## Hallertauer Magnum

Hallertauer Magnum was developed by the Hop Research Center in Hüll. It exhibits both a high yield and a vigorous growth habit. This high alpha variety is the daughter of US Galena and was approved in 1993. Due to its high bittering power, Hallertauer Magnum has quickly gained in importance and, as such, is primarily added at the beginning of the boil in the brewhouse. Beers brewed with Magnum exhibit a harmonious bitterness of medium intensity along with a slightly floral and spicy, herbal hop aroma.



## **Analytical Values**

#### **Bitter Substances**

α-acid [EBC 7.4]	13.0 % w/w
β-acid [EBC 7.7]	6.5 % w/w
β/α [EBC 7.7]	0.5
Co-Humulone [EBC 7.7]	27 % rel.

### **Aroma Substances**

Total Oil [EBC 7.10]	2.40 ml/100 g
Myrcene [GC-FID]	754 mg/100 g
β-Caryophyllene [GC-FID]	124 mg/100 g
Farnesen [GC-FID]	2 mg/100 g
α-Humulene [GC-FID]	426 mg/100 g
$\sum$ Hydrocarbon fraction [GC-FID]	1387 mg/100 g
Linalool [GC-FID]	6 mg/100 g
Geraniol [GC-FID]	7 mg/100 g
Geranyl acetate [GC-FID]	1 mg/100 g
2-methylbutyl 2-methylpropanoate [GC-FID]	46 mg/100 g
∑ Oxygen fraction [GC-FID]	189 mg/100 g
∑ Monoterpene alcohols and esters [GC-FID]	20 mg/100 g
∑ Propanoate [GC-FID]	60 mg/100 g
∑ unsaturated esters [GC-FID]	40 mg/100 g
∑ Esters [GC-FID]	115 mg/100 g
∑ Sesquiterpene alcohols [GC-FID]	23 mg/100 g
∑ Ketone [GC-FID]	27 mg/100 g
∑ Hydrocarbon fraction + Oxygen fraction [GC-FID]	1575 mg/100 g



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### **Polyphenols**

Polyphenols [EBC 7.14]	2.6 % w/w
$\sum$ Low-molecular polyphenols [EBC 7.7]	3244 mg/l
Xanthohumol [EBC 7.7]	0.47 % w/w





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### **Usage in Brewing**

### Often Used

	rarely	medium	frequently
Boil – Beginning			
Boil – Midpoint			
Boil – End & Whirlpool			
Dry Hopping			

### **Recommended Beer Styles**

	rarely	medium	frequently
Lager			
Ale			
Heavily dry-hopped beers			
Dark Beer			
Wheat Beer			
Belgian Origin Styles			

### **Agronomic Aspects**

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Climate Tolerance					
		low	medium	good	very good
Plant Health					
	early	medium early	medium	medium late	late
Maturity					
			low	medium	high
Storage Stability					

