

Methanol Encyclopedia Article

Methanol

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Methanol

Methanol is the simplest alcohol, containing only one carbon atom, four hydrogen atoms, and one oxygen atom (CH_3OH). It is also called methyl alcohol, WOOD ALCOHOL, carbinol, wood naphtha, wood spirit, pyroxylic spirit, and pyroligneous alcohol or spirit. It is a flammable, potentially toxic, mobile liquid, used as an industrial solvent, in antifreeze, and in chemical manufacture. Ingestion may result in severe acidosis, visual impairment, and other effects on the central nervous system. Methanol does not produce significant inebriation unless a very large amount is consumed.

Methanol itself is not toxic, but it is metabolized by enzymes in the body to create formaldehyde and formic acid—both of which are very toxic substances. The formic acid can cause blindness. Ethanol (ethyl alcohol—drinking alcohol) can be used as an antidote for methanol poisoning, because it competes with the methanol for the enzyme. As a result, there is a delay of formaldehyde and formic acid production, and these toxic substances do not rise to such high levels. Although methanol is frequently added to ethanol-based cleaning solutions, its addition denatures the solution and makes it unsafe to drink. Only desperate alcoholics will drink methanol, but it is sometimes drunk by accident by people experimenting with various alcohol substitutes.

See Also

Alcohol)

Bibliography

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