

TABLE 9.4

## COMMONLY USED IPA HOP VARIETIES

The "4 C's"

VARIETY	TYPICAL ALPHA ACID CONTENT (%)	COHUMULONE (% of alpha acids)	OILS (ml/100 g)	FLAVOR AND AROMA DESCRIPTION	TYPICAL USES AND OTHER COMMENTS
Cascade	5-8	37	0.8-1.5	Spicy, floral, citrus, grapefruit	Classic American aroma and dry hop
Centennial	9-11.5	30	1.5-2.5	Floral, citrus (lemon rind), piney	Originally developed as Super Cascade, used for flavor, aroma, dry hopping
Chinook	12-14	39-34	1.5-2.5	Intense spice, pine, and apricot flavors, grapefruit	Dual-purpose hop
Columbus (aka Tomahawk, Zeus, or CTZ)	13-16	32	1.5-2.5	Intense pungent, herbal, floral	Good bittering hop, used frequently in dry hopping. Can get sulfury
Citra	11-13	22-24	2.2-2.8	Strong citrus and tropical, grapefruit, lime, melon, passionfruit	Newer variety
Warrior	15-17	25	1.0-2.0	Mild, clean	Primarily a bittering hop
Bullion	7-10	35-40	2-3	Intense American hop aroma. Black currant and catly	Hard to find, used in Ballantine IPA
Apollo	15-19	24-28	1.5-2.5	Grapefruit, spicy	Newer variety, very intense. Can get sulfury
Bravo	14-17	29-34	1.6-2.4	Floral and fruity	Newer variety
Delta	5.5-7	22-24	0.5-1.1	Citrusy and spicy, with hints of tea, berry, melon	Newer aromatic variety
Calypso	12-14	40-42	1.6-2.5	Pear, berry, apple	Newer aromatic variety
Galaxy	13.5-15	35	2.4-2.7	Citrus, passionfruit, stone fruit	Australian variety
Magnum	12-14	22-26	1.9-2.3	Clean, bitter	German origin, excellent bittering hop
Amarillo	8-11	22	1.5-2	Floral, citrus, mango/tropical fruit	Popular bittering and aroma hop. May be too intense if not used with other varieties
Simcoe	12-14	15-20	2-2.5	Strong resinous/piney	Bittering and aroma. Nice dry hop
Nugget	12-14	26-30	1.7-2.3	Strong bitter. Light herbal	Bittering, primarily
Summit	16-18	26-33	1.5-2.5	Citrusy and herbal	Bittering and flavor. Can get oniony/sulfury at high levels
Sorachi Ace	10-16	23	2-2.8	Herbal, dill, tangerine	Developed in Japan. Unique flavor
Nelson Sauvin	12-13	24	1-1.5	White wine, berries	Unique New Zealand variety
East Kent Golding	4.5-7	28-32	0.5-1	Spicy, earthy, herbal, marmalade	Classic British variety
Challenger	5-9	20-25	1-1.7	Spicy, clean bitter	Primarily a British bittering hop, good flavor characteristics, can be used effectively for flavor/aroma
Northdown	7-8	24-29	1.5-2.5	Clean bitter, mild flavor	Good dual-purpose hop
Target	10-12	29-37	1.6-2.6	Intense. Herbal, floral, some citrus/tangerine	Good bittering hop, good for flavor
Fuggle	3.5-5	26	0.7-1.5	Mild, grassy, floral, herbal	Flavor, aroma, and dry hopping British ales
Willamette	4-7	32	1-1.5	Herbal, grassy, mild	American version of Fuggle

English IPA varieties