

Analysis of hemp products and cannabis

The popularity of products containing hemp (Cannabis) for industrial use (low in cannabinoids) is continuously increasing. Hemp seeds or protein powder produced from hemp are typical products available on the market. As the amounts of narcotic/psychotropic substances may differ considerably between different types of hemp it is crucial to know the exact content of these compounds in the product.

Analysis of these substances requires a special authorization by the Federal Opium Agency (Bundesopiumstelle) as the necessary reference materials belong to the group of narcotic/psychotropic substances. QSI holds this special authorization and is entitled to perform these analyses of hemp products.

The regulated principal constituent of hemp is Δ^9 -tetrahydrocannabinol (THC aka dronabinol) including its acids, which should be present only in trace amounts in industrial hemp intended for consumption as food.

The Federal Institute for Risk Assessment (BfR), formerly Federal Institute for Consumer Health Protection and Veterinary Medicine (BgVV), published in the year 2000 a recommendation^[1] corresponding to a maximum daily THC intake of 1-2 μg :

- 5 $\mu\text{g}/\text{kg}$ for non-alcoholic and alcoholic beverages
- 5000 $\mu\text{g}/\text{kg}$ for edible oils
- 150 $\mu\text{g}/\text{kg}$ for all other foodstuffs

These guidance values are often exceeded even by hemp types that are supposed to have low amounts of THC as is shown by frequent alerts published by the European Rapid Alert System for Food and Feed (RASFF). In September 2016, seven alerts regarding hemp protein powder, food supplements and seeds were published.

Analysis is done according to the method from the official collection of analytical methods (§64 LFGB L 47.00-9, December 2004). The analytes are extracted and subsequently analyzed using GC-MS. Use of isotopically labeled standard allows for the quantification of trace level amounts.

Furthermore, we recommend analyses of mycotoxins and plant toxins (tropane, ergot and pyrrolizidine alkaloids) in order to ensure the marketability of your product.

We will happily prepare an individual quotation for you!

[1] BgVV empfiehlt Richtwerte für THC(Tetrahydrocannabinol) in hanfhaltigen Lebensmitteln