An amyl alcohol is any of 8 alcohols with the formula C₅H₁₁OH. A mixture of amyl alcohols (also called amyl alcohol) can be obtained from fusel alcohol. Amyl alcohol is used as a solvent and in esterification, by which is produced amyl acetate and other important products. The name amyl alcohol without further specification applies to the normal (straight-chain) form, 1-pentanol.

These are the 8 structural isomers of alcohols with molecular formula C₅H₁₂O:

Three of these alcohols, active amyl alcohol (2-methylbutan-1-ol), methyl (n) propyl carbinol (pentan-2-ol), and methyl isopropyl carbinol (3-methylbutan-2-ol), contain an asymmetric carbon atom and are therefore optically active.

The most important is isobutyl carbinol, the chief constituent of fermentation amyl alcohol and a constituent of fusel oil. It can be separated from fusel oil by either of two methods: shaking with strong brine solution and separating the oily layer from the brine layer; distilling it and collecting the fraction that boils between 125 and 140 °C. Further purification is possible with this procedure: shaking the product with hot limewater, separating the oily layer, drying the product with calcium chloride, and distilling it, collecting the fraction boiling between 128 and 132 °C.

Isobutyl carbinol can be synthesized from isobutanol by conversion into isovaleraldehyde, which is subsequently
reduced to isobutyl carbinol by means of sodium amalgam. It is a colourless liquid of density 0.8247 g/cm³ (0 °C), boiling at 131.6 °C, slightly soluble in water, and easily dissolved in organic solvents. It has a characteristic strong smell and a sharp burning taste. Amyl alcohol has an oral LD50 of 200 mg/kg in mice, suggesting that it is significantly more toxic than ethanol. On passing the vapour through a red-hot tube, it decomposes into acetylene, ethylene, propylene, and other compounds. It is oxidized by chromic acid to isovaleraldehyde, and it forms addition compounds crystals with calcium chloride and tin(IV) chloride. Using the reduction of a mixture of trimethyl acetic acid and trimethylacetyl chloride with sodium amalgam. It is a solid that melts at 48 to 50 °C and boils at 112.3 °C.

Isoamyl alcohol (also known as isopentyl alcohol) is a clear, colorless alcohol with the formula (CH₃)₂CHCH₂CH₂OH. It is one of several isomers of amyl alcohol. It is a main ingredient in the production of banana oil, an ester found in nature and also produced as a flavouring in industry. It is also the main ingredient of Kovac's reagent, used for the bacterial diagnostic indole test.

It is also used as an antifoaming agent in the Chloroform:Isomyl Alcohol reagent.

Isoamyl alcohol is used in a phenol–chloroform extraction mixed with the chloroform to further inhibit RNase activity and prevent solubility of RNAs with long tracts of poly-adenine.

It is one of the components of the aroma of Tuber melanosporum, the black truffle. It has been identified as a chemical in the pheromone used by hornets to attract other members of the hive to attack.

Other names

3-Methyl-1-butanol (IUPAC Name); 3-methylbutanol; Isoamyl alcohol; Isopentyl alcohol; Potato-spirit Oil