

Quantification of herbal mixtures containing the synthetic cannabinoid Cumyl-PEGACLONE – still a risk of inhomogeneities for the consumer?

Sebastian Halter and Volker Auwärter
Forensic Toxicology, Institute of Forensic Medicine, Medical Center – University of Freiburg, Freiburg, Germany

Background Cumyl-PEGACLONE (SGT-151) (Fig.1) is currently the most prominent synthetic cannabinoid on the German drug market. It appeared directly after the law on new psychoactive substances (NpSG) had taken effect in November 2016 in Germany.^[1] Due to its γ -carbolinone core structure SGT-151 circumvents the generic definitions determined in the new law.^[2] (more information about the NpSG: Poster P154). Synthetic cannabinoids are mostly sold in form of herbal blends consisting of roughly crushed parts of the plant *damiana* (*turnera diffusa*) sprayed or soaked with a solution of the active ingredients. In the past, inhomogeneous distribution of active ingredients in analyzed herbal blends was constituting an additional risk for the consumer.^[3] The aim was to validate a method with a rapid and simple sample extraction to investigate the distribution and concentration of SGT-151 in herbal blends.

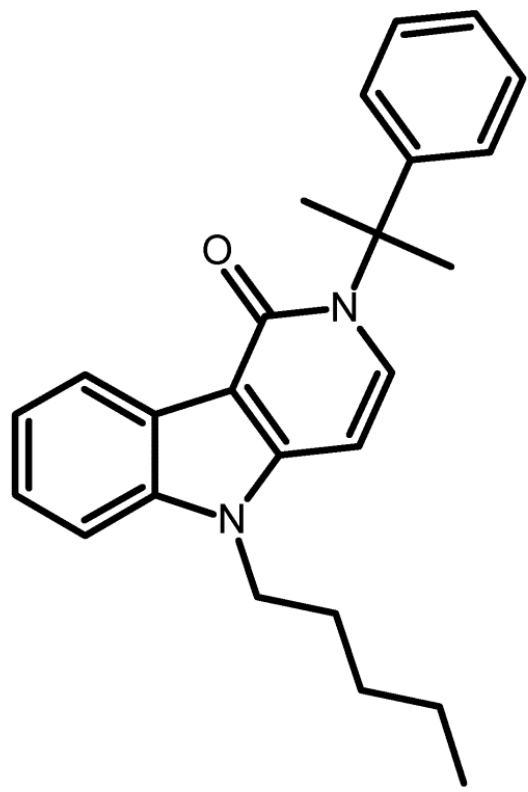
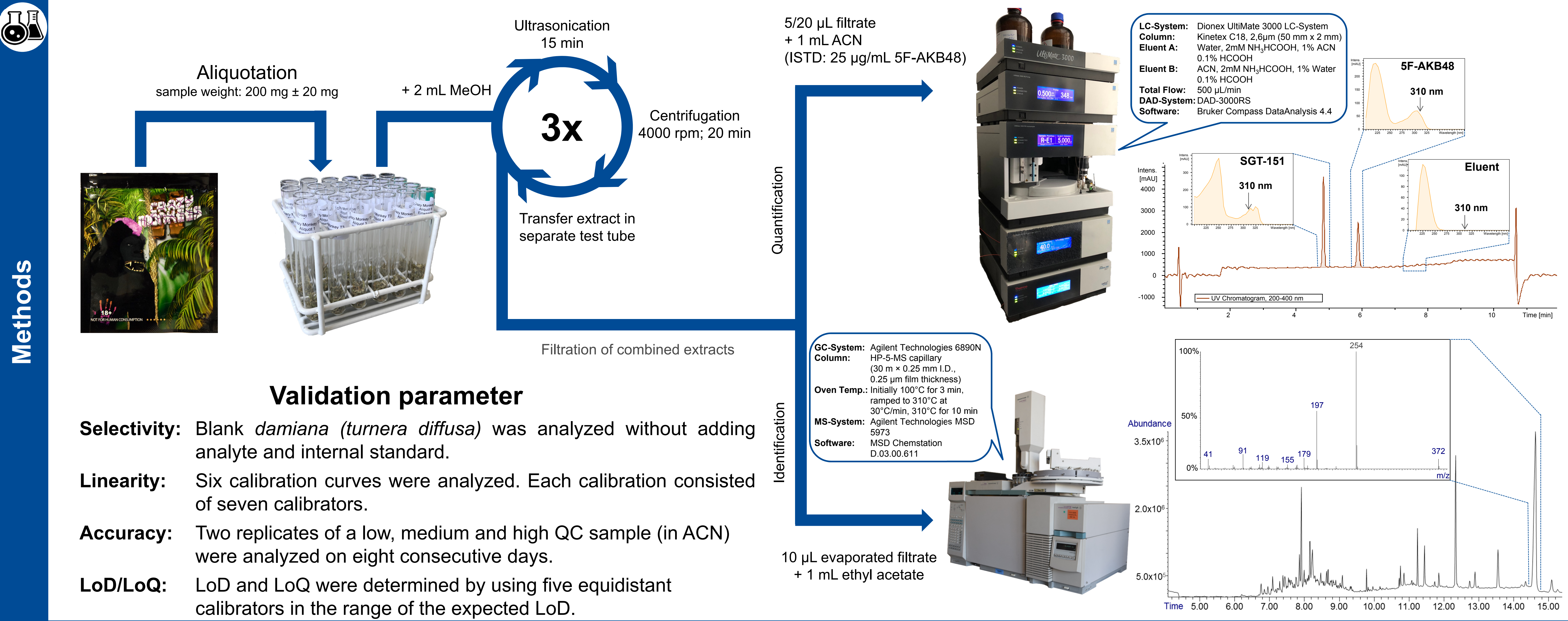
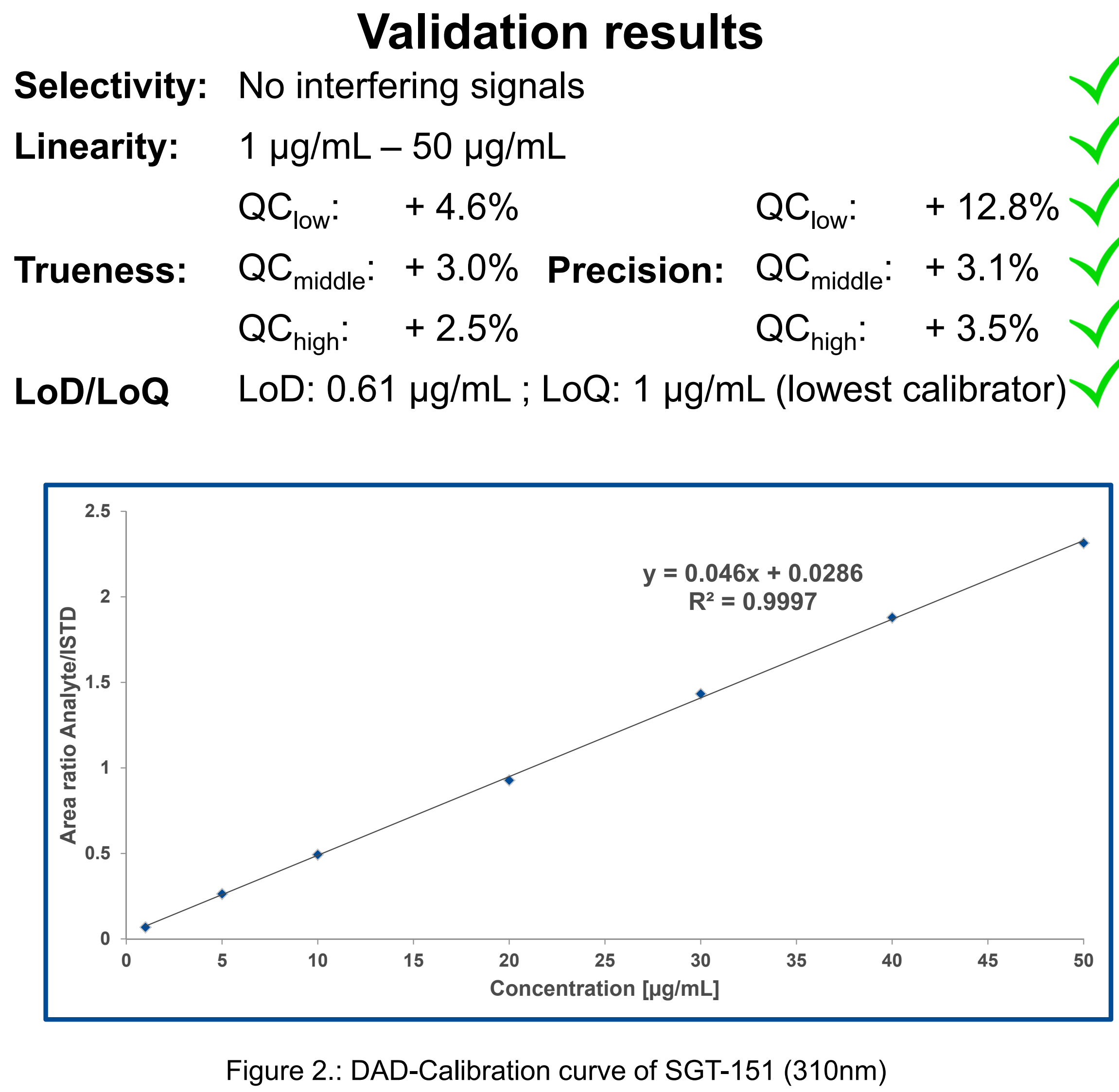
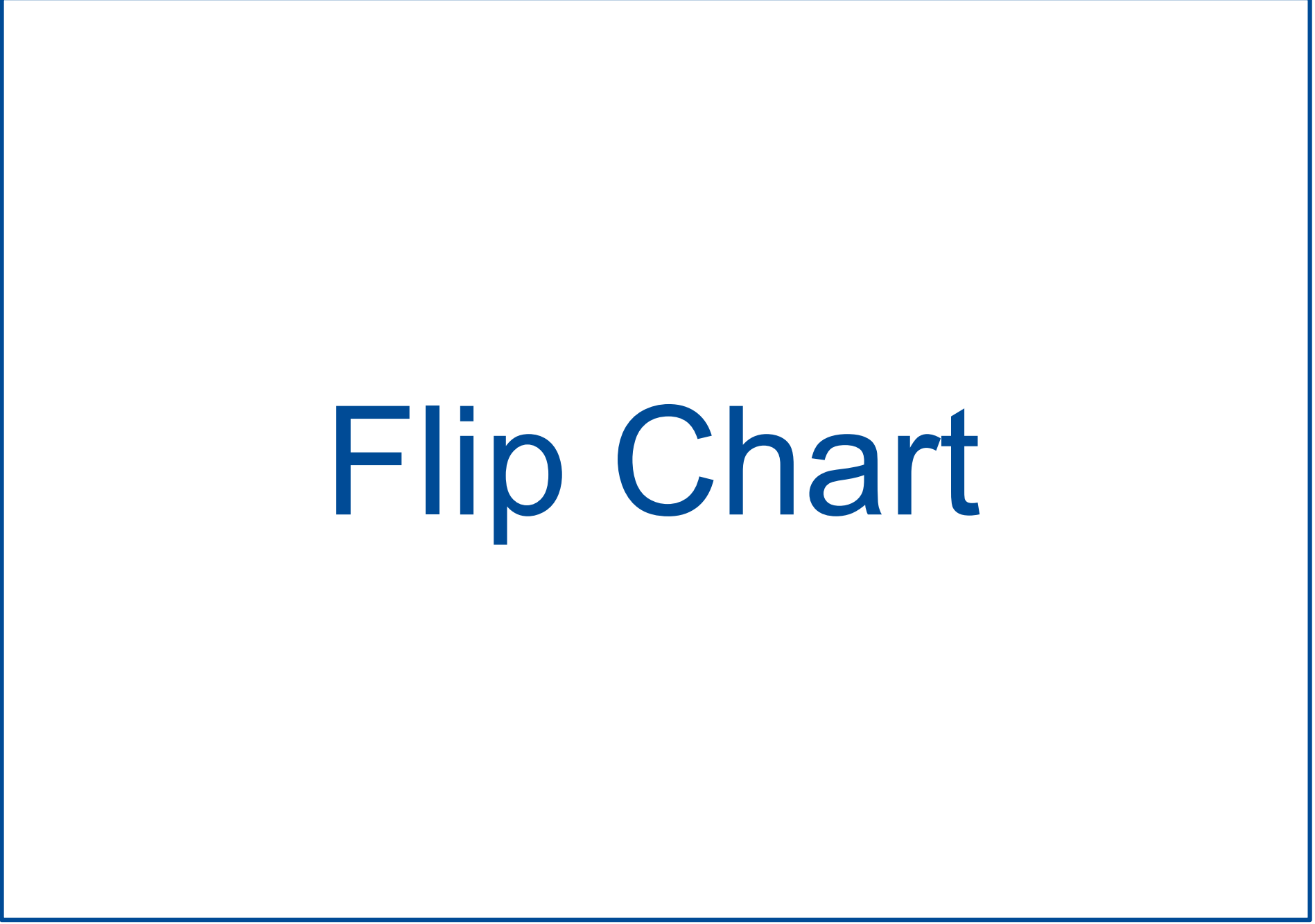


Figure 1.: Cumyl-PEGACLONE (SGT-151)



Results & Discussion

20 herbal blends with Cumyl-PEGACLONE as active ingredient were analyzed. Depending on the total weight of the single packages a varying number of \approx 200 mg aliquots were weighed. The lowest number of a single package were six aliquots, the highest 23. The determined concentrations ranged from 9.87 mg/g to 146 mg/g. Mean was 38.1 mg/g while median was 29.4 mg/g. Only one package showed concentrations above 100 mg/g. All shops except "rauchgeist.de" declared their products as strong, though the determined concentrations varied between packages of different shops. The herbal blend "KMA" showed an extremely high concentration of 129 mg/g. Comparing to packages of "rauchgeist.de" the concentration of Cumyl-PEGACLONE roughly correlates with the attributes made on the website (e.g. strong, middle, 10/10). In most of the analyzed herbal blends the concentration of Cumyl-PEGACLONE increased at the bottom of the packages. Please browse the flipchart for detailed information about the specific distribution and further statistical data of SGT -151 in the analyzed herbal blends.



Conclusion

The examined herbal blends showed differing concentrations depending on the shop and the brand. If allegations concerning the strength of the herbal blend were made on the website, a correlation between concentration and information is recognizable. Besides one exception the concentration of Cumyl-PEGACLONE did not exceed 61 mg/g and the distribution was relatively homogeneous. This might in part explain the decrease of severe SC intoxication cases in emergency departments (more information: Poster P176).

Literature

[1] Gesetz zur Bekämpfung der Verbreitung neuer psychoaktiver Stoffe. Neue-psychoaktive-Stoffe-Gesetz (NpSG). <https://www.gesetze-im-internet.de/npsg/>

[2] Angerer et al. Structural characterization and pharmacological evaluation of the new synthetic cannabinoid 'CUMYL-PEGACLONE'.

[3] Moosmann et al. Inhomogeneities in herbal mixtures: a serious risk for consumers.

Contact & Download

Sebastian Halter
Institute of Forensic Medicine,
Forensic Toxicology,
Medical Center – University of Freiburg
Albertstraße 9, 79104 Freiburg, Germany
sebastian.halter@uniklinik-freiburg.de

