
Poster

[P27-6] P27-6: Clinical toxicology (2)

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[P27-6-7] Methods of identification of AB-CHMINAKA in case of expert researches

Fazliddin Jalilov¹, Lola Pulatova², Toyduk Erova³, Alisher Iskandarov⁴, Shohista Tashmukhamedova⁵

(1.Tashkent Pharmaceutical Institute, 2.Higher military customs institute of SCC of Ruz, 3.Expert and Forensic Centre of the Ministry of Internal Affairs of the Republic of Uzbekistan, 4.Forensic-Medical Bureau of the Ministry of Health of the Republic of Uzbekistan, 5.Higher military customs institute of SCC of Ruz)

Keywords: AB-CHMINAKA, GC-MS

Background

Now, identification of synthetic cannabinoid of the "spices" which are a part of various objects of illicit movement through a customs border of the Republic of Uzbekistan is a complex challenge and requires use of modern high-informative methods of research. The aim. One of the most powerful and universal ways of research of structure of unknown substances, in particular "spices", in expert laboratories the gas chromatographic definition with mass and spectrometer detecting combining a possibility of carrying out high-selective division of the studied mixes, a possibility of identification of unknown substances on signals of molecular and fragmentary ions in mass spectrums and high sensitivity is.

Methods

In the presented work, extraction of active ingredients was carried out by means of organic solvents, in particular, of chloroform, ethanol or methanol. For optimization of extraction of active ingredients, applied ultrasonic processing. Use of chloroform as an extragent has allowed to exclude extraction of the accompanying substances which are in the dried-up and crushed substances of a phytogenesis of chartreuse color presented on research, with a specific smell of a pharmaceutical camomile (object No. 1), and also brownish-yellow color, with the mixed smell of pharmaceutical herbs and tobacco (object No. 2). Method GC-MS - the dry residue was dissolved in 2 ml of ethyl alcohol and analyzed by chromatography-mass spectrometry method by means of the device Agilent Technologies GC/MS 5977 A "7890 B with mass-selective detector using capillary column: length - 30 m; inner diameter - 0.25 mm. Chromatographic conditions: the temperature of injector - 280°C, the temperature of detector - 300°C, the initial column thermostat temperature -90°C, final temperature - 300°C, rate of temperature increasing -25 °C/min.

Results

The analysis received during research chromatograms and mass spectrums demonstrates that: - in extract of object of research No. 1,2 peaks with times of keeping 23.87, 26.71 min. and mass spectrums characteristic of AB-CHMINAKA and NM-2201.

Conclusions of research have allowed to study processes of formation of mass spectrums, to determine the consistent patterns connecting structure of anolytes with m/z values and relative intensity of signals in mass spectrums.