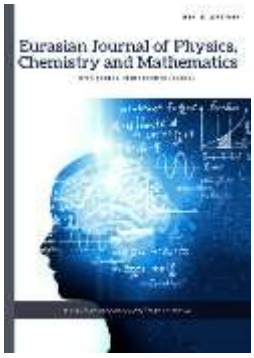

"Redevelopment of catalysts used in acetaldehyde synthesis and creation of new catalysts"

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ABSTRACT

This article discusses the need to be synthesized from acetaldehyde methane raw materials at Navoiyazot JSC in the presence of a KKF (cadmium calcium phosphate) catalyst in the process of acetylene hydration, and the need for processing due to the fact that this catalyst is imported at the expense of currency, and taking into account the fact that the used catalyst

Keywords: Anthicislota, Ant aldehyde, acetaldehyde, acetic aldehyde,ethyl alcohol, KKF (cadmium calcium phosphate).

Aldehydes are organic compounds with an organic radical (R) in the RCHO molecule and a carbonyl group (>C=O) linked by a hydrogen atom. Depending on what radical the aldehyde group (–SNO)is combined with, it can be saturated, unsaturated, aromatic and heterocyclic aldehyde. When naming aldehyde, the names of the corresponding organic acids are used. For example, Ant aldehyde or formaldehyde, which corresponds to acetic acid, is called acetic aldehyde or acetaldehyde. To call an aldehyde according to the Geneva nomenclature, a suffix-al is placed next to the name of hydrocarbons. For example, HCHO methanal, CH3CHO - ethanol. Some aldehydes have random names; for example, fur-furol aldehyde is obtained by oxidizing primary alcohols, repelling Organic Acid Derivatives, and other methods. They are considered active ingredients that react very quickly. During the reaction, hydrogen atoms in the radical and oxygen in the carbonyl group can exchange to other atoms, as well as attach other atoms as a result of the Joint break in >C=O. In addition to these, aldehyde can undergo condensation called aldol, Croton and complex Ether condensation. Aldehyde is easily oxidized. They can be polymerized, that is, several mole-bushes can combine among themselves to form a high molecular compound. Some aldehydes react under the action of alkalis in a so-called Cannicsaro reaction. They are used in the extraction of phenolformaldehyde resins, as antiseptics, in disinfection and other maksads.

With a high demand for acetaldehyde in the world,acetaldehyde is a semi-finished product for the synthesis of acetic acid, ethanol, various pyridine derivatives, etc.Vinegar aldehyde CH3, according to its appearance, it is colorless, transparent, with a pungent odor, can boil even at room temperature of 20 ° C, easily soluble in water and organic compounds. One of the most effective methods of obtaining acetaldehyde from ethyl alcohol.

Acetaldehyde, ethanol, formed during the oxidation of ethyl alcohol, was also obtained during the distillation of wood alcohol. Previously, acetaldehyde was obtained by

oxidizing ethyl alcohol with dichromate, now they began to be taken by contact. A mixture of ethyl alcohol vapor and air is passed through heated metals (catalysts). Acetaldehyde, formed as a result of distillation of wood alcohol, contains about 4-5% of various impurities. The method of extracting acetaldehyde by heating and breaking down lactic acid has a certain technical significance. All these methods of obtaining acetaldehyde are gradually losing their relevance in connection with the development of new, catalytic methods for obtaining acetaldehyde from acetylene.It made it possible to use acetaldehyde as a starting material for obtaining other organic compounds: acetic acid, aldol, etc.

In industry, ethanol is oxidized in air to acetic acid and perocytic acid. Oxidation for the production of acetic acid is usually carried out in vapors and at high temperatures. To obtain perocytic acid, the reaction is carried out at 0 ° C or at a lower temperature in the solvent. As an intermediate product, 1-hydroxyethylperacetate is formed, which decomposes to form perocytic acid and acetaldehyde.

The following methods of producing acetaldehyde in industry are most common: 1. Direct hydration of acetylene with water vapor in the presence of liquid mercury catalysts (in the Kucherov reaction).

2. Direct oxidation of ethylene with atmospheric oxygen in the presence of liquid palladium catalysts.

In the ethanol industry, cellulose is used to obtain acetates, acetic and perocytic acids, acetic anhydride, ethyl acetate, glyoxal, 2-ethylgexanol, alkylamines, butanol, pentaeritritol, alkylpyridinium, 1.3-butylene glycol, chloral. It is also used as a reducing agent in mirror production. At Navoiyazot AJ, acetaldehyde is synthesized from methane raw materials in the process of acetylene hydration with the participation of a catalyst KKF (cadmium calcium phosphate).

This was due to the fact that the catalyst was imported at the expense of the currency, and the catalyst used was intended for the need for processing, focusing on the formation of waste heaps. The cadmium contained in the catalyst used KKF(cadmium calcium phosphate) is isolated, which is formed by acetates as a result of the action of acetic acid. It is derived from the acetates of the local core kaolin and bentonite can be prepared and applied to production on the basis of. The creation of new catalysts in the extraction of acetaldehyde is the achievement of economic efficiency in monetary terms.

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