ETHIOPIAN INTERNATIONAL JOURNAL OF MULTIDISCIPLINARY RESEARCH

eISSN: 2349-5715 pISSN: 2349-5707

Volume: 11, Issue 11, November-2024 SJIF 2019: 4.702 2020: 4.737 2021: 5.071 2022: 4.919 2023: 6.980 2024: 7,662

Qo'chqorova Charos Zoir qizi
Student of Jizzakh Polytechnic Institute
Xakberdiyev Shuxrat Mahramovich
Jizzakh Polytechnic Institute teacher

THE ROLE OF ORGANIC SUBSTANCES IN THE COMPOSITION OF THE NA'MATAK PLANT

Annotation: This aqola provides information on the role of the NA'matak plant in organic chemistry. Basically: the distribution in nature, the role of usefulness in medicine,the chemical composition, etc.are indicated.

Keywords:ascorbic acid, na'matak fruit, flavonoids, carotenoids, pectins, organic acids, Polymer studies.

Na'matak (Rosa canina), a plant known in folk medicine and modern science for its healing properties, is also of great importance in the field of organic chemistry. Naamatak fruits contain biologically active substances, including vitamins, flavonoids, organic acids, pectins and essential oils. These components are used in many chemical processes and are an important source in the study of organic compounds.

The main organic compounds contained in NA'matak: Vitamin C (Ascorbic Acid): na'matak fruits are rich in vitamin C, the amount of which is several times higher than the amount in lemon. Ascorbic acid is used as a model substance in the research of oxidation-reduction processes. In addition, it is used in the production of pharmaceutical preparations.

Flavonoids: the antioxidant properties of Na'matak flavonoids allow them to be used in the production of biologically active additives and drugs. Flavonoids serve as the basis for modification in organic chemistry and the synthesis of new compounds.

Carotenoids: carotenoids in NA'matak fruits (e.g. beta-carotene) are used as pigment compounds in organic synthesis and in the food industry. They are important in drug preparations as provitamin A.

Organic acids: the citrate, malic and other organic acids contained in NA'matak are used in chemical processes as substances that provide natural acidity and stabilize the environment.

Pectins: pectins are isolated from naamatak and used as a gelling agent in the food industry and in pharmaceuticals. They are model compounds for various syntheses as organic polymers.

The substances contained in NA'matak serve as raw materials of organic synthesis for the pharmaceutical, cosmetic and food industries:

Antioxidant preparations: flavonoids and ascorbic acid extracted from Naamatak are used in the production of anti-oxidation agents.

Synthesis of biologically active substances: natural flavonoids and organic acids serve as the basis for the creation of various biologically active compounds.

Polymer research: the properties of pectins as natural polymers make it possible to create many new materials in scientific research.

Conclusion

The NA'matak plant is important in organic chemistry as a source of natural compounds. It is widely used in the pharmaceutical, food and cosmetic industries due to its healing properties and rich composition of biologically active compounds. The study of naamatak from the point of view of organic chemistry helps to develop new technologies and create environmentally friendly materials.

eISSN: 2349-5715 pISSN: 2349-5707

Volume: 11, Issue 11, November-2024 SJIF 2019: 4.702 2020: 4.737 2021: 5.071 2022: 4.919 2023: 6.980 2024: 7,662

Literature:

1. DeVore, M. L.; Pigg, K. B. (July 2007)., Plant Systematics and Evolution. „"A brief review of the fossil history of the family Rosaceae with a focus on the Eocene Okanogan Highlands of eastern Washington State, USA, and British Columbia, Canada"“. https://ui.adsabs.harvard.edu/abs/2007PSyEv.266...45D.
2. Kellner, A.; Benner, M.; Walther, H.; Kunzmann, L.; Wissemann, V.; Ritz, C. M. (March 2012) „"Leaf Architecture of Extant Species of Rosa L. and the Paleogene Species Rosa lignitum Heer (Rosaceae)"“.
3. Web.extension.illinois.edu „"The History of Roses - Our Rose Garden - University of Illinois Extension"“. Qaraldi: 2021-yil 26-fevral.
4. Shuxrat, X., Farangiz, M., & Jasurbek, M. (2022). Oltingugurt (IV) oksidi kontsentratsiyasining ortishi sharoitida metallarni korroziyadan himoyalashni o'rganish. Журнал естественных наук, 1(1 (6)), 87-89.
5. Абжалов, А., Маматова, Ф., & Хакбердиев, Ш. (2022). Коррозиядан ҳимоялашга металл буюмларни тайёрлаш. Журнал естественных наук, 1(1 (6)), 79-82.
6. Kurbanova, D. S. (2022). Titration of Cu (II) ions with solutions of organic reagents. Eurasian Journal of Engineering and Technology, 7, 47-50.
7. Sattarovna, K. F., Makhramovich, K. S., & Bakhodirovna, J. U. (2022). Technologies Of Disposal Of Industrial Waste With Harmful Chemicals. Eurasian Journal of Engineering and Technology, 7, 42-46.
8. Khaitbaev A. K., Khakberdiev S. M., Toshov K. S. Isolation of Gossypol from the Bark of Cotton Roots //Annals of the Romanian Society for Cell Biology. – 2021. – С. 1069-1073.
9. Хакбердиев Ш. Синтез, строение и получение супрамолекулярных комплексов ароматических аминов с госсиполом //Журнал естественных наук. – 2021. – Т. 1. – №. 4.
10. Хакбердиев Ш. М. и др. Синтез госсипольных производных орто, мета, пара толуидина и их строение //Science and Education. – 2021. – Т. 2. – №. 10. – С. 195-200.
11. Khakberdiev, Sh M., et al. "Synthesis and structure of gossypol azomethine derivatives." Young Scientist,(4) (2015): 42-44.
12. Хакбердиев Ш. М. и др. 3-аминопропанол-1 билан госсиполнинг турли комплекслари синтези ва макрофаглар миқдорига таъсири //Журнал естественных наук. – 2021. – Т. 1. – №. 1.
13. Хакбердиев, Ш. М. (2021). Госсиполнинг аминопиридинлар билан синтези ва уларнинг никел тузи металлокомплексларини олиш. Журнал естественных наук, 3(5), 10-15.
14. Mahramovich, K. S. (2022). Results of computer study of biological activity of gossipol products. Web of Scientist: International Scientific Research Journal, 3(6), 1373-1378.
15. Khakberdiyev Shukhrat Mahramovich, & Mamatova Farangiz Qodir qizi. (2022). Synthesis ofmetallocomplexes of schiff bases and their structural analysis.World Bulletin of Public Health,16, 173-177. Retrieved from.
16. Mahramovich, K. S. (2023). Structural analysis of supramolecular complexes of schiff bases. American Journal of Interdisciplinary Research and Development, 12, 36-41.
17. Mahramovich, K. S., & Khodiyevich, K. S. (2023). Study of the practical significance of benzimidazole and some of its derivatives. Open Access Repository, 4(02), 80-85.
18. Khakberdiev Shukhrat Mahramovich, Khamidov Sobir Khodiyevich. (2023). Chemical structure and practical significance of benzoxazole . Ethiopian International Journal of Multidisciplinary Research, 10(09), 75–77.

eISSN: 2349-5715 pISSN: 2349-5707

Volume: 11, Issue 11, November-2024 SJIF 2019: 4.702 2020: 4.737 2021: 5.071 2022: 4.919 2023: 6.980 2024: 7,662

19. Mahramovich, K. S. (2024). Study of synthesis, structure and biological activity of gossypol derivatives in computer program. American Journal of Innovation in Science Research and Development, 1(2), 75-81.
20. Mahramovich, K. S. (2023). Biological Activities of Water-Soluble and Cu^{2+} Salts of Gossypol Derivatives Metallocomplexes. International Journal of Scientific Trends, 2(2), 55-60.
21. Хакбердиев, Ш., Маматова, Ф., & Муллажонова, З. (2022). Доривор қоқи ўтининг кимёвий таркиби ва уни аданийлаштириш. Журнал естественных наук, 1(2 (7)), 209-213.
22. Makhramovich, K. S. (2024). Synthesis of Schiff Bases, Supramolecular Complexes and their Influence on Macrophages. Miasto Przyszłości, 49, 922-926.
23. Khakberdiyev, S. M. (2024). Synthesis of aminopyridine derivatives based on gossypol. Miasto Przyszłości, 48, 1063-1068.
24. Mahramovich, K. S. (2024). Study of synthesis, structure and biological activity of gossypol derivatives in computer program. American Journal of Innovation in Science Research and Development, 1(2), 75-81.