

Residue analysis of artefacts and archaeological context

13th-15th September 2023

Institute Milá y Fontanals (CSIC), Barcelona

The Archaeology of Social Dynamics unit of the Milá y Fontanals Institute (CSIC-Barcelona) is organising the 10th Seminar on Prehistoric Technology focused on residue analysis. The principles of residue analysis in archaeology are based on the identification of a range of microfossils of organic and inorganic nature associated with past human activities that cannot be characterised using traditional techniques of investigation because they are either not discrete or invisible to the naked eye. These include plant and dung microfossils, starches, lipids, fibres, pigments and resins, among other materials that may survive in a wide range of contexts at archaeological sites. Over the last decades, residue analyses have contributed significantly to improving our understanding of food production and consumption, energy supply, technological innovations, land use and symbolic behaviours, contributing to deciphering the complexities of the social, economic and cultural dynamics of past populations.

The Seminars on Prehistoric Technology are aimed at students and researchers who are interested in exploring the principles and applications of state-of-the-art methodologies to the study of archaeological residues. The seminars comprise lectures and practical sessions with materials from the IMF-CSIC reference collection as well as with materials contributed by the participants, who will have the opportunity of sharing their research and case-studies.

Registration: tecnologiaprehistorica@imf.csic.es

Registration fee: 70 €



www.asd-csic.es



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Plan de Recuperación,
Transformación
y Resiliencia



Speakers:

Vasiliki Andreaki (Autonomous University of Barcelona, UAB)
 Ingrid Bertin (Autonomous University of Barcelona/ Cultures et Environnements Préhistoire, Antiquité, Moyen Âge, CEPAM- Université Côte d'Azur)
 Maria de la Vega Cañamares (Institute for the Structure of Matter, IEM-CSIC)
 Emanuela Cristiani (Sapienza University of Rome)
 Miriam Cubas (University of Alcalá, UAH)
 Aroa García-Suárez (IMF-CSIC)
 Ada Gomar (IMF-CSIC)
 Maria Herrero (Autonomous University of Barcelona, UAB)
 Ceren Kabukcu (Interdisciplinary Center for Archaeology and the Evolution of Human Behaviour, ICArEHB)
 Guillermo Marín (IMF-CSIC)
 Marta Mateu (Catalan Institute of Classical Archaeology, ICAC)
 Berta Morell-Rovira (IMF-CSIC)
 Marta Portillo (IMF-CSIC)
 Asier Vallejo (University of the Basque Country, UPV-EHU)
 Andrea Zupancich (IMF-CSIC)

Organizers:

H. Alarashi, V. Andreaki, F. Borrell, I. Clemente, F. Estebaranz, A. García-Suárez, A. Gomar, J.J., Ibáñez, S. Jiménez-Manchón, G. Marín, B. Milić, B. Morell-Rovira, D. Ortega, F. Pichon, M. Portillo, X. Terradas, S. Valenzuela-Lamas, A. Zupancich.

Program**Wednesday 13th September**

Time	Title	Speakers
09:15-09:30	Welcome and practical issues	Aroa García-Suárez, Berta Morell-Rovira, Andrea Zupancich (IMF-CSIC)
09:30-10:30	Microfossils as a reservoir of information on the evolution of diet, daily life activities and climate	Emanuela Cristiani (Sapienza University of Rome)
10:30-11:00	Morning break	
11:00-12:00	Starch granules as proxies to understand prehistoric plant food processing techniques	Andrea Zupancich (IMF-CSIC)
12:00-13:00	Integrating phytoliths and calcitic microfossils through experimental and ethnoarchaeological approaches	Marta Portillo (IMF-CSIC)
13:00-15:00	Lunch break	
15:00-16:00	Hands-on session: microfossils (sampling, extraction, microscopic examination)	Emanuela Cristiani, Andrea Zupancich, Guillermo Marín, Ada Gomar, Marta Portillo
16:00-16:30	Afternoon break	
16:30-17:30	Hands-on session: starches, phytoliths and calcitic microfossils (microscope)	Emanuela Cristiani, Andrea Zupancich, Guillermo Marín, Ada Gomar, Marta Portillo

Thursday 14th September

Time	Title	Speakers
09:00-10:00	What was cooked in that pot? Brief introduction to lipid analysis in prehistoric pottery	Miriam Cubas (University of Alcalá)
10:00-11:00	Organic biomarkers as domestication storytellers	Asier Vallejo (University of the Basque Country)
11:00-11:30	Morning break	
11:30-12:30	High-resolution contextual analyses of archaeological deposits and residues: applications to the Near Eastern Neolithic record	Aroa García-Suárez (IMF-CSIC)
12:30-13:30	Micro-contextual case-studies studies from Early Neolithic to Iron Age northeastern Iberia	Vasiliki Andreaki (UAB) and Marta Mateu (Catalan Institute of Classical Archaeology)
13:30-15:00	Lunch break	
15:00-16:00	Hands-on session: residues in thin-section micromorphology	Aroa García-Suárez, Vasiliki Andreaki, Marta Mateu, Marta Portillo
16:00-16:30	Afternoon break	
16:30-17:30	Hands-on session: residues in thin-section micromorphology	Aroa García-Suárez, Vasiliki Andreaki, Marta Mateu, Marta Portillo

Friday 15th September

Time	Title	Speakers
09:00-10:00	Signatures of food preparation and processing on charred plant remains: working with macro-fossils at the micro-level	Ceren Kabukcu (ICArEHB)
10:00-11:00	An approach to the raw material and residues identification from diverse prehistoric plant-based artifacts	Maria Herrero (UAB) and Ingrid Bertin (UAB/ CEPAM- Université Côte d'Azur)
11:00-11:30	Morning break	
11:30-12:30	Analyses of archaeological materials through Raman spectroscopy	María de la Vega Cañamares (Institute for the Structure of Matter, IEM-CSIC)
12:30-13:30	Case-studies from attendants	Attendants
13:30-15:00	Lunch break	
15:00-16:00	Hands-on session: case-studies from attendants	Attendants
16:00-16:30	Concluding remarks	Aroa García-Suárez, Berta Morell- Rovira, Marta Portillo, Andrea Zupancich (IMF-CSIC)