

The summary of QSMT and SPAFA project 2016

Since the first project had been launched in 2014, the preliminary objective was to selecting the traditional methods of cleaning and preserving cloth in the royal court and local region in Thailand. The data from fieldwork shows that there are some plants that still used in general cleaning such as soap nut and Bai Mee. However, these plants had never been tested and analysed in scientific methods to show their properties in general wet cleaning and long term preserving fibre.

In 2016, Queen Sirikit Museum of Textiles and The Southeast Asian Ministers of Education Organization Regional Centre for Archaeology and Fine Arts (SEAMEO SPAFA) had continued to conduct and gather this project onto South East Asia region. Moreover, this recently project had combined the scientific methods to analyse the properties and effects of local plants that had been used in their general cleaning methods too.

The 2016 project aim to investigate the effects of natural saponin cleaners and commercial cleaning product that were used and use in daily life in order to cleaning and preserving clothing. Four natural saponin plants were selected to test on both cellulosic and proteinic fabrics which contain polar(soil) and non-polar dirt(curry soup). The result of testing shows that Fenugreek (PH5.5) work effectively on proteinic fabric in order to clean polar and non-polar dirt. Soap nut and Bai Mee which have PH 5 work quite well on proteinic fabrics. On the other hands, Bo ket which is PH6.5-7 work effectively on cellulosic fabric to remove polar and non-polar dirt.

From the results of these experiments, it indicates that PH of cleaning products are related to the type of fabric. Cleaning

products that have acidic work effectively on proteinic fabrics. Especially natural saponin from Fenugreek that was used in Thai traditional cleaning technique (please refer to the first project 2014). Since Bai Mee and Soap nut have strongly acidic properties (PH 5) also work well on protein fabric. They might not be good for preserving cellulosic fabrics but they are commonly used in several local regions in Thailand to clean cotton fabrics. On the other hand, Bo Ket that has less acidic properties than the others (6.5-7) work quite well on cellulosic fabrics.

Caption

01 researchers share their traditional materials that are used in their local region

02 Making Soap nut solution; after soap nuts were boiled, they were squeezed to make concentrated solution for testing

03 Making Soap nut solution; the concentrated soap nut solution has to be filtered again before using

04 Making Fenugreek solution; after Fenugreek were boiled, they were filtered to get solution

05 The concentrated saponin solution ; Bai Mee with Pea Flower, Fenugreek , Soap nut , Bai Mee and Bo Ket (from left to right)

06 Testing protocol ; each group had to prepare the dilute saponin solution to test on each sample fabric. This is silk sample fabric which has polar(soil) and non-polar(curry soup) dirt.

07 Experiment ; the researchers had to test the selected dilute saponin solution on their sample fabrics. Then they had to report their observation.

08 Experiment; the observation and report had to do along the experiment to see how each materials react and effect on each other.

09 Experiment; cotton wool was used by dipping in dilute solution and gently rub onto the stain about four times then make the observation.

10 Discussion ; After finished the experiment, each group had to discuss about their observation then make the final report.