Thematic Section: Biochemical Studies. Full Paper

Subsection: Composition of Plant Material.

Registration Code of Publication: 12-32-11-75

Publication is available for discussion in the framework of the on-line Internet conference "Butlerov readings". http://butlerov.com/readings/

The article is published on the conference proceedings "New Chemical-Pharmaceutical Technology 2012" Contributed: October 14, 2012.

Chemical variation of essential oil of thyme in the Republic of Belarus

© Anastasia G. Buzuk, 1*+ Ruslan A. Yurchenko, 1* George N. Buzuk,²* and Vladislav Y. Cusovlev

¹Department of Analytical Chemistry. Chemical Faculty. Belarusian State University. Leningradskay St., 14. Minsk, 220030. Belarus. Phone: +7 (8029) 512-04-48. E-mail: buzukag@tut.by. ² Department of Pharmacognosy. Pharmaceutical Faculty. Vitebsk's State Medical University. Pr-s Phrunse St., 27. Vitebsk, 210023. Belarus. Phone: +7 (80212) 37-09-29. E-mail: buzuk@tut.by. ³ Basic Forensic Service of the Federal Service of the Russian Federation for Narcotics Control (Becks Office FDCS Russia) in the city of Moscow, Police Colonel. Azovskaya St., 19. Phone: +7 (916) 233-14-18. E-mail.: beksmoscow@yandex.ru

*Supervising author; *Corresponding author

Keywords: kinds of thyme, Thymus pulegioides L., essential oil, thymol, carvacrol.

Abstract

As a result of chromato-mass spectrometric analysis of the herb thyme – Thymus pulegioides L. it was found that the main components of essential oil are α -terpinene (0-14.93%), γ -terpinene (0-19.99%), p-cimene (0-25.91%), thymol methyl ether (0-8.64%), β-caryophyllene (0-19.69%), carvacrol methyl ether (0-22.17%), β-bisabolene (0-13.74%), thymol (0.21%-40.60%) and carvacrol (15.44-77.71%). Using cluster analysis we identified 5 chemotypes of T. pulegioides L. Carvacrol was the dominant component in the identified chemotypes.