

BEGLEITURKUNDE

Allgemein auf Grund der Verordnung (EWG) Nr. 1038/71 vom 26. 7. 1971,
geändert durch Verordnung (EWG) Nr. 1170/77 vom 17. 5. 1977.

DEUTSCHER SIEGELHOPFEN

(ohne Barmen)



SORTE

Spalter

GRUPPE:

NR. BALLEN/BALLOT

GEWICHT IN KG (BRUTTO)

Aufbereiter:

ORT:

DEN:

19

Gleichmischer/Aufsicht:

DEUTSCHER
SIEGEL

DEUTSCHER
SIEGEL



Spalter

Characteristics

Bitter substances

alpha-acids	2.5 – 5.5 % *
beta-acids	3.0 – 5.0 % *
cohumulone	22 – 29 % ^x
colupulone	40 – 45 % ^x

Polyphenols

total content	5.0 – 6.0 % *
xanthohumol	ca.0.3 % *

Aroma substances

total oil	0.5 – 0.9 % *
myrcene	20 – 35 % ^x
linalool	0.5 – 0.8 % ^x
beta-caryophyllene	8 – 13 % ^x
aromadendrene	< 0.2 % ^x
humulene	20 – 30 % ^x
farnesene	12 – 18 % ^x
beta-selinene	0.5 – 1.0 % ^x
alpha-selinene	0.5 – 1.0 % ^x

Very fine aroma variety

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

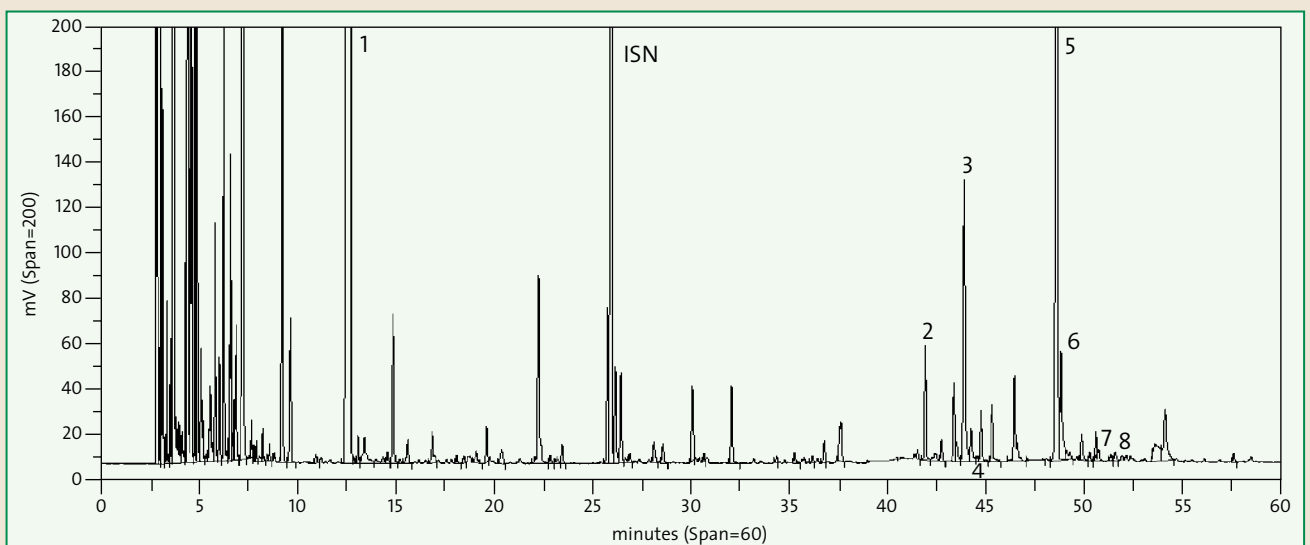
Resistance to disease:

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

Ripening time	early
Storage stability	average
Average yield	1,200 kg/ha

(*)weight-% – (x)% relative – (°) ml/100g hops

Headspace Gaschromatogramme



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

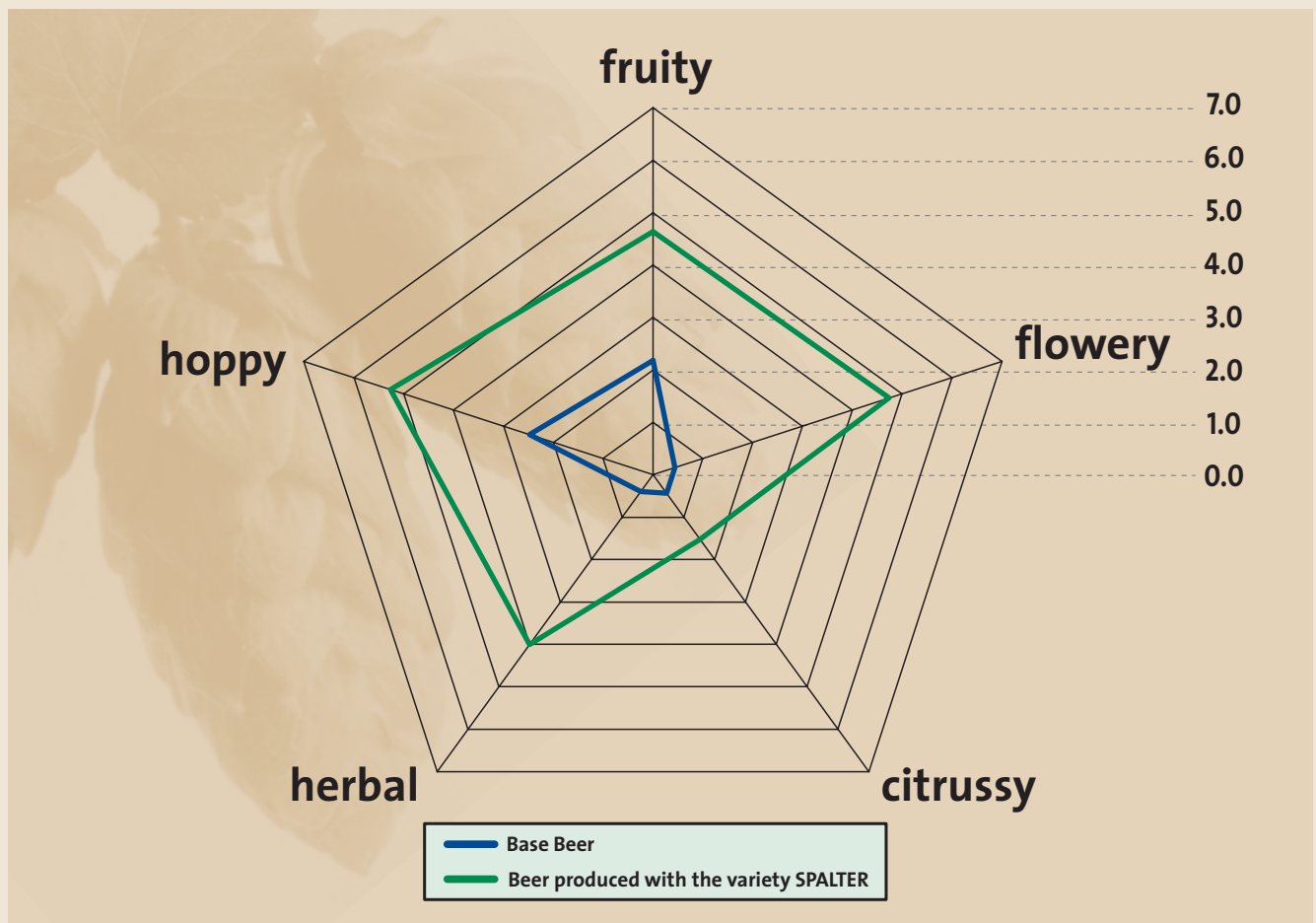


Brewing trial: Spalter

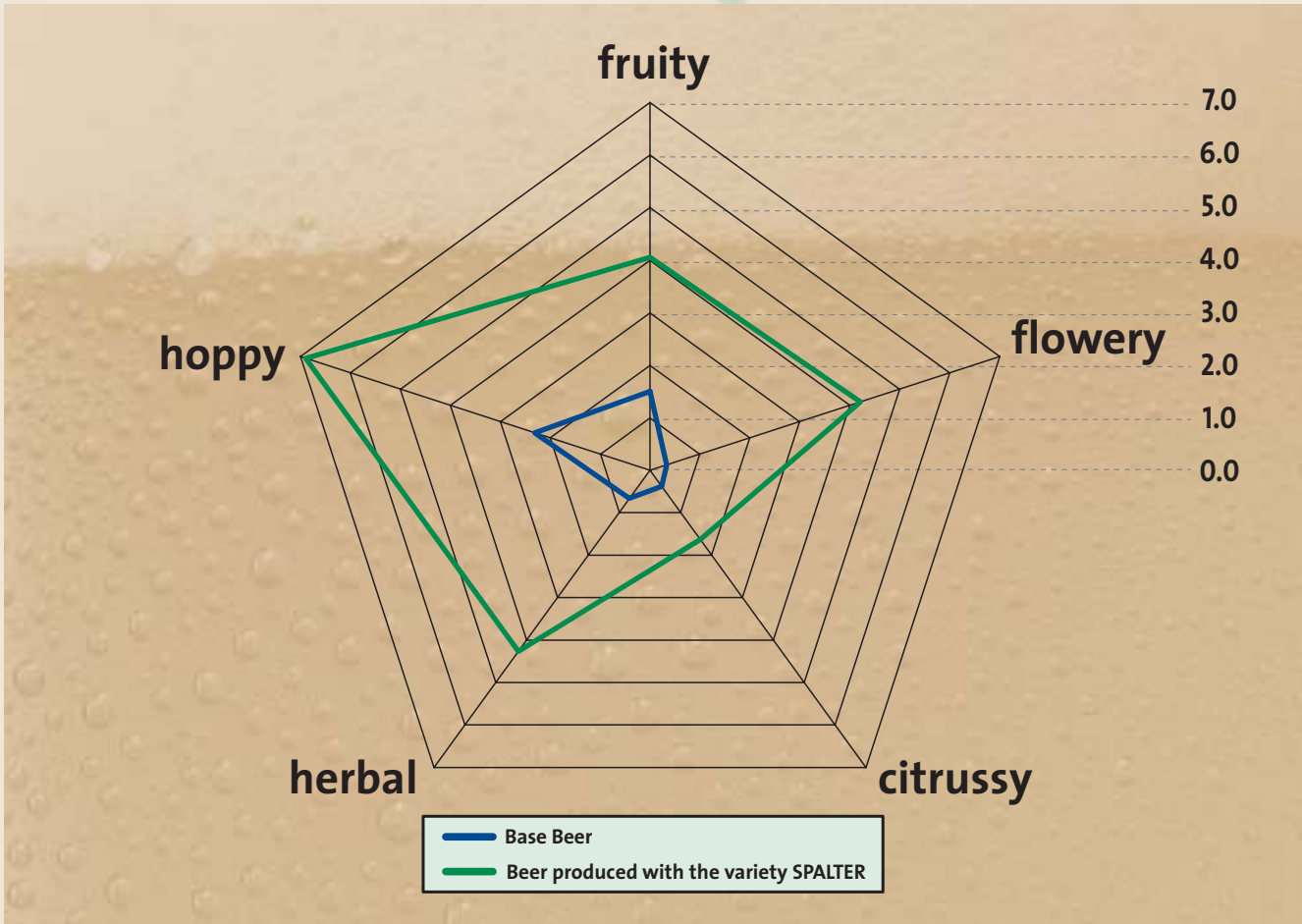
1. Beer Analysis

co-isohumulone	7.2 mg/l	iso-xanthohumol	0.75 mg/l
n-isohumulone	12.8 mg/l	xanthohumol	0.01 mg/l
ad-isohumulone	3.3 mg/l	linalool	49 µg/l
Σ isohumulones	23.3 mg/l	total polyphenols	253 mg/l
bitterness	27 EBC-BU		

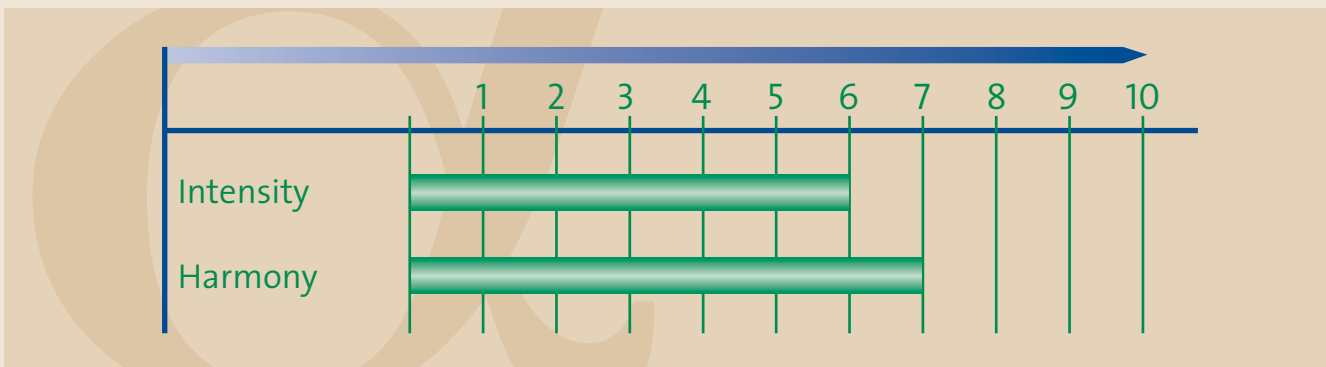
2. Sensory Evaluation “Hop Aroma” (Smell)



3. Sensory Evaluation “Hop Flavour” (Taste)



4. Sensory Evaluation of the Bitterness



The variety Spalter imparts the beer a strong but harmonic bitterness. In smell all the aroma impressions except citrusy are evident, in taste the hoppy character distinctly stands out.