



# Aldehydes Database

This database contains 694 infrared spectra of aldehyde compounds. This collection can be used for identification, classification, and verification of these substances. This database gives users access to compounds essential to the perfume and flavoring industries, as well as the manufacture of pharmaceutical intermediates and plastic additives.

Aldehydes are organic compounds which incorporate the carbonyl group in which the carbonyl group is bonded to at least one hydrogen. The general formula for an aldehyde is RCHO, where R is hydrogen or an alkyl or aryl group. Aldehydes are formed by partial oxidation of primary alcohols and form carboxylic acids when they are further oxidized. The common name for an aldehyde is often derived from the name of the acid it forms; the IUPAC name is usually derived from the name of the alcohol from which it is formed. The systematic names for aldehydes are obtained by adding -al to the name of the parent alkane. The presence of substituents is indicated by numbering the parent alkane chain from the end of the molecule that carries the important -CHO functional group.

Aldehydes are widespread in nature and are often combined with other functional groups. Low molecular weight aldehydes have sharp, unpleasant odors, while higher molecular weight aldehydes have pleasant, often flowery, odors and are found in the essential oils of certain plants. Aldehydes are used for the manufacture of synthetic resins, such as bakelite, and for making dyestuffs, flavorings, perfumes, and other chemicals.

Each compound in this database is identified by its chemical name and the method of analysis as well as structural formula, molecular formula, and molecular weight. Synonyms, melting points, boiling points, literature references, and comments may be displayed when available.

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