Soap Making Terminology

Below is a list of some common terms used when soaping. Although we tried our hardest to ensure that all important soaping terms are defined, this is by no means a complete soaping dictionary.

Absolute- Derived from plants through a method of extraction involving solvent, this term refers to the highly aromatic, concentrated oil that is extracted.

Additives- Ingredients that can be added to processed soap, which are not included in the original recipe which was used to calculate the SAP value for lye purposes. This additive category would include all ingredients with the exceptions of: lye, water, soaping oils, butters, and fats. This means that additives would describe the addition of fragrance oil, soap colorant, optiphen, vitamin E, herbs, clays, etc. Note: If you have a superfat recipe, any leftover or excess oils, butters, or fats, not saponified by the lye solution would also be considered an additive.

Alkali- Any compound with a pH higher than 7. Alkali is also referred to as a base. Both sodium hydroxide and potassium hydroxide are alkalis (or bases).

Allergen- An element that can cause an allergic reaction (irritation, redness, swelling, discomfort) in one person, but does not adversely affect another.

Anhydrous- Not containing any water.

Anti-bacteria- The ability to fight off bacteria successfully.

Anti-oxidant- Natural or synthetic elements that have the ability to decrease oxidation, preventing breakdown or spoilage.

Anti-septic- The ability to fight or decrease an infection topically (on the skin), by restricting the growth of microorganisms.

Aromatherapy- The use of certain fragrance or essential oils that can reform a person's mood or actions.

Aromatic- Being odoriferous, having a strong odor; usually found as a pleasant scent.

Astringent- An element with the capability to pull together or constrict skin tissues (or pores), concurrently restricting the flow of natural secretion from the skin.

Base- Also known as an alkali; any substance with a pH level higher than 7. Both sodium hydroxide and potassium hydroxide are bases (or alkalis).

Botanical- Directly from or related to plant or plant life.

Carrier Oil- A substance that is used to dilute a fragrance or essential oil so that it is safe for use on the body. Carrier oils can also refer to an oil that is used to carry the fragrance out in a product like roll on perfume. Oils used in this way typically do not have a very strong scent, ie: sweet almond oil.

Castile Soap- Originally denoting an olive oil soap bar; which was named for the region in Spain where it originated. This term now is commonly given to any soap containing 100% olive oil (no other soaping oil used in the recipe).

Caustic- Usually a term to describe a very strong acid or base, this refers to a substance that by means of a chemical reaction will breakdown or destroy other elements under certain conditions. Caustic material is very dangerous especially to elements containing water such as organic tissue. An example of a caustic ingredient is sodium hydroxide (lye).

Cold Process Soap Making- The term cold process is actually attributed to the fact that there is no outside heating source required for saponification; the lye mixture itself heats and saponifies the oils. This process, abbreviated as CP, involves diluting lye into distilled water to form a lye solution. This lye solution is then added to melted oils/fats/butters and stirred. After trace is present, other additives such as fragrance and herbs may be added. Batter is then poured into molds. Insulation of molds is required. Within 24 hours, the soap is solid enough to be removed from the mold and cut, exposing

more soap area to oxidation. For a time period of 4-6 weeks, the soap must complete the saponification process. During this time, any excess lye and water is evaporated out, creating a milder and harder bar of soap. Note: Using a CP bar of soap that still has active lye will irritate and burn the skin. A pH strip test is the best way to test if your soaps are safe to use.

Cold Process Oven Process Soap Making- This soaping process; usually referred to as CPOP, involves diluting lye into distilled water to form a lye solution. This lye solution is then added to melted oils/fats/butters and stirred. After trace is present, other additives such as fragrance and herbs may be added. Batter is then poured into molds. The molds are then placed into a 170 degree oven for 1- 2 1/2 hr. Within 24 hours, the soap is solid enough to be removed from the mold and cut, exposing more soap area to oxidation. To ensure milder and harder bars of soap, the soap is then cured for 2-4 weeks. Note: Using a CP bar of soap that still has active lye will irritate and burn the skin. A pH strip test is the best way to test if your soaps are safe to use.

Cosmetic Grade- Available in different grades which are priced accordingly, this refers to ingredients that are safe for use on the body or in cosmetics.

Cure- The time period that it takes to saponify soap so that there is no longer any active lye present.

D&C- D & C is the abbreviation for drug and cosmetics. If something is approved as D&C safe, then it can be used for cosmetics or in drugs.

Deodorize- This term refers to the removal of a scent from something. Within soaping reference, many soaping oils are deodorized to take away their natural scent. Using deodorized soaping oils is one way to keep your fragrance true to their original aroma.

Detergent- This agent has cleansing benefits and performs very similar to soap. However, detergent is made from chemical compounds other than the fats/oil/butters and lye (like soap). When a detergent is found in the ingredients list of a product, it must be labeled as a cosmetic product under the specific guidelines of the FDA.

Dreaded Orange Spots- These spots occur in processed soaps that contain are large amount of soaping oils that have turned rancid. These spots are orangish, brownish, beigeish in color. It is believed that they are caused by using soaping oils which are old.

Embeds- Embeds refer to pieces of soap that are placed into the processing soap during the light trace stage.

Emollient- Refers to having certain properties that are both soothing and softening to the skin.

Emulsifying Wax- This is an emulsifier (a product that allows water based ingredients and oil based ingredients to bind together) used in hair and skin care. Emulsifying wax is used in skincare recipes to allow for thick creams.

Emulsion- This is when two liquids which normally would not blend together, are blended together (oil/water). Typically, the process involves an emulsifier (a product that allows water based ingredients and oil based ingredients to bind together).

Essential Oil- Natural volatile oils that are extracted through various means from plant matter. Extraction could take place by means of: Distillation, expression, or the use of chemical solvents.

Exfoliate- An additive that is added to processed soap that allows for the removal of dirt and debris from the skin, as well as, the removal of dead skin cells themselves, for healthier skin.

Exothermic- A term referring to the heat that is produced and released when a chemical reaction occurs. Examples of an exothermic reaction would be when lye is added to water or when the lye solution is added to the oils and butters.

Extract- For essential oils, this is when the oil can be extracted from the plant without the use of any chemical solvents. This is the most pure, concentrated form of an essential oil.

F,D&C- F,D&C is the short abbreviation for Food, Drug, and Cosmetics. If something is F,D&C approved, that means that it is a safe ingredient for use in food, drug, and cosmetics.

Fatty Acids- Fatty acids are compounds either saturated or unsaturated, that are found in all fats and butters. The fatty acids are what is responsible for giving your soap bars conditioning, creamy lather, bubbles, hardness, and cleansing ability.

Fixed Oils- These are oils such as olive, palm, and coconut, that can be heated without evaporating.

Flash Point- The possible lowest temperature that will inflame the vapors of a liquid when introduced to a source of ignition. Flashpoints are available for every fragrance and essential oil that Natures Garden carries. They are located in three places, on the website under the fragrance information, on the specific MSDS sheets, as well as on the fragrance labels themselves. Fixed oils also have a flashpoint.

Fragrance Oil- The blended combination of essential oils, synthetic aroma chemicals, and resins to produce a liquid that is extremely aromatic. Certain scents can only be derived synthetically such as Strawberry, Coconut, Banana, Mango (to name just a few) because these particular aromas cannot be made into essential oil form.

Gel Phase- A possible phase of saponification, since not all soap batches will do this; occurring in the beginning of the process, this refers to the short period of time when the soap batter transforms to a warm clear gel. This gel will then slowly return to being opaque, but it will also be a little bit more solid and cooler.

Glycerin- A natural emollient and humectant, glycerin is a product of processed soap. It is also often removed from commercial brands soaps and used to created creams and lotions.

Hot Process Soap Making- This soaping process, generally referred to as HP, has steps very similar to the CP soap steps, but varies in that you are adding heat to the equation to speed up the saponification process. The heat sources are usually a crock pot or stovetop. The HP process includes: making your lye water mixture, adding your oils to the heat source, blending the lye water and oils together, stir, cook, stir, stir, stir, add fragrance/ additives, stir some more. With this process, it is not until the soap batter is closer to a solid than a liquid that it is scooped and packed into a mold. Since the saponification process has already completed from the heat, there is no need to insulate your mold. Although a cure time for these soaps is not required, to get a milder and harder bar of soap, a cure time of 1 week is advised. The final soap bars will have a very rustic appeal.

Humectant- An ingredient that not only attracts water from the environment, but also aids the skin in absorbing the water as well.

Hydrating- Something that provides moisture or water to the skin.

Hydrogenated Oil- An oil that has the addition of hydrogen added to it to make it a solid or semi solid at room temperature. The process of hydrogenation helps to decrease the chance of oils turning rancid.

INCI Name- Mandatory for labeling in the US and Canada, the INCI names were created to ensure that all ingredients would be listed the same on various cosmetic products. This also allows for ease on consumers when comparing ingredient lists on cosmetics. INCI stands for International Nomenclature Cosmetic Ingredient.

Infusion- Taking an additive such as a herb, and allowing it to steep in a liquid to extract the herb's beneficial aspects.

Insoluble- This means not able to be dissolved. Oils/Butters/Fats will not dissolve in water.

Irritant- Much like an allergen, irritants cause disturbing and painful reactions to skin.

Lye- Essential to the saponification process, lye is a caustic base. Lye can also be referred to as either sodium hydroxide (used to make bar soaps) or potassium hydroxide (used to make liquid soaps).

Lye Discount- The method of purposely decreasing the amount of lye that should be included in a soaping recipe.

Melt and Pour Soap Making- This soaping process, usually referred to as M&P, involves using soap that has already gone through the saponification process. The pre-fabricated soap base only needs a few steps before use. First, the slabs are cut and melted down into a liquid form in order to add any

fragrance, color, or additives. Once this is complete, the liquid must be poured into a mold where it will harden. The soap is finished and can be used once it has hardened and is popped out of the mold. Since this process does not include the use of lye, no cure time is needed.

Melting Point- The temperature at which a soaping oil will turn from a solid to a liquid, or starts melting.

MSDS- The abbreviation of Material Safety Data Sheet. These sheets contain all of the relevant information of a specific material.

Natural- Anything that is of the earth, not containing any manmade or synthetic additions to its makeup.

Nutrient- Within the realm of soap making, this refers to anything that is beneficial or has favorable advantages for the skin.

Organic- Without the additions of anything man made or chemically altered, this term denotes anything that was once living.

pH scale- A form of measurement for the acidity or alkalinity of a substance in ratio to water. Ranging from 0-14, the lower the number, the more acid it is. The higher the number, the more alkaline. A pH of 7 will denote neutral (water has the pH of 7). Processed soap will have a pH of 8.5-10.5 when cured completely.

pH strip- Litmus paper containing water soluble dyes that when dipped into a liquid or set on a bar of soap will show a color. The color is then compared to a chart to find the pH level.

Photosensitizers- A substance that once used on the skin will make the skin super sensitive to the sun or to sunlight; increasing the chance of a sunburn in some people.

Preservative- An ingredient that is added to a substance that will prevent the breakdown and spoilage from microbial growth.

Potassium Hydroxide- Symbolized as KOH, this is used for lye solution of gel or liquid soaps. Also known as caustic potash. This ingredient is a very strong base with a pH of 14. Note: The SAP values of your recipes fats/butters/oils will vary depending on whether you are using sodium hydroxide (NaOH) or potassium hydroxide (KOH).

Rancidity- The breakdown or spoilage of oils/butters/fats used in soaping. Often, there is a stale or off smell due to the decomposition of the oil/butter/fat.

Rebatch- Considered a do-over in the soap making process, this process involves the use of soap that was already crafted through CP or HP. The processed bars are grated down and melted with a heat source, usually a crock pot, but other

sources are used as well. A liquid, like water or milk, is added to help prevent scorching of the soap shavings. If a rebatch is being done due to an error, the correcting elements are added too. The rebatch heats for 1 hour. Once it is in a thick liquid form, any additives such as color, fragrance, or herbs, are added. The thick batter is scooped out and molded. Once cooled completely, the soap is removed, cut, and cured as usual. Rebatching is generally done for two main reasons. The first is to correct a soaping error or seize. The second is for the addition of additives that may not survive or react badly during the saponification with active lye. An example of these temperamental additives would be natural exfoliates.

Refined oils- These are oils that have been filtered, removing any impurities in the oils.

Safety Equipment- A category for all of the equipment used to keep one safe during the soaping process. This equipment includes but is not limited to: Safety goggles and/or face shield, rubber gloves, a face mask, aprons, etc. This category would also include items like protective coverings for work areas, fire extinguishers, bottles of neutralizing substances (such as vinegar for lye spills), first aid kit, etc.

Saponification- This is the process of the chemical reaction that the lye solution and oils/fats/butters go through when making soap. Saponification produces both soap and glycerin. Glycerin naturally occurs as a byproduct of this chemical reaction.

SAP Value- The abbreviation for Saponification Value. This refers to the number of milligrams of lye that is needed to completely saponify one gram of a specific oil/fat/butter in a soap recipe. Note: The SAP values of your recipes fats/butters/oils will vary depending on whether you are using sodium hydroxide (NaOH) or potassium hydroxide (KOH).

Seize- A term referencing the condition of the soap batter when saponification has occurred enough that the batter is no longer a liquid, and has started to solidify. This occurs while mixing together the ingredients of a soap recipe when the batter becomes too thick to mix easily or pour into a mold.

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