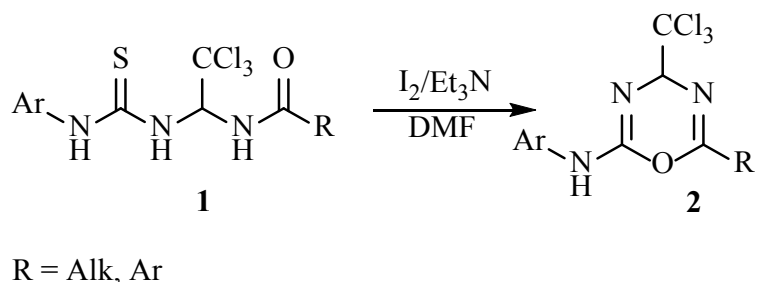


DEVELOPMENT OF A NEW SYNTHESIS METHOD OF 4*H*-1,3,5-OXADIAZINE DERIVATIVES

Among all medicinal products presented on the pharmaceutical market of Ukraine and the world, a significant share is occupied by drugs of synthetic origin. That is why the issue of improving and optimizing their synthesis is still relevant.

Derivatives of 4*H*-1,3,5-oxadiazine are widely known as biologically active substances. Mostly, these compounds show antibacterial, antifungal, and antitumor effects [1 p. 456]. In view of this, the development of new or improvement of existing methods [2, p. 370; 3 p. 275; 4 p. 2130] synthesizing compounds of this series is a very important and urgent task.



*Scheme 1. Synthesis of 4*H*-1,3,5-oxadiazine derivatives using a mixture of I₂+Et₃N as a dehydrosulphurization agent*

We have developed and proposed a method for the synthesis of 4*H*-1,3,5-oxadiazine derivatives, which uses a mixture of I₂ and Et₃N for dehydrosulphurization of the original thiourea which allows us to obtain a number of new compounds that have not been synthesized before.

The structures of the synthesized compounds were confirmed by ¹H NMR and ¹³C spectroscopy data.

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RELEVANCE OF PRODUCTION OF ENZYME PREPARATION "MACEROBACILIN G3X"

Various enzyme preparations are widely used in the most diverse branches of food and light industry, in cosmetics, in the production of detergents, in agriculture, in the medical industry, which is explained by their high catalytic activity, specificity of action, and the ability to carry out biochemical reactions. The term "enzyme preparation" is currently used both to characterize industrial enzymes and to describe pharmacological agents [2, p. 80]. Knowledge of the role of enzymes as biological catalysts for all living things on the Earth served as the basis for the development of the technology of enzyme preparations as a science and for their creation in industrial production. Enzymes play the most important role in all life processes [1, p. 48]. Therefore, it is advisable to use enzymes for carrying out various industrial processes, both from the economic and technological points of view.

Bacteria of the genera *Bacillus*, *Clostridium*, *Erwinia* are used in industry for the production of enzyme preparations. Among them, representatives of the genus *Bacillus*, such as *B. subtilis*, *B. circulans*, are most often used. Their use is explained by the fact that most representatives of this genus are non-pathogenic and can