Cleaning of Acrylic Painted Surfaces

Washington DC, April 30 – May 3, 2013

SESSION TITLE

Acrylic Paint Binders

INSTRUCTOR

Tom Learner

SESSION OUTLINE

ABSTRACT

Acrylic paints have been available since the 1940s, initially in solution form and - shortly after - as water-borne emulsions. The emulsion form has been widely used by artists ever since. This session will introduce all participants to some of the main concepts and features of acrylic paints, including an overview of their history and use, some basic chemistry, what this means in terms of their behaviour, how they will/may alter with age, and how this might affect their subsequent conservation. The session will also give an overview of some broad trends that these paints display with cleaning treatments, in preparation for the more in-depth studies to be discussed over the next few days, as well as outlining one of the main purposes of this particular workshop: examining Research into Practice.

OBJECTIVES

- To provide participants with up-to-date understanding of recent research exploring the effects of wet (and some dry) surface cleaning treatments on acrylic paint films and works of art.
- To explore and understand how the properties of acrylic paints vary with paint brand, age, pigment type, cleaning system type, cleaning system application and exposure time.
- To be introduced to and become familiar with new wet cleaning systems produced through the Dow-Tate-GCI collaboration; including ECOSURF surfactants and a range of oil-in-water microemulsions based on mineral spirits.
- To critically evaluate these new systems - alongside others provided during the workshop - by comparing them to established/accepted cleaning materials.

CONTENT OUTLINE

The session will provide participants with the salient information on acrylic emulsion paints that will be needed to properly digest the discussion on cleaning systems that will follow in the rest of the workshop. A brief description of the history and uses of acrylic paints will be given, including known dates of introduction, and will be compared to other major classes of modern, synthetic paints. An overview of basic chemistry and physical properties of acrylics will be guided by highlighting features that differentiate them from other paint types. Particular attention will be placed on the role and behaviour of the surfactant, one of several additives added to acrylic emulsion paints during the manufacturing process, and now known to have a significant effect on the appearance and aging of acrylics, as well as their response to cleaning. The section introducing the various issues of cleaning will outline some fundamental concepts, both in terms of likely physical/chemical changes

experienced by the paints with cleaning, as well as a discussion on the ethical aspects of potentially removing components of the paint that are present in the original formulation. The session will conclude with an interactive period, in which the participants' individual experiences in the practical cleaning of acrylic painted surfaces will be discussed.

BIBLIOGRAPHY

Crook, J., and T. Learner. (2000). *The Impact of Modern Paints.* London: Tate Publishing

📖 Learner, T. and B. Ormsby. (2009). "Cleaning acrylic emulsion paints: putting research into context." *Proceedings of SFIIC colloquium: Conservation-restauration des oeuvres comtemporaines*: 193-199.

Learner, T., P. Smithen, J. Krueger and M. Schilling (eds). (2007). *Modern Paints Uncovered*, Getty Conservation Institute, Los Angeles.

Ormsby, B., and T. Learner. (2006). "The effects of surface cleaning on acrylic emulsion paintings – a Preliminary Investigation". *Surface Cleaning – Material and Methods*: 135-149.

Phenix, A., and T. Learner. (2009). *Cleaning acrylic painted surfaces: Research into practice*. Getty Conservation Institute, Los Angeles.

📖 = Essential reading material
💻 = Available online