

MLIS/1/CT/02

Unit 2: TECHNIQUES OF PRESERVATION AND CONSERVATION OF MANUSCRIPTS



Manuscripts

NAVEEN CHAPARWAL

Guest Faculty

Department of library and information science

UCSSH, MLSU, Udaipur (raj).

TECHNIQUES OF PRESERVATION AND CONSERVATION OF MANUSCRIPTS

• Traditional Techniques

• Modern Techniques

TRADITIONAL TECHNIQUES

- ▶ *Small packets of powder of dried leaves of aswagandha are kept with the manuscripts covered in clothes to repel insect attack.*
- ▶ Dried ginger is kept along with bundles of manuscripts to save them from insect attack.
- ▶ Kumkum fruit powder is a very good insect repellent.
- ▶ Powdered roots of dried sweet flag are filled in small bags and are kept in cupboards of manuscripts as it has got very good medicinal value and insecticidal power.
- ▶ Powdered ajwain also acts as an insect killer and fungicide. Fumes of ajwain obtained by its burning, has often been used as a fungicide and an antiseptic in Indian homes.
- ▶ Dried tobacco leaves are packed in small cloth bags or spread on the shelves where manuscripts are kept. The nicotinic acid of the leaves keeps the insects away.
- ▶ Mint leaves in its natural form are used to repel ants and cockroaches.
- ▶ Citronella oil is rubbed on palm-leaf manuscripts to increase flexibility and to deter attack by insect.

MODERN TECHNIQUES

❑ CLEANING AND STAINS REMOVAL

Faulty storage conditions, contact with water, dust and dirt causes the stains on the manuscripts. Different methods are adopted to clean and remove stains.

Dry Cleaning Method

- ▶ The dry cleaning methods are effective only to remove loose powdery dust, dirt, dead insect bodies or their eggs and fungus spores. Dry cleaning is done by brushing with the soft brush. Small hand held vacuum cleaner with brush as an attachment is also used to remove the dust from manuscripts.

Solvent Cleaning

- ▶ The stains and spots that can not be removed by dry methods can be removed by treatment with solvent or by washing. The important solvents are ethyl alcohol, toluene, acetone, di-chloro ethylene, petroleum ether. tri-chloroethane , ethanol are used to clean the surface written manuscripts

Aqueous Cleaning

- ▶ In order to remove the stains water or water based solution is used. Ensuring the ink is not effected by water, the best solvent for the removal of dirt and other stains from palm leaves and birch bark is water.

Bleaching

- ▶ There are several stains on paper which are difficult to remove either by organic solvents or washing. The bleaching has been used for many years to remove such stains. Bleaching agents such as hypochlorites, chloramine-T, sodium chlorite (chlorine dioxide), potassium permanganate and hydrogen peroxide can be used for paper manuscripts. Birch bark has natural stains and can not be bleached.

❑ DE-ACIDIFICATION

- ▶ The process of neutralizing the acid in paper by raising its pH is called de-acidification. De-acidification does not return deteriorated paper to its original conditions, it simply aims to neutralize the acid in paper and add alkaline to it as a buffer to withstand future acid attack. In mass deacidification process gas or liquid is introduced into a sealed chamber in which items to be de-acidified are stacked. A vacuum is introduced which forces the gas or liquid to penetrate throughout the items and react with the paper to neutralize the acid in it and leave an alkaline residue. Waste products are withdrawn from the chamber. The process requires scientific, technical and engineering expertise and expenses to establish. The deacidification system for paper is divided into three important categories namely aqueous, non-aqueous and vapor-phase de-acidification.

□ FUMIGATION

- ▶ There are several chemicals which are volatile i.e., they evaporate, if left open, either in normal room temperature or with slight rise in the same . As the vapors of such volatile chemicals are poisonous to the insects, fungi, etc. these can be used for protection against such enemies of the manuscripts. The process of disinfection involving the use of insecticide in gaseous form is called fumigation. Methods adopted for fumigation are:
 - Vacuum Fumigation
 - Vault Fumigation
 - Gas-Tight Cover Fumigation

□ RESTORATION

- ▶ Flattening
- ▶ Resizing
- ▶ Minor repair
- ▶ Reinforcement

Tissue Paper

Lamination

Encapsulation

CONCLUSION

- ▶ The art of preservation is as old as human civilization itself. Our forefathers had judiciously selected the basic materials for writing. Plants and their products have been recognized and used since ancient times as insect repellent and as preservatives to safeguard the manuscripts. We have been gradually shifting from our inherited natural methods to the world of synthetic chemicals by deploying more and more funds and infrastructure, etc. Now the world of document preservation is gradually becoming more and more technology oriented. Reformatting is of key importance when the original manuscripts are crumbling and turning to dust. Preservation through microfilming has the advantage of long life while digitization provides widespread access. Digitization and microfilming as a means of preservation of the manuscripts are discussed in the next chapter entitled Digitization of Manuscripts.

Reference:-

1. shodhganga.inflibnet.ac.in
2. Google (for image)