29.06 - Cyclic alcohols and their halogenated, sulphonated, nitrated or nitrosated derivatives.

- Cyclanic, cyclenic or cycloterpenic :

2906.11 - - Menthol

2906.12 - - Cyclohexanol, methylcyclohexanols and dimethylcyclohexanols

2906.13 - - Sterols and inositols

2906.19 - - Other

- Aromatic :

2906.21 - - Benzyl alcohol

2906.29 - - Other

(A) CYCLANIC, CYCLENIC OR CYCLOTERPENIC ALCOHOLS AND THEIR HALOGENATED, SULPHONATED, NITRATED OR NITROSATED DERIVATIVES

(1) **Menthol**, a secondary alcohol which is the main constituent of peppermint oil. Crystals; used as an antiseptic, as a local anaesthetic and also to relieve nasal congestion.

(2) **Cyclohexanol, methyl- and dimethylcyclohexanols** are compounds with a characteristic odour like camphor. They are used as solvents for varnishes. Dimethylcyclohexanol is used in soap-making.

(3) **Sterols** are alicyclic alcohols, saturated or unsaturated, the structure of which is derived from the hydrocarbon perhydro-1,2-cyclopentanophenanthrene, the hydroxyl group being linked to the 3-carbon, with a methyl group on the 10- and 13-carbons and a side chain of 8 to 10 carbon atoms linked to the 17-carbon. They exist abundantly both in the animal (zoosterols) and vegetable (phytosterols) kingdoms. The most important is **cholesterol** obtained mainly from the spinal cords of cattle and from wool grease; it is also obtained from bile, and as a by-product during the extraction of lecithin from egg-yolks. It is in the form of shiny, colourless tablets, insoluble in water.

This heading **excludes** ergosterol, found in fungi (mushrooms) and in spurred rye, a provitamin from which vitamin D_2 is obtained by ultra-violet irradiation. Both ergosterol and vitamin D_2 fall in **heading 29.36**.

(4) **Inositols**, constituents of body tissue. There are nine isomeric forms of inositol. White crystals. Widely distributed in plants and animals.

(5) **Terpineols**, very important alcohols used as a basis for perfumes such as lilac, etc. Found in nature either in the free state or esterified in many essential oils (e.g., of cardamoms, sweet orange, orange-flower, petit-grain, sweet marjoram, nutmeg, turpentine, cherry-laurel, camphor).

Commercial terpineol is usually a mixture of isomers but it remains in this heading (see Note 1 (b) to Chapter 29). It is a colourless, oily liquid, and is sometimes used as a bactericide. A solid isomer is used in medicine and may also be used as a bactericide.

(6) **Terpin**, obtainedsynthetically. White crystals. Terpin hydrate is obtained from turpentine; colourless crystals, aromatic. Used in medicine, and also for the preparation of terpineol.

(7) **Borneol** (Borneo camphor), the alcohol corresponding to the ketone camphor. Appearance and odour like natural camphor; crystalline white or sometimes brownish mass; volatile at room temperature.

(8) **Isoborneol**, lamellar crystals; an intermediate stage in the conversion of alphapinene to camphor.

(9) **Santalol**, main constituent of sandalwood oil.

(B) AROMATIC ALCOHOLS AND THEIR HALOGENATED, SULPHONATED, NITRATED OR NITROSATED DERIVATIVES

Aromatic alcohols contain the hydroxyl group (-OH) linked not to the aromatic rings but to the side chains.

(1) **Benzyl alcohol** (phenylmethanol, phenylcarbinol). Found in the free state or esterified in oils of jasmine and tuberose, and esterified in storax and balsam of Tolu. Colourless liquid with a pleasant aromatic odour; used in organic synthesis and in the preparation of varnishes, dyestuffs, artificial perfumes, etc.

(2) **2-Phenylethanol** (phenylethyl alcohol). A liquid forming the main constituent in attar of roses.

(3) **3-Phenylpropanol** (phenylpropyl alcohol). Found in storax, in Sumatra gum benzoin, in cassia oil and in Chinese cinnamon oil; it is a dense, colourless liquid with a faint odour of hyacinths.

(4) **Cinnamyl alcohol**. Found in liquid storax and in balsam of Peru. Crystallises in needles with an odour of hyacinths.

(5) **Diphenylmethanol** (diphenylcarbinol, benzhydrol). Crystallises in needles.

(6) **Triphenylmethanol** (triphenylcarbinol). Crystals. This alcohol is the parent substance of an important group of dyes which includes aurine, rosaniline, etc.

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For the purposes of this heading, aldehyde-bisulphite compounds and ketone-bisulphite compounds are classified as sulphonated derivatives of alcohols. This heading also covers metal alcoholates of cyclic alcohols.