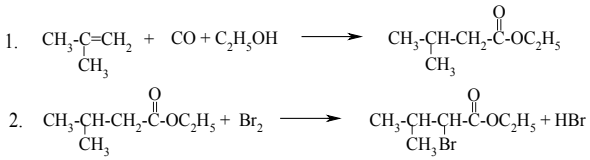
The proposed by us new technology of obtaining EEBIA (and Corvalolum production on its basis) is based on the new effective method of obtaining EEBIA from isobutylene, carbon monoxide, ethanol and bromine. The synthesis of ethylisovalerate is carried out by hydroethoxycarbonilation reaction of isobutylene by carbon monoxide and ethanol in the presence of metalcomplex catalyst. On the second stage the product (EEBIA) is synthesized by bromination of ethylisovalerate in the presence of the red phosphor. Quality of EEBIA obtained by the new technology is higher (contains less admixtures), the production costs are 2-3 times lower than the production costs of the existing four stage method of obtaining EEBIA.



α-Monoglyceride of isovaleric acid was synthesized by carbonylation of isobutylene with carbon monoxide in the presence of glycerin and the catalyst system $Pd(Acac)_2$-PPh_3-TsOH. According to available data, the secondary hydroxyl group of glycerin reacts more slowly than a primary one. At ratios of [isobutylene]:[glycerin]=1:1 and 2:1, mono- and diglycerides are formed, and mono-, di- and triglycerides are formed when the ratio is 1:3. The maximum total yield of glycerides (23,3%) was obtained at a ratio of [isobutylene]:[glycerin]=2:1; the yields of monoglyceride and diglyceride make up 19,1 and 4,2%, respectively, in this case. The yields of mono- and diglycerides at [isobutylene]: [glycerin]=1:1 are 9,3 and 1,1%, respectively. At a ratio of [isobutylene]:[glycerin]=3:1, mono-, di-, and triglycerides were obtained with yields of 14.7, 3,0 and 0,4%, respectively.

Note that, in contrast to the known processes for the manufacture of glycerides of fatty acids by the direct esterification of the acids with glycerin and by transesterification of methyl (or ethyl) esters of fatty acids with glycerin when a mixture of a- and b-isomers of monoglycerides is formed, the formation of the α-isomer alone is observed during the hydroxycarbonylation of isobutylene with carbon monoxide and glycerin.

Thus, the feasibility of the synthesis of isovaleric acid esters with aliphatic polyols by means of alkoxycarbonylation of isobutylene in the presence of the catalytic system $Pd(Acac)_2$-PPh_3-TsOH was established. The reaction proceeds regioselectively at the terminal atom of isobutylene. Isovaleric acid monoglyceride is formed only in the form of the a-isomer.

The proposed methods are highly economical and may be used for commercial production of the mentioned above biological active esters of the isovaleric acid. Optimal technological parameters for carrying out the processes were tested at the pilot plant. Technologically, organization of the productions being proposed does not present any great difficulties. Standard equipment may be used. It should be noted that all the proposed productions are based on the similar technology using one and the same equipment.

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