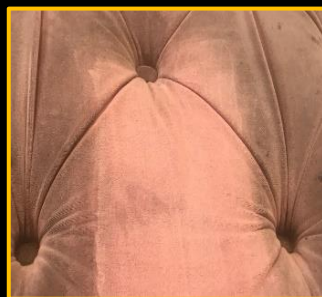


Restoration Training Services Presents

The Cleaning Basics 101 Series:

# FABRIC CLEANING



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An IICRC Approved Publication

TEXTBOOK # RTS1005CBS

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# LINEN



Linen fabric



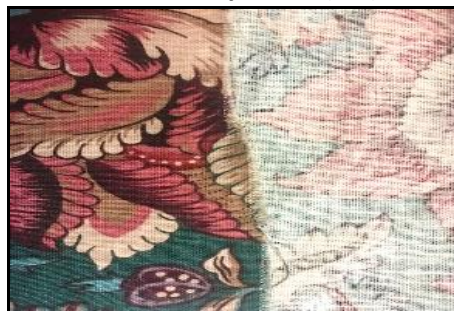
Linen chair with printed (ink) words



Wool carpet with linen squares



Linen print fabric



Linen print fabric



Linen & sisal carpet blend

## Linens' Background:

Linen comes from the stem of a flax plant. It has a soft hand and is a high-quality natural yarn. Like silk, it is considered a yarn of luxury. The use of linen has been traced as far back 4,000 years ago. Ancient Egyptians used linen as a burial cloth. Besides furniture, it is used as a blend in carpets and area rugs. The most common yarn it is blended with is wool.

## LINEN CLEANING CONCERNS: DISADVANTAGES

1. Linen is very susceptible to cellulosic browning ("brown outs") from alkaline cleaning solutions. It is best to clean with Dry Compounds, neutral cleaning agents, or mild acidic detergent solutions.
2. Subject to shrinkage, mildew, and mold.
3. Linen tends to turn dark when wet; may be confused with linen:









**Darkest areas in the above four photos are the still damp areas after cleaning. Notice some has already dried. This is due to the amount of total wet and dry passes it took to clean the linen fabric.**

4. Linen can be difficult to spot as linen may absorb the stain. Beware of possible water rings in linen after spotting.
5. Clean with caution and consider using The Barrier Method when cleaning linen that has been dyed dark red, dark blue, dark green, or black. The Barrier Method is described in the Cleaning Systems Module 14.



# MODULE 6 – YARN FIBER IDENTIFICATION

Carpet fiber identification is a crucial part of a cleaning technician's information towards the road to a success cleaning. It is best to keep it simple. Technicians should be able to properly identify a carpet yarn within a few minutes. Below are some of the tools needed to identify carpet yarns.


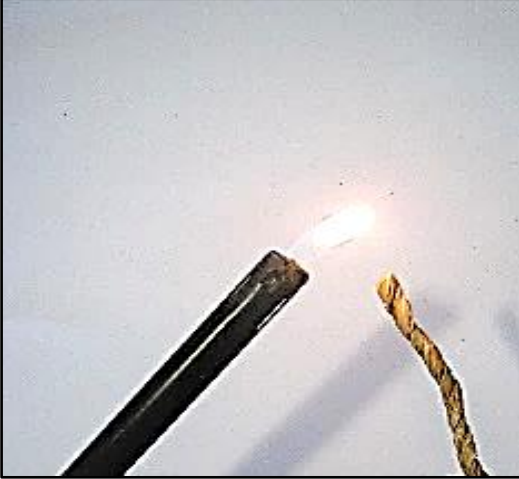

					
Butane lighter	Hemostat	Paper clip	Duckbill scissors	Ash Tray	Chemical ID Acid

## Natural Verses Synthetic Yarns

When burn testing, technicians will first notice that the natural yarns will burn, and the synthetic yarns will melt. Secondly, they will notice that the natural yarns' ashes (cellulosic and protein) crumble; and the synthetic yarns will have hard bead for an ash (melted plastic).

## The Burn Test

The burn test is a simple way to identify a yarn. Each yarn has individual traits when burned which assist the technician. Technicians will observe the yarn when burning to identify its odor flame and when extinguished, its ash.

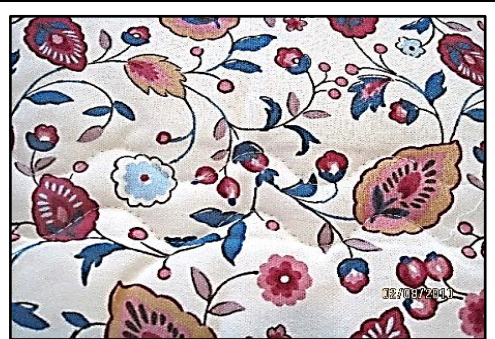
		
1. Set flame to on and secure yarn with a hemostat (ideally) or a paperclip.	2. Get yarn close as possible to the flame. Do <u>not</u> set it on fire. See if it shrinks away from the flame. If it shrinks away, it is a synthetic.	3. If it <u>does not</u> shrink away from the flame, it is natural. Go ahead and burn the end of the yarn. Wait for it to cool off!!

### KNITTED CONSTRUCTION



Knitted fabrics are uncommon in upholstery. Be cautious not to snag a loop with your tools. Use gentle agitation – soft towel or soft brush only. Dry vacuum very carefully, and well prior to cleaning.

### QUILTED CONSTRUCTION



Quilted construction consists of a three-layered fabric, with a cotton or polyester filling in between. Stitching holding it together is usually visually present. Take caution in not getting cleaning tools caught in any loose stitching. Make note of pre-existing loose or missing stitching.

### CREWEL CONSTRUCTION



Crewel is a weave type that allows the pattern to be risen (placed) above the top flat part of the construction. This provides a multi-dimensional fabric face that is quite beautiful. Cleaners beware the raised yarns catch *very easily* in your vacuum tools and your agitation brushes. It is easy to cause damage. The most common yarns of this construction are cotton and wool. Crewel construction is rarely found today, and when you see it it is usually an older piece of furniture.



# MODULE 14 Cleaning Systems Compared & Applied

*With so many yarns or blends of yarns...*

## Wet Cleaning VS Dry Cleaning

Most fabrics clean best using water-based cleaning agents. Cleaning technicians will need to determine whether they want use water-based cleaning – high moisture or low moisture; or utilize a solvent-based cleaning system. When wet cleaning fabrics, technicians must constantly be cautious to avoid over wetting the fabric. We will later explore the options each technician will have to choose from and why.

## Recommended Cleaning Methods for Each Yarn (if pre-tested and colorfast)

YARN TYPE	TYPES OF METHOD(S)	WHY?
1. Silk	Dry Solvent Method	Dry solvents lessen texture change possibilities.
2. Wool	Shampoo, Dry Foam, HWE or Dry Solvent	Wool responds well to all methods.
3. Rayon	Shampoo, Dry Foam, HWE or Dry Solvent	Minimize moisture, best to dry fast as possible
4. Cotton	Shampoo, Dry Foam, HWE or Dry Solvent	Strongest when wet, but limit moisture
5. Linen	Shampoo, Dry Foam, HWE or Dry Solvent	Be sure to clean panel to panel, limit moisture, dry fast
6. Jute	Dry Compound, Dry Foam, Dry Solvent	Color fastness, shrinkage, & brownouts are an issue
7. Sisal	Dry Compound, Dry Foam, Dry Solvent	Color fastness and shrinkage are an issue
8. Seagrass	Dry Compound, Dry Foam, Dry Solvent	Multi-layer yarn fiber construction major issue if not flat weave. Caution: latex may be old and unstable.
9. Coir	Dry Compound, Dry Foam, Dry Solvent	Possibility of some slight expansion when wet.
10. Nylon	All Methods	Will dry slowest of all synthetics. Water-based stains
11. Polyester	All Methods.	Water-based methods & chemistry work best.
12. Acrylic	All Methods	Water-based methods & chemistry work best.
13. Olefin	All Methods	Water-based methods & chemistry work best.

**NOTE: ALL-NATURAL YARNS EXCEPT SILK MAY BE CLEANED USING THE BARRIER METHOD.**

The barrier method, if used to salvage silk only. You should utilize a heavier coat of solvent on silk before attempting to wet clean it. Again, this is for salvage efforts only. Beware of dye loss on silk -ALWAYS!

## CLEANING PROCEDURES:

### 1. FIBER IDENTIFY ALL YARNS. BE WATCHFULL OF ANY BLENDS.

- a. Burn test and / or chemical test.
- b. Test every color, every time. Ideally, test on the zipper side.



Fabric tools are special purpose tools



Photos courtesy of Kleenrite Mfg and Rotovac.

**Before and After Results of Hot Water Extraction. This is common for Wet Cleaning Methods.**



**HOW TO PERFORM: HOT WATER EXTRACTION (HWE) PROCEDURES:**

1. Pre vacuum.
2. Treat specialty spots and stains.
3. Pre spray fabric if needed.
4. Agitate fabric if needed by brush, towel, or mitten.
5. Extract (rinse / flush) fabric with acidic / fiber rinse OR fabric detergent. Do not rinse fabric with water only!! You may form rings in the fabric when it dries. You will also not neutralized chemicals left behind.
6. Towel any excess moisture in most dampened areas.
7. Groom fabric if needed.

**E. THE DUAL METHOD / The TWO STEP METHOD**

The Dual Method is the most aggressive method towards a restoration of the fabric being cleaned. It also is perhaps the most aggressive, utilizing the most moisture when cleaning. This method should be used with caution and common sense as to not over wet the fabric and cause damage. With proper technic, and extra effort to dry the fabric, this method can be extremely effective. Do not use on antique, silk, or natural pile weaves.