AICCM

Emerging Technologies in Textile Conservation

TSIG

Textile Special Interest Group

Proceedings of the AICCM TSIG Symposium,
Sydney, Australia
19 to 22 May, 2016

Mission Statement

The AICCM Textile Special Interest Group (TSIG) has been formed to promote the preservation of our textile heritage through education, collaboration and research.

Our objectives are to:

- Achieve the highest ethical standards by upholding the AICCM Code of Ethics
- Respond with research and education initiatives appropriate and relevant to the needs of private and public textile owners.
- To establish standards for the materials, treatments and procedures used in the conservation of historic textiles and to ensure WHS standards are observed.
- To provide leadership, influence and direction on textile conservation and management issues.

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ACKNOWLEDGEMENT
The Australian Institute for the Conservation of Cultural Material (AICCM) Textile Special Interest Group acknowledges the Cadigal people as the traditional custodians of the land on which this conference is held. The group would also like to pay respect to the elders past and present of the Eora Nation and extend that respect to other Indigenous people present.

Speedo® Swimwear - Sweating it!

Suzanne Chee & Sue Gatenby
Museum of Applied Arts and Sciences, Sydney

ABSTRACT

Speedo® has become an international brand well known for their swimming attire; the name itself evokes speed and winning Olympic races. The Speedo® label was born in 1928 from a staff competition at the MacRae Knitting Mill in Sydney Australia with the winning slogan 'Speed on in your Speedo'. The Museum of Applied Arts and Sciences in Sydney holds the only Speedo® archives in the world and the most comprehensive costume collection from the 1930's to 2012 Olympic Games.

During a survey of the Speedo® LYCRA® costume collection in the museum's climate controlled storage, it was discovered all the swimwear made in the 1980s were showing significant signs of deterioration. All these costumes have a composition of 80% Nylon and 20% LYCRA®, a registered trademark for DUPONT's elastane fibres. Our swimwear collection fabricated in this era felt damp to touch, left stains and residue on tissue paper and showed major loss of elasticity. This paper will investigate the reasons why this has occurred. The findings from Fourier Transform Infrared Spectroscopy (FTIR) with UATR accessory, Nuclear Magnetic Resonance Spectroscopy (NMR), Scanning Electron Microscope (SEM) analysis and RH testing will be discussed.

A method using FTIR as a tool to monitor the deterioration of this collection will also be discussed. Determining ways to slow down their deterioration will not only assist in preserving this important collection but also to apply the results to the Museum's large collection of plastics. New collection storage conditions was proposed. As new technologies are developed to improve performance, new challenges are thrown to museum conservators.

INTRODUCTION

The full paper has been submitted to the Studies in Conservation Journal and is currently under review.

ATR-FTIR as a tool for monitoring chemical ageing in Spandex/1 Lycra/Elastane-based fabric collections

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Suzanne Chee works as a Conservator at the Museum of Applied Arts and Sciences, Powerhouse Museum Sydney. Suzanne acquired valuable experience in all aspects of conservation and exhibition work through the Costume Institute at the Metropolitan Museum of Art in NY, the galleries at F.I.T, and over 20 years' experience at the Powerhouse Museum.

Sue Gatenby is a Conservation Scientist at the Museum of Applied Arts and Sciences, Powerhouse Museum. She is currently involved with the identification of unknown materials in museum collections (FTIR-UATR and XFR analysis); undertaking a range of museum collection research projects and new environmental strategies such as LED lighting, exhibition guidelines and mould recovery. Acting Co-Convenor of the AICCM Mould remediation working group and member of DISNSW.