

The identification of traditional Sri Lankan painting techniques

The identification of traditional Sri Lankan painting techniques that produced a vast number of paintings with diverse characteristics over centuries provide valuable information on the structure and composition of mural paintings. This information is used to identify behavior of paintings, agents of decay that can act on them, decay mechanisms, possible defects and performance of paintings. These details are vital for their conservation. The method adopted in this study to identify painting techniques was to analyze the structure and composition of mural paintings in thirty randomly selected sites, covering all periods excluding the pre-historic period, together with their respective painting schools, pictorial composition and artistic features. The information obtained from the traditional technical (*silpa*) texts was also taken into account. Materials were identified using micro-chemical tests, thin-layer chromatography, infra-red spectroscopy and nuclear magnetic resonance spectroscopy. The structures of paintings and textures of materials were examined with an optical microscope, a stereo microscope and a scanning electron microscope.

Three major painting techniques were identified from the information obtained from the chemical and physical analyses. They were (1) the Classical Technique that produced paintings with a lime based ground and mineral pigments, (2) the Kandyan Technique that produced them of a clay ground, lime sensitive organic pigments and inorganic pigments and (3) the Southern Technique with mixed characteristics. *Limonia acidissima* gum was identified in the composition of a number of paintings. Seven major painting techniques were identified combining technical information with artistic features and historic records. They were (1) the Pre-Historic, (2) Indigenous, (3) the Early Classical, (4) Sigiriya (5) the Late Classical, (6) the Post Classical, (7) the Classical Kandyan and (8) the Southern techniques. Sri Lankan techniques, when compared with those from abroad, have corresponding features of the *Tempera* Technique except at Sigiriya, where the technique is a variant of *Fresco* or the *fresco* action taking place on *tempera* paintings. Analysis of painting techniques provides information on a continuous evolutionary pattern.