

НАУЧНЫЕ И ПРИКЛАДНЫЕ АСПЕКТЫ РАЦИОНАЛЬНОГО ИСПОЛЬЗОВАНИЯ ПРИРОДНЫХ РЕСУРСОВ

NOVEL THIOCARBOHYDRAZONE DERIVATIVE OF FLAVANONE

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Polyphenols are a category of chemicals that naturally occur in plants. They are known as phytochemicals. These chemicals can be categorized into the following groups: flavonoids, phenolic acids, stilbenes and lignans. The largest group of polyphenols are flavonoids which are widely spread in nature. The main class of polyphenolic secondary metabolites are flavanones. They are very interesting compounds extensively present in food products of plant origin for example citrus fruits. Derivatives of flavanone with substituents in rings: A or B have various and valuable properties, such as anti-inflammatory, antimicrobial, antioxidant, or antitumor. The basic moiety of these compounds is flavanone (Fig. 1) [1,2]

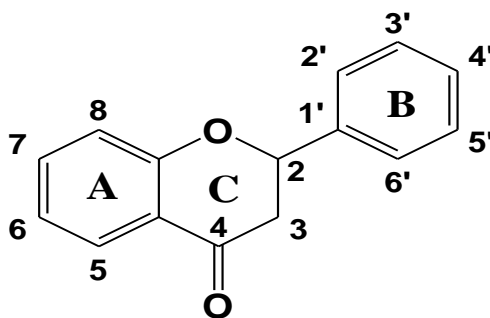


Figure 1 – Chemical structure of flavanone

Their bioavailability and bioactivity depends on chemical structure. They have huge and significant potential in the treatment of many illnesses like cancer or cardiovascular diseases [3].

Thiocarbohydrazides are also really important class of chemical compounds that have applications in organic chemistry, biology and medicine due to their valuable reactions and variety of activities. The aromatic derivatives of thiocarbohydrazide exhibit high antiviral and antimicrobial activity. [4]

Thiocarbohydrazone Schiff bases are chemical compounds of great importance in medicine and pharmacy. Due to their crucial role in these areas they could be used as potential drugs. It is very promising field of science. [4]

The aim of work was synthesized new derivative of flavanone and thiocarbohydrazone (Fig.2) and analyzed by different spectral methods like UV-visible, IR and NMR spectra.

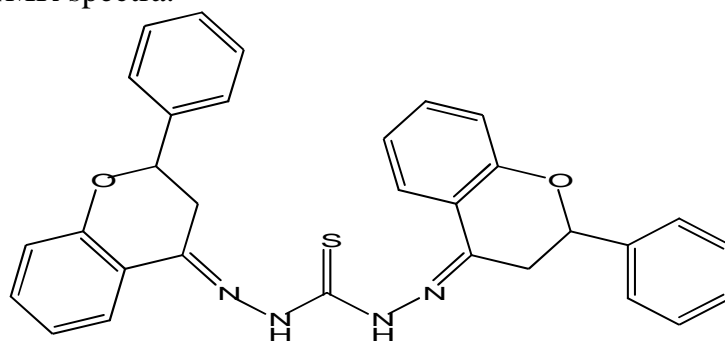


Figure 2 – Chemical structure of thiocarbohydrazone derivative of flavanone FTCH (N'-((E)-2-phenylchroman-4-ylidene)-2-((Z)-2-phenylchroman-4-ylidene)hydrazine-1-carbothiohydrazone)

The results showed that the application of spectroscopic methods NMR, IR and UV confirm structure of new compound FTCH.

FTCH will be used for further studies to investigate biological activity.

The list of references

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