



## Anionic Detergent

### Introduction

Before washing a museum textile, several factors must be considered. Most importantly, can the textile be safely washed? To help determine this, see CCI Notes 13/7 *Washing Non-coloured Textiles* and CCI Notes 13/14 *Testing for Colourfastness*. It is also important to realize that old stains that have oxidized are very difficult and often impossible to remove without causing further damage.

### Washing a Textile

If you decide to wash the textile, the next step is to choose a suitable detergent.

Most detergents available, including those for delicate fabrics, contain perfumes, colorants, and whiteners — which makes them unsuitable for museum textiles. Even after washing and rinsing, many of these additives remain and may harm the fibres. In addition to being free of additives, detergents for washing historic textiles should have a neutral pH (i.e. they should be neither acidic nor alkaline) and should clean well at low temperatures.

One product that meets these conservation specifications is WA Paste. This is an anionic detergent containing sodium dodecyl sulphate (sodium lauryl sulphate). WA Paste is the same as Orvus, produced by Proctor and Gamble in the United States. It is available through conservation supply houses, animal care suppliers, and drugstores in some provinces.

When a bath is prepared for a historic textile, the WA Paste must be diluted. Dissolve 8–12 mL\* of WA Paste

in each litre of water (1.5–2.5 teaspoons in each quart of water) depending on the degree of soiling and the type of textile. For heavily soiled textiles or wool textiles, the higher detergent volume will clean more effectively. For lightly soiled linen or silk textiles, as little as 5 mL per litre of water may be sufficient. If the paste appears to have separated, stir it before using. Mix carefully to ensure that the detergent is well dissolved; the solution will be slightly cloudy. If the volume of the wash bath is quite large, it is helpful to make up a concentrated detergent solution that can then be dispersed in the bath. To do this, calculate the total volume of the wash bath and the total volume of detergent required. Mix all of the detergent in a volume of water that can be gently heated over a hotplate until it becomes clear. When this concentrated detergent solution is mixed with the bath water, the ratio of 8–12 mL/litre of water is maintained.

After the textile is washed with WA Paste, it must be thoroughly rinsed to remove the detergent. For more details, see CCI Notes 13/7 *Washing Non-coloured Textiles*.

\* This quantity is estimated from the critical micelle concentration (CMC) of sodium dodecyl sulphate (SDS), which is the surfactant and main component of WA Paste (the CMC of SDS is 2.34 g/L); the concentration of SDS in WA Paste (28%); and the density of WA Paste (1.04 g/mL).

### Bibliography

Mailand, H.F., and D.S. Alig. *Preserving Textiles: A Guide for the Nonspecialist*. Indianapolis, IN: Indianapolis Museum of Art, 1999.



by the staff of the CCI Textile Lab

Originally published 1990  
Revised 1992, 2008

Copies are also available in French.  
Texte également publié en version française.

©Minister of Public Works and Government  
Services Canada, 2008  
Cat. No. NM-95-57/13-9-2008E  
ISSN 0714-6221

Printed in Canada