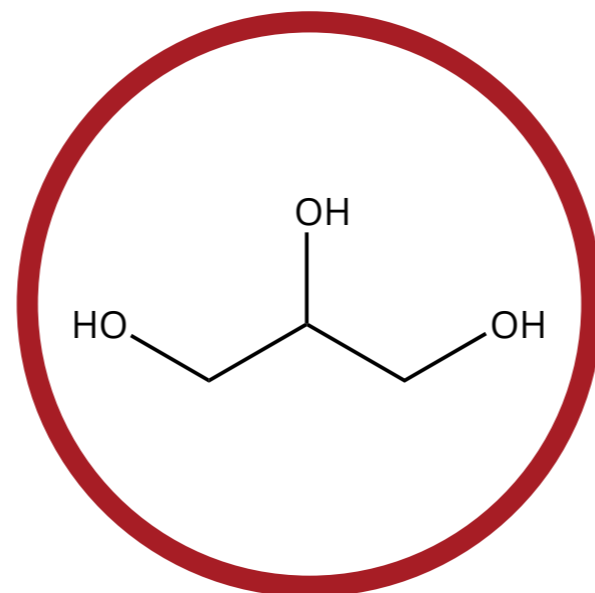


EVERYDAY COMPOUNDS: GLYCEROL

ALSO KNOWN AS GLYCERIN, GLYCEROL IS PRODUCED AS A BY-PRODUCT OF SOAP-MAKING, & CAN ALSO BE PRODUCED SYNTHETICALLY

IN THE FOOD INDUSTRY

There are a number of different uses for glycerol in the food industry. It can be used as a sweetener in drinks, as an important moistening agent for baked goods, and is also added to confectionary to prevent sugar crystallisation. Additionally, it is often used as a solvent for food colourings, and higher levels can have a preservative effect.



GLYCEROL

Propane-1,2,3-triol
Colourless, odourless,
viscous liquid
 $C_3H_8O_3$

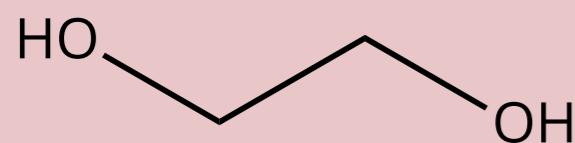


IN PERSONAL CARE PRODUCTS

Glycerol is used as a method of improving smoothness in toothpaste, skin care products, shaving cream, soaps, and hair-care products. It serves as an emollient and lubricant in these products. It is also found in pharmaceuticals, where it is commonly used as a humectant to stop creams drying out, and as a tablet-holding agent.

IN ANTI-FREEZE

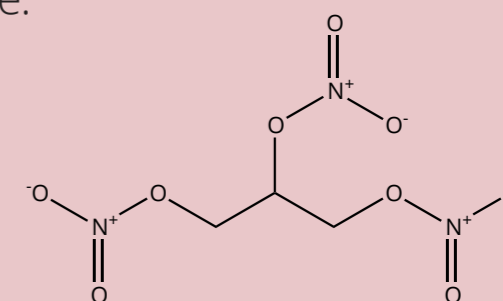
Glycerol was historically used as an anti-freeze, since it can form strong hydrogen bonds with water, lowering the freezing point. It was succeeded by ethylene glycol (shown below), but as this is toxic to humans, glycerol is being reconsidered as a non-toxic alternative.



ETHYLENE GLYCOL

AS A PRECURSOR TO EXPLOSIVES

Glycerol can be reacted with a mixture of sulfuric acid & nitric acid to produce nitroglycerin, an explosive liquid commonly used in dynamite and other propellants. This compound is also used as a medication for ischemic heart disease.



NITROGLYCERIN