

# Herkules

Herkules is a high alpha variety developed by the Hop Research Center in Hüll. It was approved as a variety in 2006. In just a few years, Herkules has become well-established on the international market as more than a mere bitter variety. Agonomically, in terms of its yield and bitter potential, it possesses considerable advantages but is also notable for its outstanding brewing traits. Herkules hops make up the largest share of hops grown in Germany by area, amounting to approximately 6,720 ha (in 2020). It is also the most cultivated hop worldwide. Herkules is primarily used to pro-

duce bitterness and is therefore added at the beginning of the boil in the brewhouse. It lends beer a harmonious bitterness without being excessive. In good crop years, Herkules can also possess intensely spicy hop and fruity notes.



Mother

Hallertau Taurus

Father

93/009/041

## Herkules

## Analytical Values

### Bitter Substances

$\alpha$ -acid [EBC 7.4]	16.0 % w/w
$\beta$ -acid [EBC 7.7]	4.8 % w/w
$\beta/\alpha$ [EBC 7.7]	0.3
Co-Humulone [EBC 7.7]	36 % rel.

### Aroma Substances

Total Oil [EBC 7.10]	1.70 ml/100 g
Myrcene [GC-FID]	462 mg/100 g
$\beta$ -Caryophyllene [GC-FID]	90 mg/100 g
Farnesen [GC-FID]	4 mg/100 g
$\alpha$ -Humulene [GC-FID]	320 mg/100 g
$\Sigma$ Hydrocarbon fraction [GC-FID]	948 mg/100 g
Linalool [GC-FID]	6 mg/100 g
Geraniol [GC-FID]	5 mg/100 g
Geranyl acetate [GC-FID]	0 mg/100 g
2-methylbutyl 2-methylpropanoate [GC-FID]	91 mg/100 g
$\Sigma$ Oxygen fraction [GC-FID]	214 mg/100 g
$\Sigma$ Monoterpene alcohols and esters [GC-FID]	23 mg/100 g
$\Sigma$ Propanoate [GC-FID]	115 mg/100 g
$\Sigma$ unsaturated esters [GC-FID]	20 mg/100 g
$\Sigma$ Esters [GC-FID]	161 mg/100 g
$\Sigma$ Sesquiterpene alcohols [GC-FID]	13 mg/100 g
$\Sigma$ Ketone [GC-FID]	28 mg/100 g
$\Sigma$ Hydrocarbon fraction + Oxygen fraction [GC-FID]	1162 mg/100 g

### Polyphenols

Polyphenols [EBC 7.14]	3.8 % w/w
$\Sigma$ Low-molecular polyphenols [EBC 7.7]	4818 mg/l
Xanthohumol [EBC 7.7]	0.80 % w/w

# Herkules



## Usage in Brewing

### Often Used

	rarely	medium	frequently
Boil – Beginning			<div></div>
Boil – Midpoint	<div></div>		
Boil – End & Whirlpool	<div></div>		
Dry Hopping		<div></div>	

### Recommended Beer Styles

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

### Agronomic Aspects

	low		medium	high	
Climate Tolerance			<div></div>		
	low	medium	good	very good	
Plant Health			<div></div>		
	early	medium early	medium	medium late	late
Maturity				<div></div>	
	low		medium	high	
Storage Stability				<div></div>	