



# Cellulosic Browning

What is it and how to treat it effectively.

**Cellulosic browning is a common challenge faced by professional cleaners, particularly when working with natural fibers like cotton, jute, or blends found in carpets and upholstery.**

This discoloration, often appearing as brown or yellow stains, typically occurs after cleaning due to overwetting, slow drying, or high pH solutions. It can frustrate cleaners as stains may surface hours later, leading to callbacks and dissatisfaction.

## WHAT IS CELLULOSIC BROWNING?

**Cellulosic browning is caused by the wicking of lignin.**

**Lignin:** is a naturally occurring gum present in cellulosic fibres such as cotton, jute and linen. When dissolved it can wick up to the face of the fibre by capillary action and present as a brown discoloration.

## WHAT FIBRES AND FABRICS ARE AFFECTED BY CELLULOSIC BROWNING?

Cellulosic Fibres are affected by cellulosic browning. These are fibres derived from plants such as cotton, linen, jute, viscose and rayon.

It should be noted that the backing material on some wool and synthetic fibre carpets and rugs are made from cellulosic fibres such as jute which can lead to cellulosic browning.

## WHAT CAUSES CELLULOSIC BROWNING?

- **Strongly alkaline chemicals:** Cleaning solutions with a high and/or buffered alkaline pH can cause the lignin in cellulosic fibres to dissolve and wick up to the face of the fibre.
- **Slow Drying:** Overwetting and slow drying also facilitates the wicking of dissolved lignin to the fibre surface.

## KEY PREVENTION MEASURES

- **Prespray:** Use a neutral or acidic prespray solution.
- **Rinse:** Rinse/extract using an acid rinse.
- **Dry:** Leave fibres and fabrics as dry as possible.
  - Do not over-wet.
  - Apply additional vacuum strokes to remove any excess moisture.
  - Use ultra-low moisture cleaning methods for sensitive fibres
- **Assist drying:** Use fans and air movers to assist drying.

The Encap Fine Fabric is an ideal cleaning solution for sensitive cellulosic fibres. It has a mildly acidic pH and can be used with low moisture methods.

It is sometimes combined with a small amount of Perox (hydrogen peroxide) at 20ml/Lt of Encap Fine Fabric (ready to use) solution for additional cleaning and removal of mild browning.

## HOW TO CORRECT CELLULOSIC BROWNING

Cellulosic browning is corrected using an acidic solution, a bleaching oxidiser or reducer.

When treating cellulosic browning, remember to minimise moisture in this process.

- **Acid:** A quality blend of organic acids such as Actichem Brownaway will correct most browning.
- **Reducing Agents:** Reducing agents such as Actichem CTR act as an effective and safe bleaching agent to correct most stubborn browning occurrences.
- **Oxidising Agents:** Oxidising agents such as Spotaway U or Conquer O2 act as an effective and safe bleaching agent to correct many stubborn browning occurrences.



## HOW TO CORRECT CELLULOSIC BROWNING

### Method 1

1. Spray/apply Actichem Brownaway or Actichem CTR undiluted or diluted 1:1 for lesser affected areas and upholstery. Avoid overwetting.
2. Agitate solution using a carpet rake or upholstery brush.
3. Allow 10-20 minutes reaction time.
4. Rinse/extract using Actichem Rinse Pro.
5. Assist drying

### Method 2

1. Spray/apply Actichem Spotaway U diluted 1:1 or Conquer O2 diluted 1:1. Avoid overwetting.
2. Agitate using a carpet rake or upholstery brush.
3. Do not rinse – dry vacuum thoroughly. Assist drying.

### Ultra-Sensitive Fabrics And Fibres

- Apply browning treatment to a rag and blot the affected area.
- Do not rinse, simply dry vacuum as much product away as possible to avoid adding extra moisture.

### Rug fringes

Rug fringes can be especially sensitive to cellulosic browning. Using a no-rinse, dry vacuum method such as Spotaway U can be the most effective treatment.

## WHEN IS BROWNING NOT CELLULOSIC BROWNING?

When there is no cellulose present. Some natural fibres such as wool and silk are derived from animals and do not contain cellulose. Except it should be noted that cellulosic fibres are sometimes blended in or may be present in the backing.

Similar discolouration can occur from soil wicking and from the yellowing of wool.

- **Soil Wick-Back:** During the drying process of a carpet, moisture migrates up to the face of the yarn and may bring with it unrinsed soil and staining materials from the base of the fibre. This can create patches of brownish discolouration.
- **Yellowing Of Wool:** Wool is not naturally white due to the sulphur present in the protein molecule. This sulphur can be released by exposure to heat and alkali causing the wool carpet to present with yellow blotches.

## FURTHER RESOURCES

- [Spotting Guide](#)
- [Knowledge Centre](#)

### Actichem

☎ 1800 108 800

☎ (02) 4966 5516

✉ [info@actichem.com.au](mailto:info@actichem.com.au)

📍 11 Gamma Close Beresfield NSW 2322

[www.actichem.com.au](http://www.actichem.com.au)