



Liberty

U.S.

Aroma Hop

Liberty is a triploid variety bred as cross between a female Hallertau Mittelfrüh and a downy mildew resistant German male hop. The variety was developed in 1983 from the USDA program at Oregon State University and released in the US in 1991. Of the four triploid Hallertau Mittelfrueh varieties released, Liberty most closely resembles the Hallertau Mittelfrüh.

Pedigree	Triploid from Hallertau Mittelfrüh and German aroma male hop
Aroma	Mild, slightly spicy, floral
Alpha Acids*	3.0 - 5.0 %
Beta Acids	3.0 - 4.0 %
Cohumulone	24 - 30 % of alpha acids
Total Oil	0.6 - 1.2 ml/100g
Myrcene	20 - 40 % of total oil
Humulene	35 - 40 % of total oil
Caryophyllene	9 - 12 % of total oil
Farnesene	< 1 % of total oil
Storage Stability	Poor to fair

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