIN DECORACION	FONDO	69	0	8.01	6	8	0	2.5Y4/2	DARK GRAYISH BROWN
3180	D	5	3		COMAL	FONDO	70	0	7.78	5	7.5	0	10YR5/4	YELLOWISH BROWN
3287	F	5			COMAL	FONDO	71	1	7.4	5	8.5	1	10YR5/4	YELLOWISH BROWN
2088	F	10	SUP	2	COMAL	BORDE	72	1	7.18	4	7.5	1	10YR4/4	DARK YELLOWISH BROWN
2131	I	7	1	1	INCENSARIO CON DECORACION	BORDE	73	0	7	4	8	0	2.5Y6/2	LIGHT BROWNISH GRAY
2131	I	7	1	1	INCENSARIO CON DECORACION	CUERPO	74	0	7	5	8	0	2.5Y5/2	GRAYISH BROWN
2131	I	7	1	1	INCENSARIO CON DECORACION	FONDO	75	0	7	4	7	0	2.5Y5/3	LIGHT OLIVE BROWN
4295	G	11		4	INCENSARIO CON DECORACION	BORDE	76	1	7.7	5	7.5	1	2.5Y6/3	LIGHT YELLOWISH BROWN
4295	G	11		4	INCENSARIO CON DECORACION	CUERPO	77	1	7.68	5	7.5	1	2.5Y6/3	LIGHT YELLOWISH BROWN
4295	G	11		4	INCENSARIO CON DECORACION	FONDO	78	1	7.89	5	7.5	1	2.5Y7/3	PALE YELLOW
						MAXIMO		2	9.22	6	9	2		
						MINIMO		0	6.83	1	7	0		
						PROMEDIO		0.34	7.88	4.08	7.76	0.39		
						DESV. ESTAND		0.62	0.49	1.17	0.35	0.54		
					PASTA INTERMEDIA									
BAG	C-L	C-#	LAYER	LEVEL	FORM	PART	MUE	CO <sub>3</sub>	P.H.	PO <sub>4</sub>	ALB	A.G.	COLOR	NOMBRE COLOR

2284	F	11	1		1	C. CURVO CONVERGENTE C/DECORACION	BORDE	1	0	8.63	4	7	0	10YR6/4	LIGHT YELLOWISH BROWN
2284	F	11	1		1	C. CURVO CONVERGENTE C/DECORACION	CUERPO	2	0	8.87	3	7.5	0	10YR6/4	LIGHT YELLOWISH BROWN
2284	F	11	1		1	C. CURVO CONVERGENTE C/DECORACION	FONDO	3	0	8.8	3	8	0	10YR6/4	LIGHT YELLOWISH BROWN
2160	I	8	2			C. CURVO CONVERGENTE S/DECORACION	BORDE	4	0	8.39	3	8	0	2.5Y5/2	GRAYISH BROWN
2160	I	8	2			C. CURVO CONVERGENTE S/DECORACION	CUERPO	5	0	8.18	3	7.5	0	2.5Y5/2	GRAYISH BROWN
2160	I	8	2			C. CURVO CONVERGENTE S/DECORACION	FONDO	6	0	8.21	5	7.5	0	2.5Y5/2	GRAYISH BROWN
3172	E	5				VASO S/DECORACION	BORDE	9	0	8.11	3	7.5	0	10YR6/3	PALE BROWN
3172	E	5				VASO S/DECORACION	CUERPO	10	0	8.88	4	7.5	0	2.5Y6/3	LIGHT YELLOWISH BROWN
3172	E	5				VASO S/DECORACION	FONDO	11	1	8.86	3	7.5	0	2.5Y6/3	LIGHT YELLOWISH BROWN
2276	G	11	1		3	VASO C/DECORACION	BORDE	12	0	8.63	3	7.5	0	2.5Y5/2	GRAYISH BROWN
2276	G	11	1		3	VASO C/DECORACION	CUERPO	13	0	8.63	4	7.5	0	10YR6/3	PALE BROWN
2276	G	11	1		3	VASO C/DECORACION	FONDO	14	0	8.8	3	7	0	2.5Y6/3	LIGHT YELLOWISH BROWN
3271	G	5				PLATO C/DECORACION	BORDE	15	0	8.59	4	8	0	10YR6/3	PALE BROWN
3271	G	5				PLATO C/DECORACION	CUERPO	16	1	8.57	5	8	0	2.5Y5/2	GRAYISH BROWN
3271	G	5				PLATO C/DECORACION	FONDO	17	0	8.47	4	8	0	10YR6/3	PALE BROWN
2229	G	10	1		1	PLATO S/DECORACION	BORDE	18	2	8.47	2	8	0	10YR6/4	LIGHT YELLOWISH BROWN
2229	G	10	1		1	PLATO S/DECORACION	CUERPO	19	2	8.19	2	8.5	0	10YR6/4	LIGHT YELLOWISH BROWN
2229	G	10	1		1	PLATO S/DECORACION	FONDO	20	2	8.07	2	8	0	10YR5/4	YELLOWISH BROWN
4072	I	13	2*			PLATO C/DECORACION	BORDE	21	2	8.42	2	7.5	1	10YR6/4	LIGHT YELLOWISH BROWN

4072	I	13	2*		PLATO C/DECORACION	CUERPO	22	0	8.53	3	7	0	10YR6/3	PALE BROWN
4072	I	13	2*		PLATO C/DECORACION	FONDO	23	2	8.54	5	7.5	0	2.5Y5/3	LIGHT OLIVE BROWN
1094	I	5	SUP		PLATO S/DECORACION	BORDE	24	0	7.95	2	8	0	10YR6/4	LIGHT YELLOWISH BROWN
1094	I	5	SUP		PLATO S/DECORACION	CUERPO	25	1	7.83	2	7.5	0	10YR6/4	LIGHT YELLOWISH BROWN
1094	I	5	SUP		PLATO S/DECORACION	FONDO	26	0	7.75	2	8.5	0	10YR6/4	LIGHT YELLOWISH BROWN
1054	G	13		1	OLLA C/DECORACION	BORDE	27	1	8.33	1	7	0	2.5Y6/3	LIGHT YELLOWISH BROWN
2194	H	10	1	1	OLLA C/DECORACION	BORDE	28	1	8.47	4	7	0	2.5Y6/3	LIGHT YELLOWISH BROWN
3261	G	6	3		OLLA C/DECORACION	FONDO	29	1	8.27	3	7	0	10YR7/4	VERY PALE BROWN
4298	F	13		4	OLLA S/DECORACION	FONDO	30	0	8.77	3	7.5	0	10YR6/3	PALE BROWN
3155	D	6			OLLA S/DECORACION	CUERPO	31	0	8.64	3	7.5	0	10YR6/3	PALE BROWN
3311					OLLA C/DECORACION	CUERPO	32	1	8.66	3	7.5	0	10YR6/2	LIGHT BROWNISH GRAY
4298	F	13		4	C. SEMIESFERICO S/DECORACION	BORDE	33	0	8.54	3	7	0	10YR6/4	LIGHT YELLOWISH BROWN
4298	F	13		4	C. SEMIESFERICO S/DECORACION	CUERPO	34	0	8.54	4	7	0	10YR7/3	VERY PALE BROWN
4298	F	13		4	C. SEMIESFERICO S/DECORACION	FONDO	35	1	8.66	4	7	0	10YR6/4	LIGHT YELLOWISH BROWN
3276	F	6			C. SEMIESFERICO S/DECORACION	BORDE	36	0	8.51	3	7.5	0	2.5Y6/2	LIGHT BROWNISH GRAY
3276	F	6			C. SEMIESFERICO S/DECORACION	CUERPO	37	0	8.54	4	7	0	2.5Y6/2	LIGHT BROWNISH GRAY
3276	F	6			C. SEMIESFERICO S/DECORACION	FONDO	38	0	8.29	3	7	1	2.5Y6/2	LIGHT BROWNISH GRAY
2229	G	10	1	1	C. DIVERGENTE S/DECORACION	CUERPO	50	2	8.56	4	8	0	10YR6/4	LIGHT YELLOWISH BROWN

2229	G	10	1		1	C. DIVERGENTE S/DECORACION	FONDO	51	2	8.41	4	8	0	10YR6/4	LIGHT YELLOWISH BROWN
3297	E	9	3			C. DIVERGENTE C/DECORACION	BORDE	52	2	8.58	4	7.5	0	2.5Y6/3	LIGHT YELLOWISH BROWN
3297	E	9	3			C. DIVERGENTE C/DECORACION	CUERPO	53	1	8.58	4	7.5	0	2.5Y6/3	LIGHT YELLOWISH BROWN
3297	E	9			3	C. DIVERGENTE C/DECORACION	FONDO	54	0	8.71	5	8.5	1	2.5Y6/3	LIGHT YELLOWISH BROWN
2178	H	7	1		2	C. DIVERGENTE C/DECORACION	CUERPO	55	0	8.28	5	8.5	0	2.5Y6/3	LIGHT YELLOWISH BROWN
2178	H	7	1		2	C. DIVERGENTE C/DECORACION	FONDO	56	0	8.26	3	8	0	2.5Y6/2	LIGHT BROWNISH GRAY
3143	D	7			2	C. DIVERGENTE C/DECORACION	BORDE	57	0	8.74	4	8.5	0	10YR7/3	VERY PALE BROWN
3143	D	7			2	C. DIVERGENTE C/DECORACION	CUERPO	58	0	8.73	4	8.5	0	10YR7/3	VERY PALE BROWN
4122	H	15			2	INCENSARIO C/DECORACION	BORDE	59	2	8.74	5	8.5	0	2.5Y6/2	LIGHT BROWNISH GRAY
4122	H	15			2	INCENSARIO C/DECORACION	CUERPO	60	2	8.73	5	8.5	0	2.5Y6/2	LIGHT BROWNISH GRAY
2229	G	10	1		1	INCENSARIO C/DECORACION	BORDE	61	0	8.95	4	8.5	1	10YR7/2	LIGHT GRAY
2229	G	10	1		1	INCENSARIO C/DECORACION	CUERPO	62	0	8.96	5	8.5	0	2.5Y6/2	LIGHT BROWNISH GRAY
4334	G	13			4	INCENSARIO C/DECORACION	BORDE	63	0	9.03	5	7.5	0	2.5Y6/2	LIGHT BROWNISH GRAY
4334	G	13			4	INCENSARIO C/DECORACION	CUERPO	64	0	8.97	5	8	0	2.5Y6/2	LIGHT BROWNISH GRAY
4294	G	11			4	INCENSARIO S/DECORACION	FONDO	65	0	7.79	4	8	0	10YR7/2	LIGHT GRAY
2233	G	9	1		1	INCENSARIO C/DECORACION	FONDO	66	0	8.95	4	8	0	10YR7/4	VERY PALE BROWN
4081	D	12			1	INCENSARIO C/DECORACION	FONDO	67	2	8.58	5	8	1	10YR6/3	PALE BROWN
2147	I	8	1		1	SAHUMADOR S/DECORACION	CUERPO	68	0	8.17	4	8	0	10YR7/2	LIGHT GRAY
2160	I	8	2		2	SAHUMADOR S/DECORACION	CUERPO	69	0	8.8	5	8.5	0	2.5Y6/2	LIGHT BROWNISH GRAY

2299	F	12	3	2	SAHUMADOR S/DECORACION	CUERPO	70	0	8.9	6	7.5	1	2.5Y6/2	LIGHT BROWNISH GRAY
4221	I	11		4	SAHUMADOR S/DECORACION	CUERPO	71	0	8.35	3	8.5	0	2.5Y6/2	LIGHT BROWNISH GRAY
3172	E	5			SAHUMADOR S/DECORACION	FONDO	72	0	8.51	5	7.5	0	2.5Y6/2	LIGHT BROWNISH GRAY
4295	G	11		4	SAHUMADOR S/DECORACION	FONDO	73	0	8.58	4	7.5	0	2.5Y7/3	PALE YELLOW
3271	G	5			MANGO DE CUCHARON S/DECORACION	BORDE	74	0	8.58	4	8.5	0	10YR7/3	VERY PALE BROWN
3271	G	5			MANGO DE CUCHARON S/DECORACION	CUERPO	75	0	8.57	4	8	0	2.5Y7/3	PALE YELLOW
3271	G	5			MANGO DE CUCHARON S/DECORACION	FONDO	76	0	8.47	4	8	0	2.5Y7/2	LIGHT GRAY
3271	G	5			MANGO DE CUCHARON S/DECORACION	BORDE	77	0	8.4	4	8.5	0	10YR7/4	VERY PALE BROWN
3271	G	5			MANGO DE CUCHARON S/DECORACION	CUERPO	78	0	8.48	4	8	0	10YR6/4	LIGHT YELLOWISH BROWN
3271	G	5			MANGO DE CUCHARON S/DECORACION	FONDO	79	0	8.57	3	8.5	0	10YR6/3	PALE BROWN
1176	H	3	SUP		MANGO DE CUCHARON S/DECORACION	BORDE	80	0	8.07	3	9	0	10YR7/4	VERY PALE BROWN
1176	H	3	SUP		MANGO DE CUCHARON S/DECORACION	CUERPO	81	0	7.79	3	7.5	0	10YR7/3	VERY PALE BROWN
1176	H	3	SUP		MANGO DE CUCHARON S/DECORACION	FONDO	82	0	7.63	4	8	0	10YR7/3	VERY PALE BROWN
3149	E	8		2	MANGO DE CUCHARON S/DECORACION	BORDE	83	0	8.58	4	8	0	10YR7/4	VERY PALE BROWN
3149	E	8		2	MANGO DE CUCHARON S/DECORACION	CUERPO	84	0	8.88	3	7	0	10YR7/4	VERY PALE BROWN
3149	E	8		2	MANGO DE CUCHARON S/DECORACION	FONDO	85	0	8.74	3	8	0	10YR7/3	VERY PALE BROWN
1267	F	2	2		CUCHARON C/DECORACION	BORDE	86	0	7.81	3	7.5	0	10YR7/3	VERY PALE BROWN
1267	F	2	2		CUCHARON	CUERPO	87	0	7.87	3	7.5	0	10YR7/3	VERY PALE

					C/DECORACION										BROWN
1267	F	2	2		CUCHARON C/DECORACION	FONDO	88	0	7.7	4	7.5	0	10YR7/2	LIGHT GRAY	
2258	G	8	1	2	CUCHARON S/DECORACION	BORDE	89	0	7.89	4	7	0	7.5YR6/4	LIGHT BROWN	
2258	G	8	1	2	CUCHARON S/DECORACION	CUERPO	90	0	7.7	4	7	1	7.5YR6/4	LIGHT BROWN	
2258	G	8	1	2	CUCHARON S/DECORACION	FONDO	91	0	8.06	4	8	0	7.5YR6/4	LIGHT BROWN	
						MINIMO		0	7.63	1	7	0			
						MAXIMO		2	9.03	6	9	1			
						PROMEDIO		0.39	8.45	3.65	7.76	0.08			
						DES. ESTAND.		0.72	0.35	0.95	0.52	0.28			

**Appendix 2.**  
**Chemical residues from floors, Montículo 20, Santa Cruz Atizapan, Estado de México.**

FLOOR 2 SAMPLE			CO <sub>3</sub>	pH	PO <sub>4</sub>	Protein	Fatty acids		CO <sub>3</sub>		
3	G	13	2	8.31	3	7.5	0	m1	3	AVERAGE	promedio
4	G	13	2	8.37	3	8.5	2	m2	1.103354569	S.D.	desvest
7	H	11	2	8.46	2	8.5	0	m1	PO <sub>4</sub>		
8	H	11	2	8.22	2	8.5	1	m2	2.00	AVERAGE	promedio
10	H	11	2	8.36	4	8	1	m4	1.141270208	S.D.	desvest
12	H	11	2	8.40	4	7.5	1	m6	FATTY ACIDS		
13	H	12	4	8.30	4	8	0	m1	0.787234043	AVERAGE	promedio
14	H	12	4	8.56	5	8.5	0	m2	0.587410316	S.D.	desvest
15	H	12	2	8.31	3	8.5	1	m3	PH		
19	H	13	2	8.46	3	8.5	0	m1	8.31	AVERAGE	promedio
20	H	13	1	8.48	4	7.5	0	m2	1.212138079	S.D.	desvest
21	H	13	4	9.10	4	8.5	1	m3	PROTEIN		
22	H	13	4	8.81	5	7.5	0	m4	8.28125	AVERAGE	promedio
23	H	14	4	9.01	5	7.5	0	m1	3.974682831	S.D.	desvest
24	H	15	3	9.10	4	8	1	m1			
25	H	15	3	8.94	5	8.5	0	m2			
26	H	15	5	9.45	5	8.5	2	m3			
27	H	15	2	8.89	6	7.5	0	m4			
33	I	11	4	8.26	3	9	0	m2			
34	I	11	4	8.14	4	9	1	m3			
36	I	11	4	8.49	2	8.5	0	m5			
37	I	11	4	8.43	3	8.5	1	m6			
42	I	12	4	7.36	5	9	0	m2			
44	I	12	4	7.35	5	8.5	0	m4			
45	I	13	4	8.16	2	8.5	1	m1			
46	I	13	2	7.33	6	8.5	1	m2			
47	I	13	4	8.04	3	8	1	m3			
48	I	13	2	8.35	4	8	1	m4			
49	I	14	3	9.40	3	8	1	m2			

50	I	14	2	8.76	5	8	1	m3			
51	I	14	3	9.42	4	7.5	2	m4			
52	I	15	4	8.60	4	9	1	m1			
53	I	15	4	9.26	5	7.5	1	m2			
54	I	15	4	9.23	6	8.5	1	m3			
55	I	15	4	8.65	4	8.5	1	m4			
57	I	16	3	8.52	6	8	2	m2			
58	I	16	3	9.61	6	8.5	1	m3			
60	J	11	1	8.04	2	8	1	m1			
61	J	11	2	7.75	4	7.5	1	m2			
62	J	12	4	7.78	3	8.5	1	m1			
63	J	12	2	7.68	4	8.5	1	m2			
64	J	13	4	7.87	4	8.5	1	m1			
65	J	13	2	7.70	3	8	1	m2			
66	J	14	1	7.72	3	8.5	1	m1			
67	J	14	4	8.84	4	8	1	m2			
68	J	15	4	8.76	4	8.5	1	m1			
69	J	15	1	8.13	4	8.5	1	m2			
<b>FLOOR 3</b>											
70	H	11	1	7.57	4	8.5	0	m1	<b>CO<sub>3</sub></b>		
71	H	11	1	7.74	4	9	0	m2	1.086956522	AVERAGE	promedio
72	H	11	0	7.80	5	8	1	m3	0.783895882	S.D.	desvest
73	H	11	1	7.75	5	8.5	1	m4	<b>PO<sub>4</sub></b>		
74	H	12	0	8.16	4	8.5	0	m1	5.217391304	AVERAGE	promedio
75	H	12	2	8.72	6	8	2	m2	0.986870328	S.D.	desvest
76	H	12	2	8.12	6	8.5	1	m3	<b>FATTY ACIDS</b>		
77	H	12	1	8.01	5	8.5	0	m4	0.652173913	AVERAGE	promedio
78	H	13	2	7.99	5	8	0	m1	0.673874083	S.D.	desvest
79	H	13	2	8.21	5	8	1	m2	<b>PH</b>		
80	H	13	1	7.86	6	9	1	m2	7.57	AVERAGE	promedio
81	H	13	1	7.74	6	8.5	0	m4	1.116135608	S.D.	desvest
82	H	14	1	7.77	6	8	0	m1	<b>PROTEIN</b>		
83	H	14	2	8.77	6	8	0	m2	8.173913043	AVERAGE	promedio

									m3	4.146356296	S.D.	desvest
84	H	14	2	8.36	6	8	0					
85	H	14	0	7.90	6	8.5	0		m4			
86	H	15	0	8.04	6	7.5	0		m1			
87	H	15	0	8.18	6	8	0		m2			
88	H	15	1	7.90	5	8	1		m3			
89	H	15	0	7.99	5	8	1		m4			
90	I	11	0	7.90	4	9	1		m1			
91	I	11	1	8.62	6	8.5	1		m2			
92	I	11	2	8.07	4	8.5	1		m3			
92a	I	11	1	8.40	6	8.5	1		m3			
93	I	12	1	8.14	5	8.5	3		m1			
94	I	13	1	8.12	6	8.5	0		m2			
97	I	13	1	8.27	5	8	1		m1			
98	I	13	2	8.01	6	7.5	1		m2			
99	I	13	2	8.50	4	8.5	1		m3			
101	I	14	0	8.40	6	8	0		m1			
102	I	14	1	8.10	2	7	1		m2			
103	I	14	2	8.60	6	7.5	0		m3			
104	I	14	0	8.36	5	8	0		m4			
105	I	15	0	8.10	5	8.5	1		m1			
106	I	15	1	8.15	6	9	0		m2			
107	I	15	2	8.06	6	7.5	1		m3			
108	I	15	2	8.69	6	8.5	1		m4			
109	J	11	0	7.36	2	8.5	0		m1			
110	J	11	2	9.03	6	8.5	1		m2			
111	J	12	2	8.79	6	8	1		m1			
112	J	12	1	8.41	5	9	1		m2			
115	J	13	2	8.20	5	8	1		m1			
116	J	13	1	8.25	5	8	1		m2			
119	J	14	2	8.11	5	7.5	0		m1			
120	J	14	1	8.15	6	8.5	0		m2			

123	J	15	0	7.78	5	8	2	m1			
<b>FLOOR 4</b>											
145	I	11	0	7.70	3	7.5	0	m1	<b>CO<sub>3</sub></b>		
146	I	11	0	7.53	3	8	0	m2	0.636363636	AVERAGE	promedio
147	I	11	1	7.66	4	8.5	1	m4	0.657951695	S.D.	desvest
148	I	12	0	7.67	4	8	0	m1	<b>PO<sub>4</sub></b>		
149	I	12	1	8.01	6	8.5	1	m2	4.863636364	AVERAGE	promedio
150	I	13	1	8.05	4	8	0	m1	0.455842306	S.D.	desvest
151	I	13	0	7.90	3	8.5	0	m2	<b>FATTY ACIDS</b>		
152	I	13	1	8.08	6	7.5	0	m3	0.272727273	AVERAGE	promedio
153	I	13	0	7.69	6	8.5	0	m4	0.455842306	S.D.	desvest
154	I	14	0	7.65	6	8	0	m1	<b>PH</b>		
155	I	14	2	7.71	4	8.5	0	m2	7.613	AVERAGE	promedio
156	I	14	0	7.53	4	9	1	m3	0.23554	S.D.	desvest
157	I	14	0	7.63	6	7.5	0	m4	<b>PROTEIN</b>		
164	J	11	1	7.39	4	7.5	0	m1	8.125	AVERAGE	promedio
165	J	11	1	7.38	6	7.5	0	m2	4.005677789	S.D.	desvest
166	J	12	1	7.58	4	7.5	0	m1			
167	J	12	1	7.42	4	8	1	m2			
168	J	13	1	7.37	6	7.5	1	m1			
169	J	13	2	7.43	6	8	1	m2			
170	J	14	0	7.56	6	8	0	m1			
171	J	14	1	7.33	6	7.5	0	m2			
172	J	15	0	7.22	6	7.5	0	m3			
<b>FLOOR 5</b>											
193	I	11	1	6.98	4	8	0	m1			
194	I	11	0	6.94	5	8.5	1	m2	<b>CO<sub>3</sub></b>		
195	I	11	1	7.19	6	8	0	m3	0.333333333	AVERAGE	promedio
196	I	11	1	7.21	5	8	0	m4	0.483045892	S.D.	desvest
197	I	12	0	7.37	4	7.5	0	m1	<b>PO<sub>4</sub></b>		
198	I	12	0	7.37	6	7.5	0	m2	5	AVERAGE	promedio
199	I	12	0	7.56	4	8	0	m3	0.402373908	S.D.	desvest
200	I	12	0	7.44	5	8	0	m4	<b>FATTY ACIDS</b>		
201	I	13	1	7.38	5	8	0	m1	0.19047619	AVERAGE	promedio

202	I	13	0	7.33	6	8	0	m2	0.402373908	S.D.	desvest
203	I	13	0	7.26	5	8.5	0	m3	<b>PH</b>		
204	I	13	0	7.25	4	8	0	m4	7.2973	AVERAGE	promedio
205	I	14	0	7.44	6	8	0	m1	0.1728	S.D.	desvest
209	J	11	0	7.22	2	8	0	m1	<b>PROTEIN</b>		
210	J	11	1	7.16	5	8.5	0	m2	8	AVERAGE	promedio
211	J	12	0	7.22	4	8.5	0	m1	4.056740423	S.D.	desvest
212	J	12	1	7.22	6	8	1	m2			
213	J	13	1	7.33	5	8	1	m1			
214	J	13	0	7.29	6	8.5	0	m2			
215	J	14	0	7.23	6	8.5	1	m1			
216	J	14	0	7.20	6	8.5	0	m2			

Appendix 3. Faunal materials recovered from Montículo 20, Santa Cruz Atizapan, Estado de México.								
Ejemplar	Cuadro-row	Cuadro-column	Capa	Nivel	Prof.	Contexto	Ident.	Tipo
2345	G	910			59-81	BASURERO	MAM	FRAGS
2207	J	9			SUPERFICIE	"LIMPIEZA PERFIL, ZANJA NORTE"	MAM GR	FRAGS
2382	G	9	4	1	118		MAM GR	"DIAFISIS HUESO LARGO, FRAGS"
2323	H	8	2	1	63-79		MAM GR	FRAGS
2011	F	12	SUPERFICIE			MONT 20- E8	MAM GR	FRAGS
2391	G	9	5		163-175		MAM GR	COSTILLAS FRAG
2451	F	8	5		127-150		POS MAM	FRAGS
3210	I	8	2	1	47-65		MAM GR	"FRAG VERT, EPIFISIS METAPODIAL FRAGS"
2038	F	11	SUPERFICIE		0-20		MAM GR	"CALCANEO FRAGS"
2045	E	16	SUPERFICIE		0-20		MAM	FRAGS
2359	G	9	2		65-72	POZO 2	MAM	FRAGS
2467	F	8	6		150		MAM GR	"ASTRAGALLO Y PATELA, FRAGS"
2072	F	7	SUPERFICIE	1	0-30		MAM GR	DENTARIO
2014	F	13	SUPERFICIE			MONT 20- E8	MAM GR	HUESOS LARGOS
2287	F	11	1	1			MAM GR	FRAGS
2099	G	1	SUPERFICIE	1	0-23		ANTILOCAPRIDE	DENTARIO
2334	G	910			59-81	BASURERO	CANIS FAMILIARIS	CANINO SUP DER
2007	G	9	SUPERFICIE			MONT 20- E8	MAM GR	FRAGS
2396	G	9	5		-160		CANIS FAMILIARIS	DENTARIO DER
2121	F	5	SUPERFICIE	2	26-35		CANIS FAMILIARIS; MAM GR	"ESCAPULA DER, COSTILLA; FRAGS"
2416	G	9	6	2			FRAGS MADERA	

2035	E	12	SUPERFICIE		APPROX 25		MAM	FRAGS
2136	I	7	1	1	46-62		MAM GR	FRAG ASTA
2401	G	9	6	1	105-200		AVE	FRAGS
2182	H	7	1	2	45-63		MAM	CRANEO FRAG
2326	H	7	2	1	65-78		MAM	"EPIFISIS HUESO LARGO, METAPODIAL"
2069	F	9	SUPERFICIE		0-28		MAM	"VERT, FRAGS"
2041	F	17	SUP		0-32		MAM GR	FRAGS
2057	E	17	SUP				MAM MED	COSTILLA FRAG
2027	E	13	SUP				ANTILOCAPRIDE	2 DENTARIOS
2474	I	8	8			POZO 1	AYTHYA AFFINUS	"DIAFISIS Y EPIFISIS DISTAL HU, DER"
2447	G	1	SUP				MAM GR	FRAGS
2063	E	18	1				MAM MED O GR	FRAGS
4061	D	11	1		0-20		MAM	FRAG VERT
4348	H			7	180-240		ODOCOILEUM VIRGINIANUS; MAM GR	ESCAP DER; FRAGS HUESOS LARGOS
4241	H	13	4		60-80		LEPUS; MAM MED Y CHICO; ANAS SP; ANATIDE	TIB DER; HUESOS LARG; CORACOIDES FRAG; ULNA
4344	H	14		7(2)	180-200		MAM GR; ANATIDE SP	FRAGS; FRAG HUMERO
4233	H	12	4		40-60		MAM GR Y MED	FRAGS
4303	H	15	5		100-120		MAM MED; CAN FAM; ODO VIR; AVE; MAM CHI; HUMANO	"COST FRAG; FEMUR, PE LV FRAG; TIBIA, FRAG; FRAG; FALANGE"
4061	I	8	1		0-25		CAN FAM	FRAG MANDIBULA DER
26	D	9	SUP			MONT 33	MAM GR	FRAG
4068	I	7	1		0-30		MAM GR; AYTHYA SP	FRAGS; MANDIBULA
4227	H	13	4		60-80		ODOCOILEUS SP	FRAGS ASTAS
140	F	2	SUP			MONT 20-E8	BUTEO JAMAICENSIS; MAM	"TARSO-METATARSO, CORACOIDES; FRAG"

4035	C	11	1		0-15		MAM	FRAGS
4293	H	14	5		100-120		MAM GR; FELIDE; MAM CHI; AVE; ANTILOCAPRIDE	VERT; FALANGE; FRAG HUESO LARG; FRAG HUESO LARG; DENT
101		0					MAM GR	FRAG HUESO LARG
4053	E	10	1		0-20		MAM GR O MED	VERT FRAGS
41	E	8	BAJO ler PISO			MONT 22	MAM GR	ESCAPULA DER
149	F	10	1			MONT 20- E8	MAM	FRAG
118	J	9	PERFIL 2			ZANJA N; CARA N	MAM GR	FRAGS
1544	D	4	4-1			PISO 4	ARTIODACTILO (POS ODO VIR); MAM	TIBIA; FRAGS
1044	G	13	SUP			MONT 20- E8	AVE	FRAG
1317	G	3	3			PISO 3	POS MAM	FRAG
1459	E	3	3	3			AVE	FRAGS
1513	F	3	4(sup)	5			ANTILOCAPRA AMERICANA; MAM	TIBIA; FRAGS HUESO LARGO Y COSTILLAS
1087	I	4	SUP		0-18	MONT 20- E8	MAM GR (POS VENADO O BORREGO)	FRAGS
1077	G	16				MONT	MAM	FRAG
1628	E	5	2				MAM	FRAG
1083	G	17	SUP			MONT 20- E8	POS AVE	FRAG
1121	G	2	1		15-28		POS MAM	FRAG
1439	E	4	3	4	84		VENADO O BORREGO	ULNA DER Y IZQ
1388	E	2	3	1			POS MAM	FRAGS
1566	E	32	4	2			ODOCOILEUS VIRGINIANUS; MAM; POS AVE	METACARPAL; FRAGS; FRAGS
1594	E	3	5		116		CANIS FAM; CANIS SP; AVE MED; MAM Y AVE	TIBIA DER; 2 COST FRAG; DIAFISIS Y EPIFISIS; FRAGS
1502	E/F	34	4				MAM; AVE	FRAGS

1131	F	4	SUP B				POS MAM	FRAG
1037	G	12				MONT 20-E8	MAM	FRAG
1432	F	3	3	4	81		POS AVE	FRAG
1422	F	3	3	3			POS ARTIODACTILO	COSTILLA FRAG
3335	C	7			180-207		CANIS FAM; MAM	ULNA IZQ; FRAG
1097	I	5				MONT 20-E8	POS MAM	FRAGS
1602	D	4	4	4			POS AVE	FRAGS
1100	I	6	SUP				MAM	FRAGS
2454	J	9	3		85		MAM GR	FRAGS
4310	H	15	5		100-120		POS ODO VIR; CANIS; ANADE; MAM Y AVE; HUMANO	"COST, HUESO LARG; TIBIA, COSTILLA; 2 ULNAS; FRAGS; MET"
3310	E	7			56		POS MAM MED	FRAG
3066	D	10			0-26		MAM MED	FRAG
3346	D	6			78-92	POZO	POS CANIS FAMILIARIS	HUMERO DER
1524	F	3	4	5			CERDO; MAM	"HUMERO; AXIS (2A VERT CERV), FRAGS"
4083	D	12	1		0-15		ODOCOILEUS VIRGINIANUS	FALANGE
4058	E	11	1		0-20		ARTIODACTILO; ODO VIR; MAM	"DENTARIO, FRAG ASTA; FALANGE, VERT; PELVIS, FRAGS"
4307	G	13	4		60-80		CANIDO	FRAGS
1556	D	4	4	2			POS OODOCOILEUS VIRGINIANUS	"DENTARIO, VERT, COST, HUESO, LAR, METACARPALES, CRANEO"
1590	D	4	4	4			ANATIDO; MAM	ULNA; FRAGS
1427	E	4	3	3	78		CANIS FAMILIARIS; MAM	TIBIA DER; FRAGS
1493	E	4	4	2		EXT PISO 5	ANAS CRECCA; AVE	HUMERO; FRAGS
3301	F	6			-72-94		POS MAM	FRAGS

3024	E	5	II		30-40	MONT 22	MAM GR O MED	FRAG	
3278	D	5			-78-95		MAM MED	FRAG	
3075	C	8					MAM MED	VERT LUMBAR	
3373	E	7			-199-122		MAM Y AVE	FRAGS	
3227	C	6			41-56		MAM MED	FRAGS	
3012	E	3					MAM GR O MED	FRAG HUESO LARGO	