

## **PROTEIN AND ALBUMINOUS STAINS**

**BY DANIEL EISEN (88)**

**Protein and albuminous stains are stains originating from a human body. This includes eggs, milk, urine, perspiration, blood, animal glue, discharge, vomit and some body fats. This can be a difficult stain to remove if it contacts alcohol or is allowed to set in the fabric for a period of time. If these stains are not removed before washing the heat of the dryer can set the stain. These stains are often built up on the surface of the fabric it will often turn white when you scratch it, In order to remove these stains it is important that you have an understanding of the methods available.**

### **DIGESTION**

**Digestion is a process that uses enzymes to convert insoluble stains to soluble substances. It is similar to what takes place in the human body. It is interesting that people have used saliva to remove stains. The advantages of using and understanding digestion is that the process removes stains safely by eliminating the need to rub, lubricate and employ chemicals that can affect the safety of many fabrics. Digestion can be used alone as a stain remover or in combination with other methods, thus increasing the range of stain removal. Enzymes associated with stain removal in digestion are proteins that act as a catalyst in a biochemical reaction. Many detergents contain enzymes making it suitable for stain removal. Remember enzymes do not remove stains but converts it to a soluble substance that can be removed by simply flushing with water. A classic riddle that I use in my spotting classes that explains enzymes is as follows: Question-How do they get the liquid center inside the liquid filled chocolate covered cherries? Answer-The cherries are put in a solid mold which contains an enzyme. The cherries are then dipped in chocolate. They are then put in storage for controlled time and heat. The enzymes then convert to solid substance on the cherries to a liquid sugar.**

### **USING ENZYMES (IMETHOD 1)**

**There are many detergents on the market that contain enzymes. Tide is a mild detergent that contains surfactants and enzymes. Do not use products that contain bleach or alkali. Sodium perborate, sodium percarbonate and sodium hydrochlorite are bleach. Ammonia is an example of an alkali. Read the ingredients of the products you intend to use carefully. In order for enzymes to work they must be used in warm water (120oF). They must be allowed to remain on the stain for at least ½ hour.**

### **PREPARATION**

**.....Mix 1 part warm water with 1 part enzyme detergent.**

.....Clear cool water.  
.....Eye dropper  
.....Spoon

### **PROCEDURE**

If stain such as egg has built up on the surface of the fabric, carefully scrape off excess with the edge of a spoon. Apply enzyme solution to stain and wait a ½ hour. Rinse with cool water. Enzymes can also be used in the washing machine by soaking stained garment in warm water plus enzyme detergent. Soak for ½ hour prior to regular washing.

### **METHOD 2**

This method is used if the stain is not removed in method 1.

### **PREPARATION**

.....1/2 tablespoon of mild detergent to 4 ounces of cool water  
.....household ammonia  
.....white distilled vinegar  
.....eyedropper  
.....spoon  
.....hydrogen peroxide (3%)  
.....towel or cloth

### **FACTS ABOUT THE CHEMICALS USED**

**Ammonia**-a mild alkali and must be carefully tested since it can disturb color on many fabrics especially wool and silk. If a color change occurs while using ammonia, rinse and immediately apply white distilled vinegar.

**White distilled vinegar**-a mild acid produced from the action of bacteria on yeast fermented brews. If a color change occurs while using vinegar, rinse area and apply ammonia.

**Hydrogen peroxide (3%)**-is a mild oxidizing agent and it is the same peroxide that is used as an antiseptic.

**REMEMBER TO TEST ALL CHEMICALS FOR FABRIC SAFETY PRIOR TO USE.**

### **PROCEDURE**

Apply detergent and water.  
Rub and dab  
Rinse with water  
Apply detergent and water and a few drops of ammonia

**Rub and dab**

**Rinse with water**

**Apply hydrogen peroxide**

**Add ammonia**

**Wait 5 minutes**

**Rinse with water**

**Apply vinegar**

**Rinse and feather area or wash**