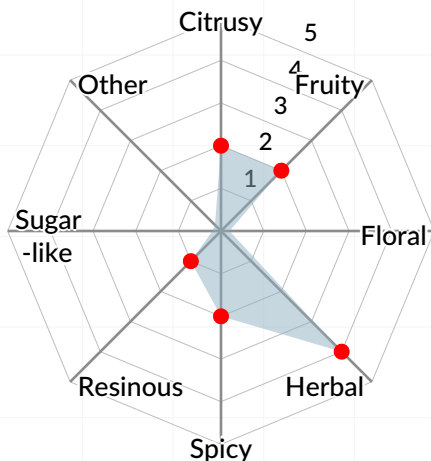


AROMA EVALUATION



VISUAL EVALUATION



AROMA SPECIFICATION

spicy, hay, orange, tobacco

GENETIC ORIGIN

A landrace variety originating Germany.

AGRONOMIC ASPECTS

GROWING

Yield (kg/ha)	1,450 - 1,750
Maturity	Late
Main Growing Country	Germany
Acreage (ha)	916

RESISTANCE AGAINST DISEASES

Wilt diseases	Tolerant
Downy mildew	Susceptible
Powdery mildew	Susceptible
Aphid	Tolerant

CHEMICAL INGREDIENTS

BITTER COMPONENTS

Alpha-Acid %	1.5 - 4.0
Beta-Acid %	2.5 - 6.0
Co-Humulone % rel.	17 - 25
Hard Resins : Alpha-Acid	0.53 - 2.47

POLYPHENOLES

Total Polyphenoles	4.4
Xanthohumol (EBC 7.7)	0.2 - 0.3

AROMA COMPONENTS

Total Oils (ml/100g)	0.5 - 1.0
Beta-Caryophyllene: Humulene	0.40 - 0.44
Farnesene % of total Oil	0.00 - 1.00
Linalool % of total Oil	0.5 - 1.0
Linalool: Alpha-Acid	0.25 - 0.33

HOP ALTERNATIVES

BREWHOUSE

Spalter, Tettnanger

HOPS HOTLINE

800.339.8710