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ACAD. S.Yu. YUNUSOV INSTITUTE OF THE CHEMISTRY
OF PLANT SUBSTANCES

INTERNATIONAL SCIENTIFIC
CONFERENCE

Actual Problems of the Chemistry of Natural Compounds

ABSTRACTS

March 15–16, 2023
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CONFERENCE TOPICS

1. Chemistry, biology, pharmacology, and technology of natural compounds and their derivatives.
2. Successes and problems of creation of new drugs.

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DIRECTION OF ALKYLATION REACTIONS OF 2-METHYL-5-CHLOROBENZIMIDAZOLE

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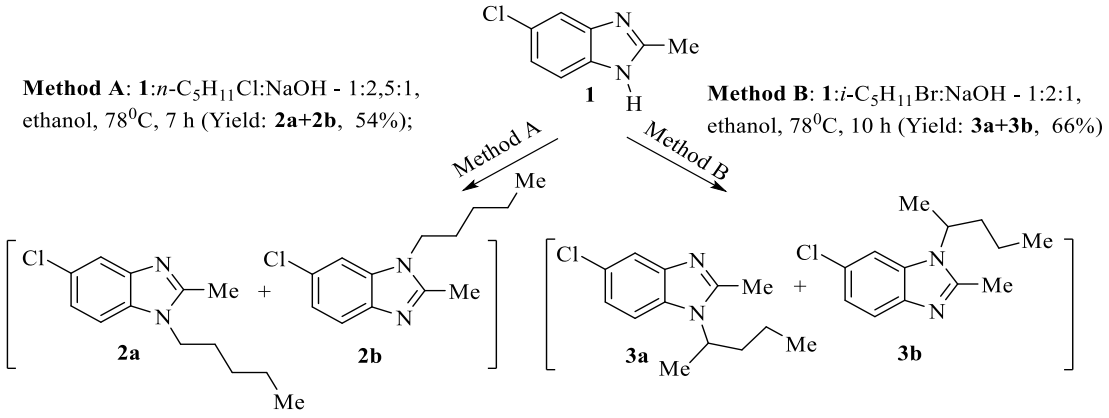
Nowadays, benzimidazole derivatives play important role in medicine. They have many pharmacological activities such as antimicrobial, antiviral, antidiabetic and anticancer activity [1]. Benzimidazoles are remarkably effective compounds, extensive biochemical and pharmacological studies have confirmed that these molecules are effective against various strains of microorganisms [2]. Some of the synthesized compounds, for example *Benomyl, Rabeprazol, Telmisartan* are used as fungicide, anti-ulcer and anti-hypertensive agents [3].

In the present work we continued alkylation of 2-methyl-5-chlorobenzimidazole (**1**). To do that we carried out interaction of 2-methyl-5-chlorobenzimidazole (**1**) with *n*-amylchloride and *i*-amylbromide:



Reactions carried out at boiling temperature of ethanol in the presence of NaOH for 7-10 hours. As results, we have synthesized N-alkyl-5-chloro-2-methyl-derivatives (**2**a,b; **3**a,b).

The structure of the obtained isomeric dialkyl products was confirmed by ^{1}H and ^{13}C NMR spectroscopy methods.

References

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