and acquired immunity mechanisms, cell cycle, apoptosis, and inflammatory response by the control of transcription of a wide range of genes.

Low availability of c[G(2′,5′)pA(3′,5′)p] for a comprehensive study of immunomodulatory properties with the purpose of its practical application, simultaneous similarity of this cyclic dimeric purine nucleosidemonophosphate structure with c-di-GMP, which also influences eukaryotic cells as a "danger signal" and has a significant immunomodulatory activity, allows primarily to consider c-di-GMP as a perspective basis for creating a highly efficient immunomodulating agent.

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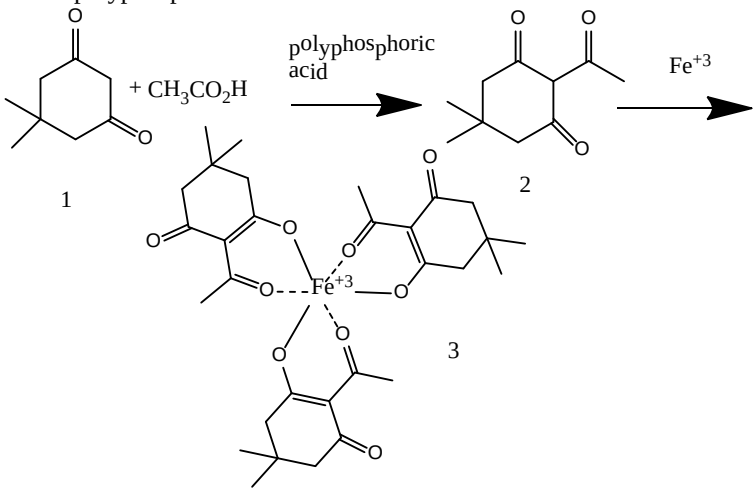
SYNTHESIS AND USING OF 2-ACETYL-5,5-DIMETHYLCYCLOHEXANE-1,3-DIONE AS COMPLEXOMETRIC TITRATION INDICATOR

In analytical chemistry, complexometric indicators are used in complexometric titration to indicate the end point of a titration.

Here in we wish to report our results on synthesis of 2-acetyl-5,5-dimethylcyclohexane-1,3-dione (2) and the possibility of using this compound as indicator of complexometric titration of solutions containing Fe^{+3} cations. This substance is bidentate ligand and it forms a chelate compounds with metal cations. Thus it forms iron (III) red colored octahedral complex (3) and hence may be used as an indicator for determination of iron by chelatometry method.

The substance investigated was obtained by heating dimedone (1) with glacial acetic acid in polyphosphoric acid.



Prepared 0.02 molar ferric chloride solution was titrated with a solution of EDTA using as an indicator known (sulfosalicylic acid) and the resulting triketone (2). Titration results were the same. Thus, it was shown that the obtained compound can be used as an indicator in determining the concentration of iron (III) by complexometric method. It was used as alcohol solution.

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IMPACT OF PURINE NUCLEOTIDES ON A CONDITION OF SYSTEMS OF CYCLIC NUCLEOTIDES IN CELLS OF IMMUNE SYSTEM

Cyclic nucleotides are universal regulators of biochemical processes in living cells. A leading role of a cyclic nucleotide in a cell is phosphorylation of proteins of ribosomes which are catalyzed by protein kinases. This in turn influences character and amount of synthesizable proteins in a cell. The research of impact of purine nucleotides on a human body will help understand processes of normal functioning more detailed, violation of purine exchange and influence of purines on a set of the reactions happening at the cell-like level. The purpose of work is to analyze possible changes of concentration of cyclic nucleotides in cells of the immune system of rats at influence of purine nucleotides. The object of the research were thymus cells (thymocytes) and lymphocytes of peripheral blood of rats. The maintenance of intracellular cAMF and cGMP was defined by a radio immune method by means of reference sets (IBOH NAN RB). It is showed that purine nucleotides in different degrees affect the system of cyclic nucleotides in thymocytes and lymphocytes of peripheral blood. So, exogenous ATP authentically increased the maintenance of cAMF and cGMP in thymocytes, and the system of cyclic nucleotides in lymphocytes of peripheral blood showed pronounced changes at action of an adenosine. Mounted effect of increasing the content of cyclic nucleotides adding purine nucleotides can be explained by the fact that ATP and adenosine act on the corresponding receptors: Adenosine activates P1 - purinoreceptors (A1- receptor), which have a high affinity for adenosine and ATP and its analogs stimulate structural P2 - purinoreceptors. From the obtained data it is possible to draw a conclusion that purine nucleotides in different degree affect system of cyclic nucleotides in thymocytes and lymphocytes of peripheral blood. Exogenous ATP authentically increases the maintenance of tsAMF and CGMP in thymocytes, and the system of cyclic nucleotides in lymphocytes of peripheral blood showed pronounced changes at action of an adenosine.