

## **GENERAL PRODUCT FACTS:**

### **Natural or Organic:**

In hair care products there are no such thing as **all natural** products. Ingredients derived from natural sources lose their natural composition when they are processed to make cosmetic products. Cleaning ingredient in shampoos and conditioning agents in conditioners are just a few. They may start from plant derivatives, but are altered drastically to be a shampoo or conditioner. Adding natural or organic products to the shampoo or conditioner are done for performance enhancement.

### **SHAMPOO:**

The purpose of a shampoo is to clean the hair. It is important that shampoo does not clean too well, or all of the protective oils in the hair would be stripped out.

### **Detergents:**

The most common ingredient in shampoos is detergent, which is used in other products, a class of surfactants known as straight-chain alkyl benzene sulfonates. An example is Ammonium Lauryl Sulfate, or its sodium relative, or the slightly larger related molecule ammonium lauryl ether sulfate, sometimes abbreviated as ammonium laureth sulfate.

These detergents work best in water that has little calcium and magnesium, as these elements bind to the detergent and make an insoluble scum. So tetrasodium EDTA is used to sequester the calcium and magnesium from the detergent, while keeping them soluble so they rinse away without scum. Cocamide DEA (or MEA or TEA) is used as a foaming agent to make the lather. The other surfactants will generate a certain amount of suds, but this foaming agent is added to get the amount just right. Besides its foam stabilizing effects, it is also a viscosity booster (it's thick).

The detergent cocamidopropyl betaine is added for several of its special properties. It is milder on the skin than the benzene suffocates, so adding it to the mix reduces the amount of the harsher detergents needed. It is thicker than the other ingredients, so it can be added to make the mix have the right viscosity. It has anti-static properties so the hair doesn't generate an electric charge and jump to the plastic combs and brushes used when drying the hair. It is a humectant, attracting moisture from the air, thus keeping hair from drying out. Lastly, it has antibiotic properties that can prevent spoiling of the shampoo.

### **Special effects:**

Sodium chloride (table salt) is used to thicken the mixture if the main surfactants are sodium lauryl sulfates. If the surfactants are ammonium based, then ammonium chloride is used. Salt can make the shampoo harsh, drying, sting the eyes, and irritating to the skin leaving it itchy. In **Summerwinds Shine Onn**,

**Summerwinds Take A Hike and Summerwinds Stop N Itch Bath** there is no Sodium Chloride added.

Glycerin is added as a humectants (draws moisture from the air), as is propylene glycol, which is also a preservative.

**Summerwinds shampoo's** have Amino acids added that act as conditioners.

### **Preservatives**

Two widely used preservatives, DMDM hydantoin and imidasolidinyl urea are found in many shampoos, to prevent fungal and bacterial spoilage. They release formaldehyde to kill germs.

Sodium benzoate and 2-bromo-2nitropropane-1, 3-diol are other preservative's used in shampoos. It kills bacteria, fungi, and yeasts, and works well in acidic mixtures.

### **PH balance**

The surface of a strand of hair is covered with overlapping sheets, somewhat like the scales on a fish, or the shingles on a house. This surface is called the cuticle. Alkaline solutions raise these scales so they stand up. This makes the hair rougher, makes it look dull, and makes the hair shafts stick together due to the rough texture.

**All Summerwinds Shampoos** are made slightly acidic to keep the cuticle smooth and lying flat on the hair shaft.

As shampoo mixes with the water in the bath, or mixes with dirt on the hair, it can become less acidic as the acids mix with alkaline water or dirt. A compound that releases more acidifying ions when the acidity gets low, or absorbs acid when the acidity gets too high, is called a buffer.

A typical buffering agent used in shampoo is sodium citrate. Since the goal is to keep the shampoo slightly acid, the term "pH balanced" is actually a misnomer. The balance should be tipped slightly to the acidic side. Human pH is 5.5. A dog's pH is 6.5 **all** of our **Summerwinds Shampoo's** are 6.5 pH based. Many pet shampoos on the market are formulated for the human pH of 5.5, with a pet label applied to them.

### **CLARIFYING SHAMPOO**

Clarifying shampoo is any of a variety of shampoo products that are formulated to **deep clean** the hair by **removing product buildup from the hair shafts**.

Styling products, such as hair spray, conditioners, and even daily shampoos can cause buildup on the hair overtime. This buildup can add weight to the hair, making it flat and lifeless, as well as prevent the reflection of light, which makes the hair appear dull and dingy. Periodic use of a clarifying shampoo will help remove the buildup. Don't confuse the words buildup with residue. Residue can come from both the conditioning ingredient in shampoos and hair conditioners

that will protect the hair shaft. Residue can be a positive and essential end result for the shiny, healthy finished look. Buildup occurs from the accumulation of residue, both from topical styling products as well as some internal medications. Most clarifying shampoo products contain acetic acid. A chemical compound, though mild as far as acid goes, is known for its de-scaling abilities. As necessary as it is to keep the hair shaft clear of buildup it can be very difficult to find a clarifying shampoo that won't cause more harm than benefit. Many clarifying shampoos are not known for their conditioning abilities. With an improper formulation and harsh stripping agents in the ingredients some clarifying shampoos are great for aiding in the removal of unwanted buildup of oil, styling products, and other grime, but also remove the natural oils in hair and skin leaving the hair dull and dry out.

We at **Summerwinds** have worked long and hard on formulating our **(NEW) Summerwinds Remove-A-Way Clarifying Shampoo**. Finally arriving with a perfect answer to how to remove buildup with a mild formula is our **Summerwinds Remove-A-Way Clarifying Shampoo. Summerwinds**

**Remove-A-Way Clarifying Shampoo** is effective in removing product buildup or any accumulation buildup on the hair shaft. It is formulated not to deep cleanse so thoroughly as to remove any natural oils and moisture in the hair and skin or residue from conditioning agents in shampoos and conditioners that we want to remain on the hair shaft. Along with maintaining the same 6.5 pH balance that is mild and gentle as all the other shampoos in our **Summerwinds** line.

## **CONDITIONER**

Conditioners are compounds added to keep the hair cuticle smooth and slippery. Silicone oils such as dimethicone and cyclomethicone are used to make the hair shiny and slippery. Humectants (moisturizers) like panthenol help keep the cuticle moist so that the scales do not stand up.

Long chain fatty alcohols like cetyl alcohol, oleyl alcohol and stearyl alcohol lubricate the hair. One end of the molecule binds to the hair, leaving the slippery fatty end on the outside to rub against other strands of hair, or a comb.

Quaternary ammonium compounds are cationic surfactants that bind well to anionic surfaces like the protein in hair. The ammonium end sticks to the hair, leaving the long fatty end of the molecule to act as a lubricant. They are slightly conductive so they reduce the buildup of static electricity.

The "quats", as they are called, include compounds like stearylalkonium chloride, disteardimonium chloride, quaternium-5 or quaternium-18; polyquaternium-10 and they are all similar in form and function to cetrimonium chloride. These compounds help to soften and reduce anti-static. They are also used to thicken the shampoo.

The emollient isopropyl palmitate is used as a skin softener, moisturizer, and as an anti-static agent.

The term "hair conditioner" is vague. Hair conditioners fall into different groups according to what you want to accomplish with the hair. Thin hair need a specific kind of "conditioner", thick, dry hair need another...

### **Conditioners fall into six major categories:**

#### **Moisturizers**

Are concentrated with humectants. Humectants are compounds that attract and hold moisture into the hair. They may not necessarily contain botanicals or protein.

#### **Re-constructors**

Normally contain protein. Hydrolyzed human hair keratin protein is the best source, because it contains all 19 amino acids found in the hair. Human hair keratin protein has a low molecular weight. This enables it to penetrate the hair shaft (the cortex).

#### **Acidifiers -**

The key word here is "acid". Yes, it is good to put acid on your hair. Hair and skin are acid and don't like to be in an alkaline condition. When a product carries a pH of 2.5 to 3.5 it is normally termed an acidifier. This pH will close (compact) the cuticle layer of the hair. The result is shiny, bouncy hair. This pH range will adjust the beta bonds to alpha bonds (hydrogen bonds). Acidifiers do not weigh down the hair. They do create shine, and add elasticity. This category is great for fine textured hair.

#### **De-tanglers**

Most detangles are acidifiers (see above). Most have low pH's 2.5 to 3.5. They close the cuticle of the hair. Some "shield" the hair shaft with polymers (polymers are strings of "like" molecules- a chain). Some detangles are instant, some take 1-5 minutes to work.

#### **Thermal Protectors**

Thermal protectors safeguard the hair shaft against extreme heat. Using thermal protectors are one of the best things you can do to protect hair when blow-drying. They normally use heat-absorbing polymers that distribute the heat, so your hair does not get heat damage (a major cause of hair damage)

#### **Glossers/Polishers**

For the most part glossers are cosmetic. Most Glossers contain dimethicone or cyclomethicone (very light oils derived from silicone). Used in small amounts they reflect light. Also, they are one of the best products to control the "frizzles."

## **Oils (E.F.A.)**

When hair is dry (esp. if the hair has been treated with chemicals such as hair color-perm-relaxer) you need to add oil to the hair. The skin and scalp produces natural oil called sebum. E.F.A. are the closest thing to natural sebum (sebum contain E.F.A.). E.F.A. can take very dry and porous hair and transform it into soft pliable hair. E.F.A. acts as a barrier on the skin to help prevent the loss of moisture and thereby moisturize skin. In scientific studies it is one of the most effective occlusive moisturizing ingredients.

**Summerwinds Protect A Coat Oil Conditioner** is both a Moisturizer, Re-constructors and contains Essential Fatty Acid Oils.

**Summerwinds Fine L Shine Cream Rinse Conditioner** is both a Moisturizer and Acidifier.

## **THE BIG OIL DEBATE:**

There are many pros and cons about using oils. I am sure that you've heard some of them. And in part I couldn't agree more. There are as many different types of oils as there are opinions. There **is heavy petroleum crude oil, animal fat oils, vegetable oils, flower oils, seed oils to light refined oils (EFA)** and on and on. **All oils are not equal.**

For example, **LANOLIN** is animal fat oil that was very popular buzz/ word in the human hair cosmetic world a while back. **LANOLIN** is a fatty substance from sheep, by-products of the meat packing industry. But it was quickly learned that it caused more problems than benefits. It is very heavy and is fast to rancid not to mention toxins, including synthetic hormones used to bulk up animals, tend to accumulate in fat tissue. Animal fats tend to clog sebaceous pores more than vegetable oils, not to mention very difficult to remove, by detergents or strong clarifying shampoos.

**LANOLIN** is a very poor choice, for human care products let alone for animals with very fine coats. If the **LANOLIN** is left in the coat for longer than 3 to 4 days it begins to dry out, and can cause itching and matting and making more work for yourself.

It doesn't do you any good to put your dog down in heavy oil that the only way to remove them from the skin and coat on show day's is to use a detergent. Not only does the detergent remove the **LANOLIN** or **HEAVY WEIGHT OILS**, it removes the natural oils and moisture from the animal's hair and skin.

What we use in **Summerwinds Protect-A-Coat Oil Conditioner** is **light refined oils (E.F.A.)** and **E.F.A. (Essential Fatty Acid)**, that will not only protect the hair shaft but are the closest thing to natural sebum (sebum contains **E.F.A.**) **E.F.A.** will a take very dry and porous hair and transform it into soft pliable hair. **E.F.A.** acts as a barrier on the skin to help prevent the loss of moisture and thereby moisturize skin. In scientific studies it is one of the most effective occlusive

moisturizing ingredients and is easily removed with one (1) 6.5 pH balance **Summerwinds Shine-Onnn Shampoo. Summerwinds Protect-A-Coat Oil Conditioner** is a two (2) in one combo conditioner. The creamy lotion part of **Protect-A-Coat** is a **moisturizing and re-structor conditioner**, with **refined oil (E.F.A.)** added.

### **Shampoo / Conditioner all in one:**

Shampoos and Conditioners as you can see from above, **do not have the same chemistry** and are very different from each other. **Shampoos are of alkaline base. Conditioners are acid based. Alkaline and Acid are like oil and water and don't complement each other.** Conditioners are classified as cationic surfactants and Shampoos are classified as anionic surfactants.

Shampoos are designed to cleanse the hair and remove soil and oil build up.

They are not meant to adhere to the hair shaft like conditioners. They are meant to cleanse and be rinsed out while conditioners have properties to coat and protect the hair. In other words they will cancel out each other.

The reason for designing the two in one combo is to save time and money by two products in one. **Nice idea if it would work, but it doesn't.** It is much better to cleanse and condition individual allowing each product to provide ultimate results and to achieve their full potential.

### **ANT-STATIC SPRAY**

Electrostatic events occur whenever positive and negative electric charges are held apart from each other. When you comb or brush hair on a dry day, you will find that the comb /brush can pick up bits of dust, then that is a static electric occurrence, it is an example of static electricity. Maybe reword the above

But there is **no electricity in the hair or in the comb.** Instead, **the rising of the hair is the static electricity.** The **crackling sounds are the static electricity.**

Static electricity is most often caused by a lack of moisture in the atmosphere.

This may or may not be of much interest to you, but when you are trying to show a dog who's hair is suppose to drape and hang down and instead it is sticking out like you struck his toe in a light socket, I am sure that the Scientifics of static electricity will get your attention! Next thing will want is to find a product that will control this phenomenon of static electricity. **Summerwinds Stat A Way Spray** will help combat static in two ways. **Summerwinds Stat A Way Spray** will put small minute amount oil into the coat, which adds weight, and helps hold in necessary moisture, while deodorizing the coat at the same time. **Summerwinds Stat A Way Spray** also contains de-tangle properties that protect the hair shaft for ease of grooming and add shine.

### **CAUTION!!!**

#### **Products And Things That Damage Coats The Most...**

1. Shampoo is one of the most important selections you will make in choosing the right grooming products. **Continue shampooing without restoring the pH balance with a cream rinse acidifier**, such as **Summerwinds Fine-L-Shine Cream Rinse**, will cause the cuticle layer on the shaft of the hair to open resulting in dry, dull, brittle hair and breakage will occur because the chemical makeup of the shampoo itself is made with an alkaline base. I will say it again, **hair and skin are acid and do not like to be in an alkaline condition.** Especially with harsh shampoos formulated for human's pH instead of dog's pH.

For this reason, Summerwinds spent countless hours of extensive research development of all of our **Summerwinds** shampoo formulas.

2. Blow Drying hair with extreme heat, and not protecting the hair first with a thermal protector.
  3. Chemically treated hair, such as tinting, perming, and straightening without using reconstructive conditioner.
  4. Sun, UV rays without using sunscreen (i.e., **Summerwinds Protect A Coat Oil Conditioner** with sunscreen.)
  5. Chlorine, some dogs will swim daily in swimming pools. Using **Summerwinds Protect-A-Coat Oil Conditioner** will protect the hair from the harsh chlorine results.
  6. Hair sprays, bodifiers, texturizers, mousses products that give hair body.
- Grooming tools (i.e., brushes that are not used correctly.)