**PSIHOAKTIVNI POTENCIJAL UZORAKA MARIHUANE**

**U REPUBLICI SRPSKOJ**

Mirjana Dragoljić 1\*, Branka Rodić-Grabovac2, Ljubica Vasiljević3, Vesna Matić1, Ljiljana Simurdić1

1Ministarstvo unutrašnjih poslova Republike Srpske, Banja Luka, dragoljic@blic.net

2Tehnološki fakultet u Banja Luci, brankarg@blic.net

3Tehnološki fakultet u Zvorniku, aco973@gmail.com

Proizvodi biljke *Cannabis sativa L*. su najraširenija ilegalna droga, a pored uzgoja u prirodnim uslovima, u mnogim zemljama posljednjih decenija u porastu je uzgoj kanabis biljke u vještačkim uslovima, u zatvorenom prostoru, što ima uticaj na hemijski sastav biljke. Naime, ilegalni uzgajivači u vještačkim uslovima nastoje proizvesti biljku sa visokim sadržajem psihoaktivnog sastojka tetrahidrokanabinola. Pojava uzgoja u zatvorenom prostoru prisutna je i u Republici Srpskoj, gdje je također zapažen porast broja uzoraka marihuane sa visokim psihoaktivnim potencijalom tj. visokim sadržajem psihoaktivnog sastojka tetrahidrokanabinola. U ovom radu obrađeni su rezultati analiza sadržaja psihoaktivnog sastojka tetrahidrokanabinola u uzorcima marihuane zaplijenjenih na području Republike Srpske u periodu od 2011. do 2015. godine, u svrhu praćenja kretanja psihoaktivnog potencijala uzoraka dostupnih na ilegalnom tržištu i procjene trendova koji se mogu očekivati u budućnosti. Kvantitativna analiza sadržaja tetrahidrokanabinola u 1530 uzoraka marihuane rađena je gasnom hromatografijom sa plameno-jonizacionim detektorom po metodi eksternog standarda. Rezultati istraživanja pokazali su da su na ilegalnom tržištu prisutni uzorci kanabis biljnog materijala sa veoma različitim sadržajem psihoaktivnog sastojka, od tzv. niskopotentnih do visokopotentnih, te da je broj visokopotentnih uzoraka u porastu. Imajući u vidu da zdravstveni rizik predstavljaju kako visokopotentni uzorci, tako i velike međusobne razlike, te nagle promjene u psihoaktivnom potencijalu ilegalnih uzoraka droga potrebno je i dalje pratiti psihoaktivni potencijal uzorka kanabis biljke na ilegalnom tržištu.

Ključne riječi: *Cannabis sativa L*., marihuana, tetrahidrokanabinol, psihoaktivni potencijal.

**PSYCHOACTIVE POTENTIAL OF MARIJUANA SAMPLES**

**IN THE REPUBLIC OF SRPSKA**

Mirjana Dragoljić 1\*, Branka Rodić-Grabovac2, Ljubica Vasiljević3, Vesna Matić1, Ljiljana Simurdić1

1Ministry of Internal Affairs of the Republic of Srpska, Banja Luka, dragoljic@blic.net

2Faculty of Technology, Banja Luka, brankarg@blic.net

3Faculty of Technology, Zvornik, aco973@gmail.com

While the dynamics of production, transport and use of certain types of illegal drugs changes over time, consumption of cannabis preparations can be considered to be constant. *Cannabis sativa L.* plant products are the most widely used type of illegal drugs. In addition to growing under natural conditions, the increase of indoor cannabis cultivation under artificial conditions is seen in recent decades in many countries, which has an impact on the chemical composition of the plant. However, illegal breeders tend to produce, under artificial conditions, a plant with a high content of tetrahydrocannabinol, the psychoactive ingredient. Indoor growing is also present in the Republic of Srpska, where the increase is noticed in the number of the marijuana samples with a high psychoactive potential - high content of tetrahydrocannabinol, the psychoactive ingredient. This paper includes the analysis results of the content of tetrahydrocannabinol in marijuana samples seized in the Republic of Srpska in the period from 2011 to 2015 years, in order to monitor the psychoactive potential of the samples available on the illegal market and the assessment of trends that can be expected in the future. The quantitative analysis of tetrahydrocannabinol content conducted for 1530 marijuana samples was performed by gas chromatography with flame ionization detector according to the method of external standard. The results showed that the illegal market has samples of cannabis plant material with a noticeable difference in psychoactive ingredient content, ranging from so called low-potent to high-potent, with an increase in the number of high-potent samples. Bearing in mind that the health risks are caused by high-potent samples, as well as a great variety, and sudden changes in potential of illegal psychoactive drug samples, it is necessary to continue to monitor the psychoactive potential of cannabis plants samples on the illegal market. The high concentration of the psychoactive ingredient in the plant samples can influence a high potential in other preparations, such as cannabis resin and cannabis oil, which, depending on the manufacturing process, may contain more than 80 or even 90% of THC, what can be a significant health risk for users. When it is known fact that the consumption of cannabis oil is on the rise for the population of certain patients, and not just illegal consumers, this issue certainly should be given a considerable attention.

Keywords: *Cannabis sativa L*., marijuana, tetrahydrocannabinol, psychoactive potential.