

CANNABINOIDS IN NON-ALCOHOLIC AND ALCOHOLIC HEMP-BASED BEVERAGES: DEVELOPMENT OF ANALYTICAL METHOD AND HEALTH RISK ASSESSMENT

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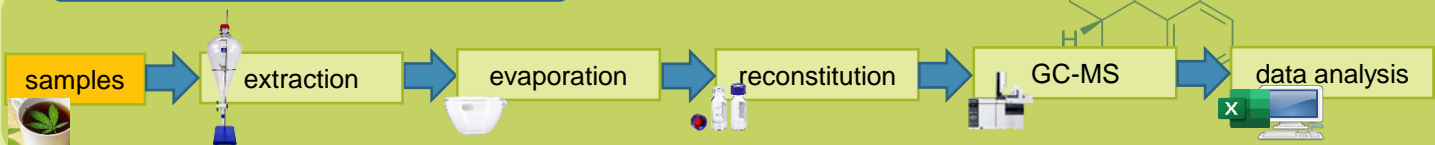
INTRODUCTION

Cannabis sativa L. Cannabaceae is a species with a long history of use. Subspecies *sativa* is mostly used in the food industry due to the significantly lower Δ^9 -THC content and is commonly recognized by the name hemp. The huge increase in presence of hemp-based food products on the market has highlighted the question of safety of such products. Regulations regarding the content of cannabinoids in food products are generally not harmonized. European Food Safety Authority (EFSA) and The German Federal Institute for Risk Assessment (BfR) define an acute reference dose for Δ^9 -THC of 1 $\mu\text{g}/\text{kg}$ bw.

OBJECTIVES

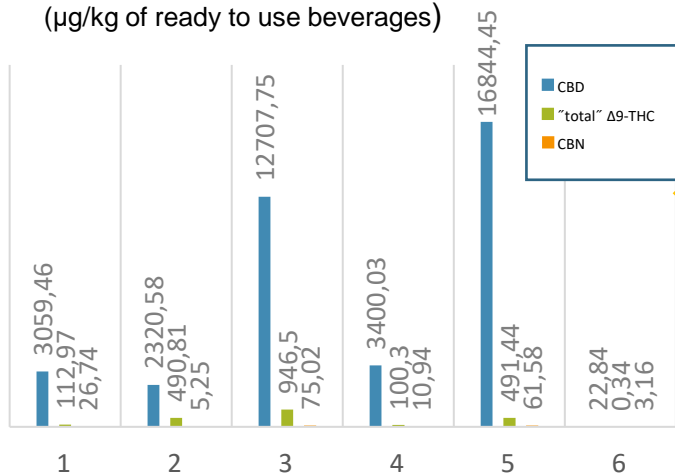
- 1 Development and validation of GC-MS method for the simultaneous determination of cannabinoids (CBD, "total" Δ^9 -THC and CBN)
- 2 Determination of cannabinoids (CBD, "total" Δ^9 -THC and CBN) in beverages based on industrial hemp
- 3 Assessment of health risk related to consumption of products based on industrial hemp

MATERIAL AND METHODS



RESULTS

Content of cannabinoids in samples
 ($\mu\text{g}/\text{kg}$ of ready to use beverages)



CONCLUSION

- ✓ Method was validated
- ✓ Amounts of cannabinoids in hemp-based beverages vary significantly
- ✓ In three of the six evaluated samples, the concentration of "total" Δ^9 -THC can represent a threat to the health of consumers (compared to 1000 ng/kg bw EFSA and BfR)

Exposure of the adults (>18 years) to "total" Δ^9 -THC

Sample	1	2	3	4	5	6
"total" Δ^9 -THC (ng/kg bw)	322,80	1402,30	2704,30	286,60	1404,10	2,42