

Ethanol (Ethyl Alcohol)

Ethanol, also called alcohol, ethyl alcohol and grain alcohol, is a clear, colorless liquid and the principle ingredient in alcoholic beverages

Uses

Personal Care Products

Ethanol is a common ingredient in many [cosmetics and beauty products](#). It acts as an astringent to help clean skin, in lotions as a [preservative](#) and to help ensure that lotion ingredients do not separate, and in hairsprays to help the spray adhere to hair.

ethanol is effective in killing microorganisms like bacteria, fungi and viruses, it is a common ingredient in many hand sanitizers

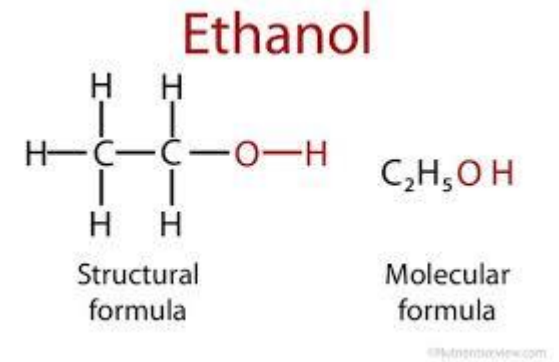
Household Products

Ethanol mixes easily with water and many organic compounds, and makes an effective [solvent](#) for use in paints, lacquers and varnish, as well as personal care and household cleaning products.

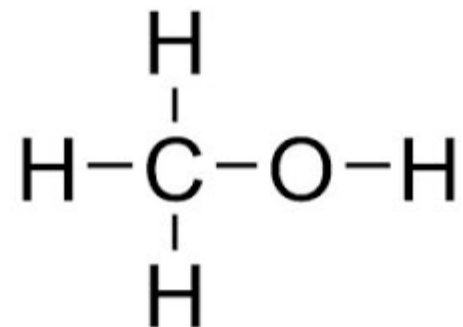
Food Additives

As a food additive, ethanol can help evenly distribute food coloring, as well as enhance the flavor of food extracts. For example, vanilla extract, a common food flavoring, is made by curing and processing vanilla beans in a solution of ethanol and water.

ethanol, typically in a mixture called E10, made up of 10 percent ethanol and 90 percent gasoline, to oxygenate the fuel and reduce air pollution



Methyl alcohol

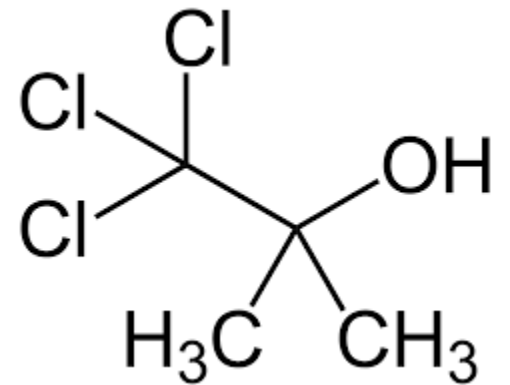


Uses of methyl alcohol

- As an industrial solvent for oils, fats, gums, celluloid etc.
- For dry cleaning and preparation of perfumes and vanishes.
- As an anti-fridge agent for automobile radiator in cold countries.
- Used as starting material for preparation of methyl chloride, dimethyl sulphate and formaldehyde.
- It is used to denature ethanol (to make ethyl alcohol unfit for drinking).

Chlorobutanol

- 2 hydroxy, 2 methyl, 1,1,1 trichloropropane (**trichloro-2-methyl-2-propanol**)
- It is a strong hypnotic agent and has been used as preanesthetic medication
- It is as dangerous as chloral hydrate



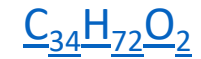
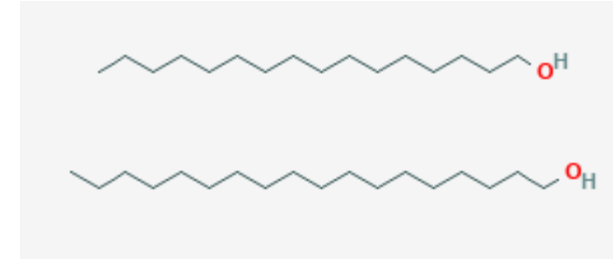
Uses:

Primarily as a preservative for ophthalmic and parenteral preparations due to antimicrobial and germicidal activity

0.5 % used in the eye , mouth preparations

Cetostearyl Alcohol

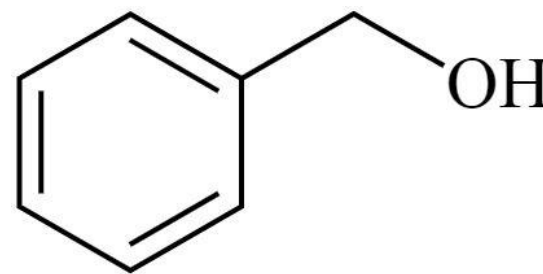
Cetostearyl Alcohol ($\text{CH}_3(\text{CH}_2)_n\text{OH}$) is a mixture of cetyl and stearyl alcohols that can come from vegetable or synthetic sources.



It is classified as a fatty alcohol. Cetostearyl alcohol is a white, waxy, solid material in the form of flakes. It is oil soluble, but it is not water-soluble. In the pharmaceutical and cosmetics industry, cetostearyl alcohol functions as an emulsion stabilizer; opacifying agent; surfactant - foam booster; and viscosity increasing agent. It is often used in creams and lotions.

It is commonly used in hair conditioners and other hair products

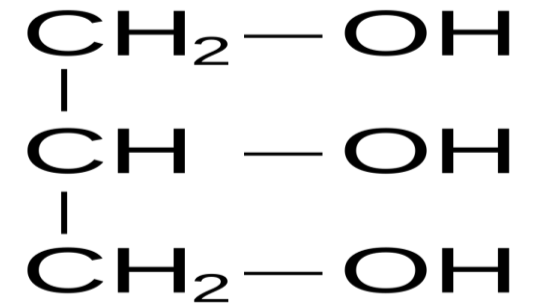
Benzyl Alcohol



This compound is widely used as a solvent for epoxy resin coatings, inks, and paints. Some other applications of benzyl alcohol are listed below.

- $C_6H_5CH_2OH$ is a precursor to several esters.
- A solution of benzyl alcohol with a concentration of 10% can be used as a local anaesthetic and also as an antimicrobial agent.
- This compound is a component of the fluid mixtures used in electronic cigarettes (it enhances the flavour).
- Benzyl alcohol can serve as a dielectric solvent for the reconfiguration of some nanowires via dielectrophoresis.
- 5% solutions of this compound can be used to treat head lice.
- It is used in the manufacture of soaps, shampoos, and skin lotions because of its antifungal and antibacterial properties.

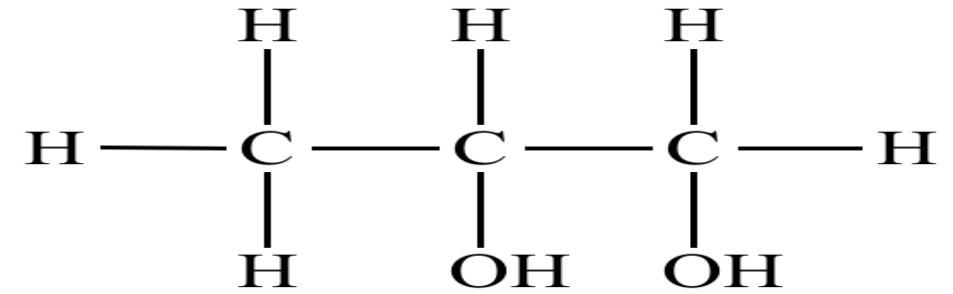
Glycerol



Uses of Glycerol:

1. pharmaceutical and cosmetic preparations.
2. Reduces brain edema in cerebrovascular disease.
3. Nitroglycerin is used as vasodilator especially for the coronary arteries, thus it is used in treatment of **angina pectoris**.
4. explosives manufacturing.
5. treatment of **glaucoma** (increased intraocular pressure) due to its ability to dehydrate the tissue from its water content.

Propylene glycol



Propylene glycol (CH₂OH-CH₂-CH₂-OH) is a commonly used drug solubilizer in topical, oral, and injectable medications. It is used as stabilizer for vitamins, and as a water-miscible cosolvent

Propylene glycol is metabolized to lactic acid, which may lead to the reported lactic acidosis.

The high concentration of propylene glycol contained in certain intravenous drug products, such as phenytoin, diazepam, digoxin, and etomidate, may induce thrombophlebitis. Rapid infusion of solutions containing high concentrations of propylene glycol-containing drugs has been linked to respiratory depression, arrhythmias, hypotension, and seizures.

Propylene glycol is also used as moisturizer in cosmetic products and as a dispersant in fragrances.