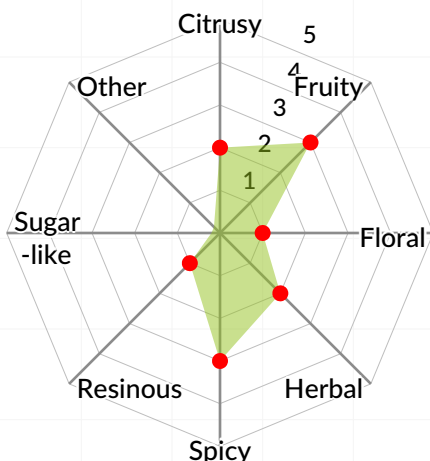


AROMA EVALUATION



VISUAL EVALUATION



AROMA SPECIFICATION

pepper, lime, currant, spicy

GENETIC ORIGIN

A German high alpha cross between 82/39/37 and 85/54/15M, bred in Huell; released in 1995.

AGRONOMIC ASPECTS

GROWING

Yield (kg/ha)	1,600 - 2,000
Maturity	Late
Main Growing Country	Germany
Acreage (ha)	465

RESISTANCE AGAINST DISEASES

Wilt diseases	Resistant
Downy mildew	Tolerant
Powdery mildew	Susceptible
Aphid	Susceptible

CHEMICAL INGREDIENTS

BITTER COMPONENTS

Alpha-Acid %	12.0 - 17.0
Beta-Acid %	4.0 - 6.0
Co-Humulone % rel.	20 - 25
Hard Resins : Alpha-Acid	0.12 - 0.28

POLYPHENOLS

Total Polyphenols	3.1
Xanthohumol (EBC 7.7)	0.9 - 1.0

AROMA COMPONENTS

Total Oils (ml/100g)	0.9 - 1.5
Beta-Caryophyllene: Humulene	0.30 - 0.31
Farnesene % of total Oil	0.00 - 1.00
Linalool % of total Oil	1.0 - 1.5
Linalool: Alpha-Acid	0.08 - 0.09

HOP ALTERNATIVES

BREWHOUSE

Hallertauer Magnum, Hallertauer Merkur, Herkules

HOPS HOTLINE

800.339.8710