

Certificate of Analysis

Hops CO2

Batch # GE 771404

production: November 2017 retest: November 2022
raw material: *Humulus lupulus* - Flores = Hop cones, dried
country of origin of raw material: Germany
country of origin of product: Germany
D/E - ratio: 4,0 - 5,3 kg raw material yield 1 kg product.

Product contains: about 35 % Sunflower oil (organic)

Sensory Check

feature	reference	result
Appearance:	Green-brown viscous extract at room temperature	meets
Odour:	weak typical smell	meets

Analytical Check

feature	method	limits	value unit
Content of essential oil	21.006.01, Distillation, gravimetric	< 2	1,0 % (g/ 100g)
Cohumulone	21.126.03, HPLC	n.s.	9,1 %
n-+ Adhumulone	21.126.03, HPLC	n.s.	26,4 %
Sum of Humulones (alpha acids)	21.126.03, HPLC	30 - 40	35,5 %
Colupulone	21.126.03, HPLC	n.s.	6,2 %
n-+ Adlupulone	21.126.03, HPLC	n.s.	7,6 %
Sum of Lupulones (beta acids)	21.126.03, HPLC	10 - 20	13,8 %
Sum of alpha and beta acids	21.126.03, HPLC	49 - 51	49,3 %
Content of water	21.220.01, Karl Fischer method	n.s.	0,26 %
		n.s. = not specified	n.d. = not detected

Storage conditions: Store in a cool, dry place!

The product meets specifications no. 16.377.02/66.302.03; date of analysis: 2017.11.22

The data in this report of analysis have been determined carefully and to the best of our knowledge. Depending on transport and storage conditions the indicated data can be subject to certain changes which are outside of our influence. Hence the report has not the meaning of a guaranty in the legal sense and does not dispense the customer from making his own quality control before using the product.