

Tomahawk®

U.S.

High Alpha Hop



The current CTZ super high alpha hops, (which include the brand Tomahawk and varieties Columbus and Zeus) have the same female parent as Nugget, making them at least half sisters to Nugget. CTZs are currently used extensively for beer bittering. CTZs have very poor storage characteristics and are susceptible to mildews

Pedigree	Same female parent as Nugget
Aroma	Aromatic, pungent
Alpha Acids*	15.0 - 17.0 %
Beta Acids	4.5 - 5.0 %
Cohumulone	28 - 32 % of alpha acids
Total Oil	2.5 - 3.5 ml/100g
Myrcene	50 - 60 % of total oil
Humulene	12 - 18 % of total oil
Caryophyllene	9 - 11 % of total oil
Farnesene	< 1 % of total oil
Storage Stability	Very poor

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