



Vanguard

U.S.
Aroma Hop

Vanguard was developed from a diploid seedling from Hallertau Mittelfrueh and both USDA male and female crosses. The variety was released in 1997.

Pedigree	Cross between Hallertau MF and USDA male hop
Aroma	Herbal similar to Hallertau MF
Alpha Acids*	5.5 - 6.0 %
Beta Acids	6.0 - 7.0 %
Cohumulone	14 - 16 % of alpha acids
Total Oil	0.9 - 1.2 ml/100g
Myrcene	20 - 25 % of total oil
Humulene	45 - 50 % of total oil
Caryophyllene	12 - 14 % of total oil
Farnesene	< 1 % of total oil
Storage Stability	Very good to excellent

* Alpha acids are determined by conductometric titration (EBC 7.4) in Europe; by spectrophotometric (ASBC Hops-6) in USA