BEGLEITURKUNDE

Autogranight stat Grand for Verordoung (EWG) Nr 1638-7 (vom 26 77 1971), againded direct Verordoung (EV/9) Nr. 1170/77 vom 37, 5, 1977.

DEUTSCHER SIEGELHOPFEN

(onne Samen



Hallertauer Magnum

NE BALLEN/BALLOT

CEWICHT IN KO (BRUTTO)

Aufbereite

DE DE

Steptelmolater Attackt

LAKAMAN



Hallertauer Magnum Characteristics

Bitter substances

alpha-acids	11.0 -16.0 %*
beta-acids	5.0 - 7.0 % *
cohumulone	21 - 29 % [×]
colupulone	38 - 48 % [×]

Polyphenols

total content 2.0 - 3.0 % * xanthohumol 0.4 - 0.5 % *

Aroma substances

total oil	1.6 - 2.6 % °
myrcene	30 - 45 % ^x
linalool	$0.2 - 0.7 \%^{\times}$
beta-caryophyllene	8 – 13 % [×]
aromadendrene	< 0.2 % [×]
humulene	30 - 45 % ^x
farnesene	< 1 % ×
beta-selinene	0.3 - 0.8 % ^x
alpha-selinene	0.3 - 0.8 % [×]

^(*)weight-% - (×)% relative - (·)ml/100g hops

High-alpha variety

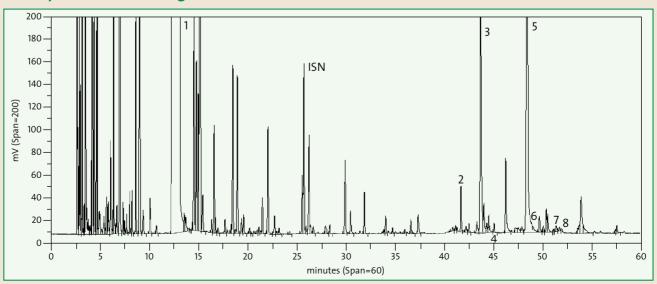
- very high bitter value
- average aroma
- good storage stability

Resistance to disease:

• wilt	good to very good
 downy mildew 	good
 powdery mildew 	very low

Ripening time medium late to late
Storage stability good
Average yield 2,000 kg/ha

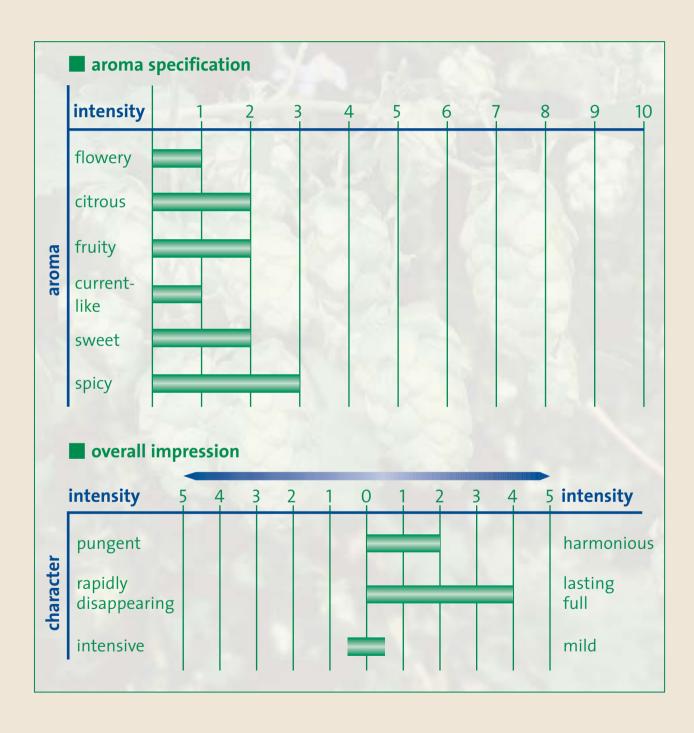
Headspace Gaschromatogramme



 $1 = myrcene \cdot ISN = internal standard \cdot 2 = linalool \cdot 3 = beta-caryophyllene \cdot 4 = aromadendrene \cdot 5 = humulene \cdot 6 = farnesene 7 = beta-selinene \cdot 8 = alpha-selinene$

Hallertauer Magnum

Evaluation



Hallertauer Magnum is a product of the Hop Research Centre in Hüll with high yields and strong growth. This high-alpha variety was registered in 1993 and quickly became important.



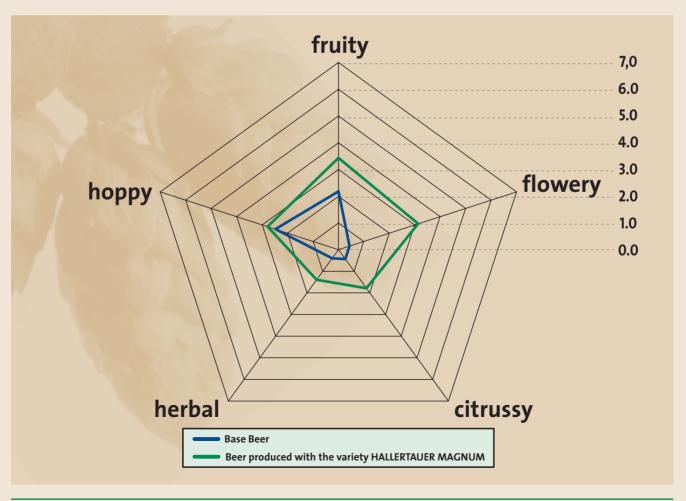
Brewing trial: Hallertauer Magnum



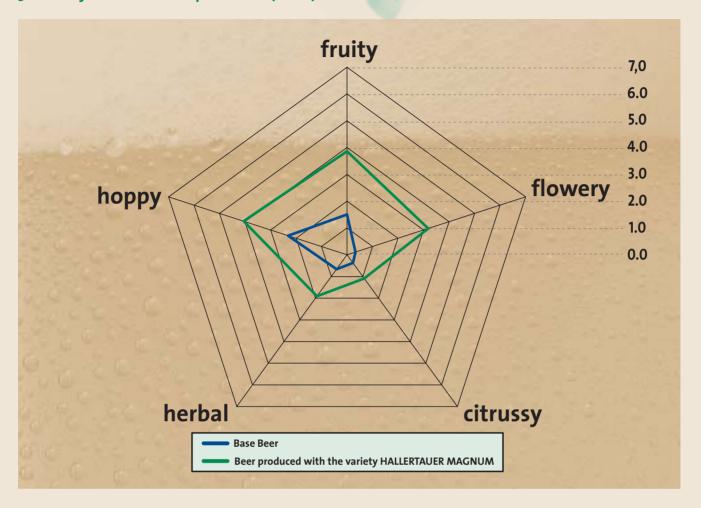
1. Beer Analysis

co-isohumulone	7.6 mg/l	iso-xanthohumol	0.40 mg/l
n-isohumulone	12.3 mg/l	xanthohumol	0,02 mg/l
ad-isohumulone	3.2 mg/l	linalool	21 µg/l
Σ isohumulones	23.1 mg/l	total polyphenols	164 mg/l
bitterness	24 EBC-BU		

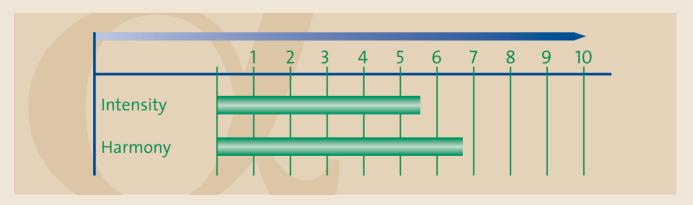
2. Sensory Evaluation "Hop Aroma" (Smell)



3. Sensory Evaluation "Hop Flavour" (Taste)



4. Sensory Evaluation of the Bitterness



The beer of the variety Hallertauer Magnum has a harmonic bitterness of medium intensity. In smell its delicate aroma inclines towards a flowery and fruity flavour, in taste it also has a hoppy tang.