

## TIPS TO REMOVE STAINS

Sitaram Dixit

The human race from early times has considered whiteness and cleanliness to be a symbol of purity. The quest for cleaner fabric has led to several different types of cleaning and bleaching processes. Cleaning achieved during a washing procedure is a combination of washing and bleaching. Bleaching means the destruction of the chromophore (colouring) system of a coloured soil not removed from the fibre by simple washing. The resulting colourless reaction product, of a bleached stain is left off as is, or washed off the fabric during rinsing.

Bleaching is usually carried out by oxidising or by reducing chemicals. The importance of the process depends on the nature and the class of the soil present on the fibre. Staining in fibre is normally due to a chemical interaction between the soil and the garment or the soil sticking superficially to the surface of the fabric. It also depends on the density of the stain and the type of the fabric it is present. In most cases the staining reaction is not instantaneous, that is the main reason fresh stains are easier to remove.

Commonly encountered stains in daily life belong to substances of the plant kingdom, namely tea, coffee, wine, beer, spices, vegetable sauce, egg yolk, etc. Perspiration or sweat stains are another major stains associated with humans. Stains of commercial products of daily use are that of cosmetics, nail polish enamels, shoe cream, Ink, tobacco, paan, etc.

During prehistoric times the bleaching agents used was woodash. Dutch used potash lye and buttermilk as bleaching agents. **About 70 AD bleachers in Rome made use of urine as a cleaning agent. The use of urine was so popularised by the bleachers of Rome, that Emperor Vespasian of Rome taxed the commercial collection of urine by the bleachers.** Subsequent developments introduced modern chemical bleaching agents that gradually eliminated its use.

Today many products are available in the market that can eliminate stains. Some detergents claim to bleach out common household stains. However it is difficult to find one single or universal product that is able to remove all types of stains normally encountered by us. The self-explanatory

table below gives a list, of stain removers that may be used by one to remove unwanted stains from our daily wear. The agents used are ones that one finds commonly at our homes and its use can greatly compliment household detergents to keep our laundry clean and pure.

STAINS	STAIN REMOVER	METHOD TO FOLLOW	PRECAUTIONS
<b>Beer, Gelatine, Glue Blood</b>	Warm soap water. #Acetic acid / Vinegar	Sponge, then wash with water	# For stubborn stains
	Soap water / Carbon tetra chloride	Try removing it with soap water. Sponge out the stain with Carbon tetra chloride	Handle Carbon tetra chloride with care.
	Javelle Water or Hydrogen Peroxide or Acetic acid / Vinegar	Wash or pour hot water from a height of about 175 cms.	It is dangerous to inhale Javelle water fumes. Concentrated solution of Hydrogen peroxide and Acetic acid is corrosive
<b>Chewing Gum</b>	Chloroform	First, scrape with knife after hardening with ice. Sponge off residue with chloroform	Do not inhale chloroform directly. You can become unconscious
<b>Chocolate Wine</b>	Soap water or petrol	Sponge	Avoid flame when using Petrol. It will catch fire.
<b>Coffee, Milk, Tea, Ice-cream</b>	Egg yolk and glycerine mixture	Sponge and later wash. Iron on opposite side.	
	On wool: Treat with a 1: 9: 0.5 mixture of glycerine : water : ammonia	Repeat the process at 12 hour intervals	Avoid ammonia on silks if colour runs.
	Borax Solution and glycerine	Wash the stain with Borax solution. Dip the stained portion in glycerine for 24 hours. Wash with soap.	
<b>Fruits and Fruit Juices</b>	Salt solution, glycerine	Wash the stain with salt solution. Dip the stained portion in glycerine for 24 hours. Wash with soap	
	On cotton / polyester : Soap water with borax On silk, wool, nylon : Acetic acid / Vinegar		If fabric is coloured then dilute by mixing acetic acid and alcohol before use Avoid flame when using alcohol. It can catch fire

<b>Grass</b>	Spirit or ether		Avoid flame when using Spirit or ether. It will catch fire
<b>Ink (Fountain pen)</b>	Dilute oxalic acid or citric acid / lemon juice	Spread small quantities with a spoon	
<b>Black colour Ink (difficult)</b>	Try Javelle water		It is dangerous to inhale Javelle water fumes.
<b>Ball pen inks</b>	Detergent solution	Treat the fabric for about 10-15 minutes	Sponge with ethylene glycol only if stain is not removed by detergent solution.
<b>Marker Inks</b>	Mix sodium chlorite and potassium nitrate in water	Apply the mixture on the stain portion of the fabric with a sponge. Wash the fabric after some time with soap.	
<b>Iodine tincture</b>	For Coloured and Acetate Rayon's. Methylated Spirit mixed with water (1:3)  For white fabrics : Hypo solution 10% with some ammonia.		Avoid flame when using spirit. It can catch fire
	Potassium nitrate in hot water	Wash with soap and then with hot potassium nitrate solution	
<b>Mud</b>	Potato slice	Rub a cut Potato on the stained portion. Then wash with soap.	
<b>Nail polish</b>	Neutral soap solution Acetone	Wash	Avoid acetone on Acetate Rayon fabrics.
<b>Oil, Ghee, Butter</b>	Carbon tetra chloride or alcohol or ether.	Use Carbon tetra chloride or alcohol or ether and sponge out the stain. Then wash the fabric with soap or detergent.	Handle Carbon tetra chloride, alcohol, and ether with care.
<b>Paan , Katha</b>	Lime paste	Soak the stained fabric in water then apply Lime paste. Keep it for Half an hour. Wash with soap or detergent	
<b>Paint, Tar</b>	Turpentine, followed by Petrol		Avoid flame when using Petrol. It will catch fire
<b>Perspiration</b>	Hypo or sodium perborate solution	On silks: Soak in concentrated salt solution for 3-4 hours. Then wash with water.	

	Soap and Hydrogen peroxide + Ammonia mixture	Wash in soap and Hydrogen peroxide / Ammonia mixture	
	Water and Potassium Permanganate mixture 8 : 1 ratio	Wash the fabrics in Potassium Permanganate mixture. Finally with Soap / Detergents	
<b>Plantain, Jambul</b>	Carbon tetra chloride Try Javelle water		Handle Carbon tetra chloride, with care It is dangerous to inhale Javelle water fumes.
<b>Rust Stains</b>	Salt solution, lemon juice / citric acid, oxalic acid	Wash the stain with salt solution, then lemon juice or citric acid, oxalic acid and finally with water.	
<b>Shoe Polish</b>	First loosen the stain with glycerine chloroform or carbon tetrachloride  On silks and wool : Dilute solution of Potassium Permanganate	After loosening bleach the stain with Javelle water	It is dangerous to inhale Javelle water fumes.
<b>Tobacco , Turmeric, Curry, spices Sambhar</b>	Kerosene, Soap solution	Apply Kerosene with a sponge then wash the stain with warm Soap Solution	If stains are stubborn then use Potassium Permanganate solution and hot oxalic acid.
	Javelle Water		It is dangerous to inhale Javelle water fumes.
<b>Ultramarine Blue</b>	1:4, Ammonia : water	Wash with a solution of 1:4 Ammonia and water.	Do not inhale Ammonia fumes.
<b>Vegetable</b>	Javelle Water or Hydrogen Peroxide or Acetic acid / Vinegar		It is dangerous to inhale Javelle water fumes. Concentrated solution of Hydrogen peroxide and Acetic acid is corrosive
<b>Wax</b>	Sandwich stain between blotting papers and iron out		

**Javelle Water: Mix solutions of bleaching powder and washing soda. Keep for few hours so that a white precipitate formed settles then decant. The upper clear solution is Javelle Water.**