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Integrated Approaches to the Study of Historical Glass - IAS12

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SEM-EDX – LA-ICP-MS – EPMA-WDS II

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Optical Spectroscopy I – Raman Spectroscopy

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Optical Spectroscopy II – UV-VIS-NIR Absorption Spectroscopy

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Conservation and Restoration

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Isotopic Analysis – ToF-SIMS – XRF and Other Techniques

Wendy Meulebroeck, Vrije Universiteit Brussel (Belgium)

Introduction

This Integrated Approaches to the Study of Historical Glass (IASHG) conference formed part of a workshop that was organized in the framework of the European funded Marie Curie Initial Training Network (People 2010 – 265010) with the acronym NARNIA (New Archaeological Research Network for Integrating Approaches to Ancient Material Studies). NARNIA is an interdisciplinary project, the main objective of which is to provide young researchers with the means to conduct research on Ancient Eastern Mediterranean material culture and to develop their analytical skills through a series of research and training activities.

The conference focused on methods and methodologies for the study, documentation and conservation of ancient glasses. Lectures targeted on studies where analytical tools and measurement techniques were applied to specific archaeological and art historical questions.

The program was divided in six sessions grouping the contributions in terms of the analysis technique that was used. The first two sessions emphasized techniques which are typically applied for elemental analysis (major glass composition + trace elements). These are Energy Dispersive X-ray Spectrometry (SEM-EDX), Laser Ablation Inductively Coupled Plasma Mass Spectrometry (LA-ICP-MS) and Electron Probe Microanalysis Wavelength Dispersion X-ray Spectrometry (EPMA-WDS). The two following sessions were devoted to optical analysis techniques: in session three Raman spectroscopy was the technique of interest, session four contained the contributions where absorption spectroscopy in the ultraviolet, the visible and the near-infrared part of the electromagnetic spectrum was used. Papers that were related to conservation and restoration aspects of historical glass were classified in the fifth session. A last session was devoted to the use of Isotopic Analysis, Time of Flight Secondary Ion Mass Spectrometry (ToF-SIMS) and X-ray Fluorescence (XRF).

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