

Synthesis of Esters of Aromatic Acids with Carbohydrates and Polyalcohols

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A group of the researchers at the laboratory of the chemistry of natural compounds has been carrying out investigations on synthesis of analogs of natural esters of aromatic acids with carbohydrates and polyalcohols. As a result, mono- and di-esters of phenolcarboxylic acids, cinnamic, ferulic, aminobenzoic and other acids with carbohydrates (sucrose, D-glucose) and polyalcohols (glycerol, D-sorbitol), modified derivatives of monoglycerides (phosphates and citrates), as well as 1,3-diacylglycerides of different acids, mono- and di-esters of polyglycerols (n=3-7) have been produced. The structure of esters, isolated with the help of column chromatography in silica-gel, is proved by spectrum data (IR-, UV-, ^1H - and ^{13}C -NMR).

The produced compounds have been evaluated biologically. Among them are substances with high anticancer, antimicrobial, stimulators of growth, fungicidal, antiviral and other specific activities have been found. On this bases new ecologically harmless preparations for medicine and agriculture are being developed.