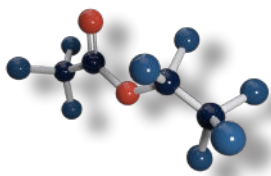


Ethyl acetate



Formula: $C_4H_8O_2$

CAS: 141-78-6

Source: Manufacturing - Production of silks, leathers & Pharmaceuticals

Detection Method: Tiger, Tiger^{LT}, Cub, Falco, TVOC 2, GasClam 2 & GasCheck G

Ethyl acetate is a carboxylate ester with the chemical formula of $C_4H_8O_2$. It is a colourless liquid that has a sweet, fruity odour that most people find pleasant. Ethyl acetate is a polar aprotic solvent. It has two dipole moments, generated by its two high electronegative oxygen atoms, which are on the carbonyl and ethyl groups.

$C_4H_8O_2$ - OCCURS NATURALLY IN FRUITS, YEASTS AND SUGAR CANE

What Is Ethyl Acetate?

Ethyl acetate is used as a solvent for varnishes, lacquers, dry cleaning, stains, fats and nitrocellulose. It is released during the production of artificial silk and leather, and during the preparation of photographic films and plates. It is released during the manufacture of linoleum, and 'plastic' wood, dyes, pharmaceuticals, drug intermediates, acetic acid, artificial fruit flavourings and essences, and perfumes and fragrances. Ethyl acetate is used as a solvent in nail polish, nail polish remover, base coats and other manicuring products.

Health Effects If Exposed

Short-term exposure to high levels of ethyl acetate results first in irritation of the eyes, nose and throat, followed by headache, nausea, vomiting, sleepiness, and unconsciousness. Very high concentrations may cause a stupor. Prolonged exposures may cause clouding of the eye, damage to the lungs, heart, kidney and liver problems.

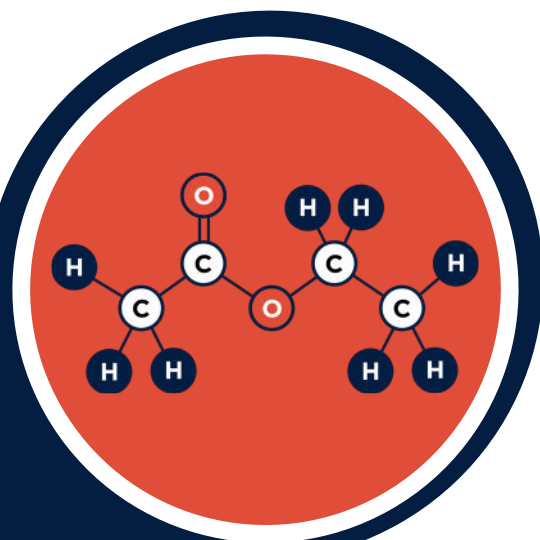
The Properties of Ethyl Acetate

Ethyl acetate is a moderately polar solvent that has the advantages of being volatile, relatively non-toxic, and non-hygroscopic. It is a weak hydrogen bond acceptor, and is not a donor due to the lack of an acidic proton (that is, a hydrogen atom directly bonded to an electronegative atom such as fluorine, oxygen, or nitrogen). Ethyl acetate can dissolve up to three percent water and has a solubility of eight percent in water at room temperature. At elevated temperature its solubility in water is higher.

Occurrence In Wines

Ethyl acetate is the most common ester in wine, being the product of the most common volatile organic acid - acetic acid, and the ethyl alcohol generated during the fermentation. The aroma of ethyl acetate is most vivid in younger wines and contributes towards the general perception of "fruitiness" in the wine. Sensitivity varies, with most people having a perception threshold around 120 mg/L. Excessive amounts of ethyl acetate are considered a wine fault.

Ethyl Acetate Detection Instruments



Fixed Instruments



Semi-Portable Instruments



Portable Instruments



Personal Instruments