

A soluble stain is one that is removed easily with water or a dry solvent. A set stain is a stain that has oxidized causing difficult stain removal and sometimes impossible to remove. There are several factors that can cause stains to oxidize but there are ways to avoid having these stains set.

- (1) Age-The older that a stain is the more it oxidizes and becomes set. This occurs because oxygen in the air combines with the stain. The classic example is cutting an apple in half and leaving it exposed to the air. In a period of time the apple oxidizes and turns brown. An important rule to follow is to try to remove the stain as soon as possible. When you are in a restaurant and you stain your fabric dab and absorb the stain with a white cloth napkin damp with water. Avoid rubbing the stain which only causes the stain to penetrate deeper into the fabric.**
- (2) Heat-Excessive heat will set stains. An example of heat setting a stain can be readily observed by applying lemon juice to a fabric. The stain on the fabric will initially be invisible but if you use a hot iron on the stain it will become visible. We also know that heat will cause an egg to harden and set. The heat of drycleaning can also set stains. It is therefore important when bringing clothes into the drycleaner to point out the stained areas for pre-spotting. Most drycleaners do not spot garments before cleaning unless the customer points out the stain. When washing fabrics use warm or cold water and dry on a permanent press cycle. A hot dryer over 120oF will set stains.**
- (3) Alkali-An alkali is a chemical that releases hydroxyl ions in the presence of water. Household ammonia, baking soda and color safe bleaches are all alkaline in nature. These agents will set stains referred to as tannin. Tannin is stains that originate from vegetable matter. The list of tannin stains include: coffee, wine, tea, soft drinks, liquor, ketchup, soy sauce, mustard and beer. When an alkali is put on a tannin stain the color will darken which shows it is oxidizing. Tannin stains should be worked with alkali free detergent and vinegar. The reaction of using acids on tannin stains can be observed when you put an acid such as found in lemons in tea. The lemon makes the tea lighter.**
- (4) Alcohol-Rubbing Alcohol is sold in supermarkets and found in some hand cleaners and hair sprays. When alcohol is put on a protein or albuminous stain it will set the stain, making the stain virtually impossible to remove. Albumin and protein stains originate from a living body. This includes eggs, milk, blood, perspiration and ice cream. We have experimented by putting alcohol on a blood stain and we found it resulted in a set stain that even the best drycleaners could not remove.**
- (5) Mustard Stain-Mustard stains when dry will be built up on the surface of the fabric. Do not attempt stain removal without first scraping off the surface residue with a spoon. This avoids transferring the stain into the fabric.**