

Chemistry Vocabulary

Acid Mantle - The acid mantle is the protective barrier of oils and secretions on the surface of the skin.

Acids – Fact: An acid is a substance that has a pH below 7.0. **Benefit:** Acids are used to exfoliate the skin.

Air – Fact: Air is odorless, colorless. **Benefit:** Air is a gaseous mix that makes up the Earth's atmosphere.

Alkalis – Fact: Alkalis are also called bases and have a pH above 7.0. **Benefit:** Alkalis are used to neutralize acids during a chemical exfoliation.

Anion - Fact: An ion has a negative electrical charge. **Benefit:** Anions are absorbed into skin for a positive benefit such as increasing circulation

Antioxidants – Fact: They are used to stabilize skin care products to prevent oxidation of the product, and can help with cell damage. **Benefit:** Examples are vitamins such as A, C, and K and are applied to the skin.

Atoms –Fact: They are the smallest particle of an element that still retains the properties of the element. **Benefit:** Solids, liquids, and gases are made up of atoms.

Cation – Fact: Cations are ions that have a positive electrical charge. **Benefit:** Ions have a positive charge and are used in the process of iontophoresis.

Chemical Change – Fact: The change in the chemical when it unites with another to form a new substance. **Benefit:** New substances are created that differ in properties from the original.

Chemical Compounds – Fact: Two or more atoms of different elements bound chemically with fixed chemical makeups. **Benefit:** These compounds have definite proportions, and distinct properties.

Chemistry – Fact: Chemistry is the science that deals with the composition, structures, and properties of matter. **Benefit:** Everything we do involves chemistry. Chemical reactions are always occurring within the body and everything we use on a daily basis.

Combustion – Fact: Rapid oxidation of a substance, accompanied by the production of heat and light. **Benefit:** Combustion involves burning

Compound Molecules- Fact: They are chemical combinations of two or more atoms of different elements in (fixed) proportions. **Benefit:** Acids, anions and cations are compound molecules. Examples are water, hydrogen peroxide, salt, and baking soda. We use all of these in our profession.

Element – Fact: The simplest form of matter that can't be broken down into a simpler substance without loss of its identity. **Benefit:** Hydrogen, nitrogen, oxygen, and calcium are elements. We all use and need these elements.

Elemental Molecules - Fact: Molecule containing two or more atoms of the same element in definite (fixed) proportions.

Benefit:

Emulsions – Fact: An unstable physical mixture of two or more immiscible substances and an ingredient that acts as an emulsifier. **Benefit:** Many products work because of the emulsifiers in them.

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Free Radicals – Fact: Free radicals are unstable molecules that cause inflammation, disease, and wrinkles in the body. Examples are pollution and smoking. **Benefit:** Antioxidants taken orally or applied to the skin can fight free radicals.

Gases – Fact: Matter without a definite shape or size. Gases take the shape of whatever container they are in. **Benefits:** Gases such as neon and argon are used in our profession.

Hydrogen Peroxide – Fact: Hydrogen Peroxide is a chemical compound of hydrogen and oxygen. **Benefits:** It is used as an antiseptic which can be used to help acne.

Hydrophilic – Fact: Products that are hydrophilic absorb moisture. **Benefit:** Products that are hydrophilic are good for dry skin because it moisturizes.

Hydroxide – Fact: This is an anion having a negative electrical charge. **Benefit:** This ion forms salt and dissolves in water. An example of a hydroxide is boric acid. Boric Acid can be used as an antiseptic, eye wash, and treatment products for acne.

Immiscible – Facts: Liquids that are not capable of being mixed together are called immiscible.

Inorganic Chemistry – Fact: The study of substances that do not contain carbon. **Benefits:** They are used as surfactants.

Ion – Fact: An atom or molecule that has an electrical charge. **Benefits:** Positive and negative ions can have positive effects on the skin. Examples are desincrustation and iontophoresis.

Ionization – Fact: Ionization occurs during separation of an atom or molecule into positive or negative ions. **Benefits:** Negative ions can produce biochemical reactions that increase levels of the mood chemical serotonin.

Lipophilic – Fact: Lipophilic are oil loving and attract oils. **Benefit:** Skincare products with lipophilic ingredients are good for dry skin.

Liquids – Fact: Liquids have volume, no definite shape and take shape of its container. **Benefits:** An example is water. Water is great to drink and almost all skincare products contain water.

Miscible – Facts: These ingredients are mixable they can be mixed together to create solutions. **Benefits:** An example is alcohol and water and witch hazel (antiseptic) and water.

Molecule -Fact: Molecules are a combination of two or more atoms. **Benefits:** An example of a molecule is water. We need water to survive

Nitrogen – Fact: Nitrogen is a colorless element. **Benefit:** Nitrogen makes up four-fifths of the air in the atmosphere

Oxidation – Fact: Oxidation is the addition of oxygen or loss of hydrogen. **Benefits:** Oxidation causes a chemical reaction which produces an oxide.

Oxidation-Reduction – Fact: This is known as redox. **Benefit:** It is a chemical reaction where the oxidizing agent is reduced and the reducing agent is oxidized.

Oxygen – Fact: The most abundant element on the Earth. **Benefit:** We need oxygen to breath and it also burns so it creates energy. Hyperbaric chambers use oxygen.

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pH – Fact: pH stands for the potential hydrogen and the degree of acidity and alkalinity of a substance. **Benefit:** It is important for estheticians to know how pH works and that certain levels of pH can be a benefit or a precaution for the skin.

pH Scale – Fact: This scale measure of the acidity and alkalinity of a substance. **Benefit:** Skincare products have a pH level such as acids used for chemical exfoliation.

Physical Mixtures – Fact: These are a combination of two or more substances united physically, but not chemically, without a fixed composition. **Benefit:** A mixture is the physical combination of two or more substances such as solutions, or suspensions.

Redox Reactions – Fact: These are reactions of a chemical that when oxidizing agents are reduced the reducing agent is oxidized. **Benefits:** Some benefits are photosynthesis and respiration. Oxidation-reduction reactions are responsible for food going bad.



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