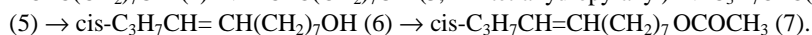
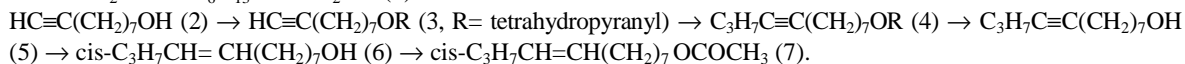
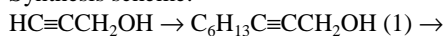


The invention relates to the synthesis of unsaturated organic compounds, in particular to the synthesis of plum fruit moth sex pheromone, used in the protection of plums.

Summary of the invention consists in that at the interaction of propargyl alcohol with 1-bromohexane in liquid ammonia is produced the compound (1) nonyne-2-ol-1 (see synthesis scheme), which in the presence of sodium amide and ethylenediamine is transformed into acetylene alcohol with the terminated triple bond nonyne-8-ol-1 (2). It is protected the hydroxyl group in the alcohol (2) with 2,3-dihydropyran to form the acetal 1-(2<sup>1</sup>-tetrahydropyranyloxy)-8-nonyne (3), which is subsequently alkylated with propyl bromide in 1-(2<sup>1</sup>-tetrahydropyranyloxy)-dodecyne-8 (4). After deprotection of hydroxyl group (16% sulfuric acid, ethanol) is produced the acetylene alcohol dodecyne-8-ol-1 (5), reduction of which in the presence of Ni catalyst with ethylenediamine in ethanol leads to cis-8-dodecenol-1 (6). Acetylation of alcohol (6) with acetyl chloride in benzene, in the presence of pyridine, provides cis-8-dodecenyl acetate (7) – sex pheromone of plum fruit moth, having a high biological activity in the field conditions.

Synthesis scheme:



The technical result is a reduction in the cost of the synthesis process and production of the sex pheromone with an isomeric purity and biological activity at the level of the standard.

Claims: 1