

Hop Varieties										
HOP NAME 酒话名称	ALPHA ACID % 阿尔法酸 %	BETA ACID % 倍塔酸 %	COHUMULONE 联合葎草酮	TOTAL OIL 油总量	DESCRIPTION 描述	FLAVOUR TYPE 味道类型	ORIGIN 起源	BEER STYLES 啤酒类型	SUBSTITUTIONS 替代	PRIMARY USE 主要用途
Ahtanum™	5.7 - 6.3%	5.0 - 6.5%	30 - 35%	0.8 - 1.2 mL / 100g	Floral, earthy, citrus and grapefruit tones 花香, 尼什, 柑橘和柚子	Citrus 柑橘 Floral 花似 Tobacco / Earthy 烟草 / 泥土	USA 美国	Pale Ale 淡色艾尔 IPA Lager 拉略	Amarillo Cascade	Aroma 香气
Amarillo®	8.0 - 11.0%	6.0 - 7.0%	21 - 24%	1.5 - 1.9 mL / 100g	Floral, tropical, and citrus (lemon, orange and grapefruit) characteristics 花卉, 热带, 柑橘 (柠檬, 橘子和葡萄柚) 特性	Citrus 柑橘 Floral 花似 Tropical Fruit 热带水果	USA 美国	Bitter 英式苦啤 IPA Wheat 小麦	Cascade Centennial	Aroma 香气
Apollo	15.0 - 19.0%	5.5 - 8.0%	24 - 28%	1.5 - 2.5 mL / 100g	Strong grapefruit, orange, and hoppy notes 强柚子, 橙, 和啤酒花	Citrus 柑橘	USA 美国	American Ale 美式 艾尔 IPA	Magnum Columbus	Bittering 苦味
Australian Ella	14.0 - 16.0%	4.0 - 7.5%	~36%	~2.9 mL / 100g	Spicy, hoppy and floral with hints of anise 香料, 酒花和花卉八角的香味	Floral 花似 Herbal 草本 Spicy 芳香	Australia 澳大利亚	Lager 拉略	Pallisade® Perle	Aroma 香气
Australian Galaxy	11.0 - 16.0%	5.0 - 6.9%	32 - 42%	3.0 - 5.0 mL / 100g	Distinct citrus, peach and passion fruit flavors 不同的柑橘, 桃子和百香果口味	Citrus 柑橘 Fruity 果味 Stone Fruit 核果	Australia 澳大利亚	IPA	Citra®	Aroma 香气
Australian Helga	4.9 - 7.3%	5.0 - 7.0%	20 - 23%	0.6 - 1.0 mL / 100g	Very mild and pleasant with delicate floral and herbal tones 非常温和宜人, 精致的花卉和草药特性	Floral 花似 Fruity 果味 Herbal 草本	Australia 澳大利亚	Ale 艾尔	Hallertau	Aroma 香气
Australian Pride of Ringwood	8.6 - 10.5%	4.4 - 7.0%	26 - 34%	1.6 - 1.8 mL / 100g	Pronounced and pleasant, a distinct Australian aroma with cedar, oak and herbal tones 独特的澳大利亚雪松香气, 橡木和香叶	Cedar 雪松 Herbal 草本 Tobacco / Earthy 烟草 / 泥土	Australia 澳大利亚	Pale Ale 淡色艾尔	Cluster Galena	Bittering 苦味
Australian Summer	5.6 - 6.4%	4.8 - 6.1%	20 - 25%	1.4 - 2.0 mL / 100g	Balanced citrus, melon and light apricot tones 平衡柑橘, 甜瓜和浅杏色	Citrus 柑橘 Spicy 芳香 Tropical Fruit 热带水果	Australia 澳大利亚	Ale 艾尔	Amarillo	Aroma & Bittering 香气和苦味
Australian Super Pride	12.5 - 16.3%	6.0 - 8.0%	26 - 29%	3.4 - 4.0 mL / 100g	Mild and pleasant subtle resin and fruit tones 温和宜人微妙树脂和果实	Cedar 雪松 Fruity 果味 Tobacco / Earthy 烟草 / 泥土	Australia 澳大利亚	Lager 拉略	Australian Pride of Ringwood	Bittering 苦味
Australian Sylva	5.6 - 7.3%	3.0 - 4.6%	20 - 25%	1.0 - 1.4 mL / 100g	Complex and subtle, floral and herbal characteristics 复杂和微妙花卉和草药的特性	Floral 花似 Herbal 草本	Australia 澳大利亚	Lager 拉略	Saaz	Aroma 香气
Australian Topaz	13.7 - 17.7%	6.4 - 7.9%	48 - 51%	1.7 - 2.2 mL / 100g	Resinous, grassy tones with light tropical flavours 树脂草香调光的热带风味	Grassy 草地 Tobacco / Earthy 烟草 / 泥土 Tropical Fruit 热带水果	Australia 澳大利亚	Ale 艾尔	Amarillo Columbus Summit	Aroma & Bittering 香气和苦味
Bitter Gold	15.44 - 18.84%	6.13 - 8.01%	36 - 41%	0.81 - 3.92 mL / 100g	Intense stone fruit and tropical fruit flavours, specifically pear and watermelon 激烈核果和热带水果的味道, 特别是梨, 西瓜	Stone Fruit 核果 Tropical Fruit 热带水果	USA 美国	All Styles 所有款式	Galena Nugget	Aroma & Bittering 香气和苦味
Bravo	14.0 - 17.0%	3.0 - 5.0%	29 - 34%	1.6 - 2.4 mL / 100g	Pleasant fruity and floral aroma characteristics 宜人的果香和花香的特性	Floral 花似 Fruity 果味	USA 美国	American Pale Ale 美式淡色艾尔	Columbus Magnum Nugget	Bittering 苦味
Brewer's Gold	8.0 - 10.0%	3.5 - 4.5%	40 - 48%	2.0 - 2.4 mL / 100g	Spicy, fruity characteristics, black currant 香料和果味特点, 黑醋栗	Fruity 果味 Spicy 芳香	USA 美国	Ale 艾尔	Chinook Galena Nugget	Bittering 苦味
Bullion	6.7 - 12.9%	3.7 - 9.1%	~39%	1.1 - 2.7 mL / 100g	Strong and zesty blackcurrant characteristics 强大和灿烂黑醋栗特点	Fruity 果味	England 英国	Stout 烈性黑啤	Brewer's Gold Chinook Columbus Galena Northern Brewer	Bittering 苦味
Cascade	4.5 - 7.0%	4.5 - 7.0%	33 - 40%	0.8 - 1.5 mL / 100g	Medium intense floral, citrus and grapefruit tones 中激烈的花香, 柑橘和柚子	Citrus 柑橘 Floral 花似 Fruity 果味	USA 美国	American Pale Ale 美式淡色艾尔	Ahtanum Amarillo Centennial	Aroma 香气
Cashmere	7.7 - 9.1%	6.4 - 7.1%	22 - 24%	1.2 - 1.4 mL / 100g	Mild herbal aroma with strong melon, lemon, lime and slightly spicy notes 温和的草本香气具有较强的哈密瓜, 柠檬, 酸橙和略带香料味	Citrus 柑橘 Fruity 果味 Herbal 草本	USA 美国	IPA	Mosaic	Aroma & Bittering 香气和苦味
Centennial	9.5 - 11.5%	3.5 - 4.5%	28 - 30%	1.5 - 2.5 mL / 100g	Medium intensity floral and citrus (lemon) tones 中等强度的花香和柑橘 (柠檬)	Citrus 柑橘 Floral 花似	USA 美国	American Ale 美式 艾尔	Cascade Chinook Columbus	Aroma & Bittering 香气和苦味
Chelan	12.0 - 14.5%	8.5 - 9.8%	33 - 35%	1.5 - 1.9 mL / 100g	Mild floral and citrus characteristics 温和的花香和柑橘特点	Citrus 柑橘 Floral 花似	USA 美国	American Ale 美式 艾尔	Galena Nugget	Bittering 苦味
Chinook	12.0 - 14.0%	3.0 - 4.0%	29 - 34%	1.5 - 2.5 mL / 100g	Distinct, medium intensity spice and pine characteristics with subtle notes of grapefruit 柚子微妙的味道, 中等强度的香料和松树特点	Citrus 柑橘 Pine 松树 Spicy 芳香	USA 美国	American Pale Ale 美式淡色艾尔	Columbus Northern Brewer Nugget	Aroma & Bittering 香气和苦味
Citra®	11.0 - 13.0%	3.5 - 4.5%	22 - 24%	2.2 - 2.8 mL / 100g	Strong citrus and tropical tones of grapefruit, melon, lime, gooseberry, passion fruit and lychee 强大的柑橘和柚子, 甜瓜, 石灰, 猕猴桃, 百香果和荔枝的热带色调	Citrus 柑橘 Fruity 果味 Tropical Fruit 热带水果	USA 美国	IPA	Galaxy	Aroma 香气

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Cluster	5.5 - 8.5%	4.5 - 5.5%	36 - 42%	0.4 - 0.8 mL / 100g	Strong floral and spicy characteristics 强烈的花香和香料的特点	Floral 花似 Spicy 芳香	USA 美国	Stout 烈性黑啤	Galena	Aroma & Bittering 香气和苦味
Columbia	6.8 - 11.5%	2.9 - 5.6%	~40%	0.5 - 1.6 mL / 100g	Subtle earth and mild fruit tones 微妙泥土和的水果味	Fruity 果味 Tobacco / Earthy 烟草 / 泥土	USA 美国	English Ale 英式艾尔	Fuggles	Aroma 香气
Columbus	14.0 - 16.0%	4.0 - 5.0%	30 - 35%	1.5 - 2.0 mL / 100g	Pungent, black pepper, liquorice characteristics with subtle citrus overtones 味辛，黑胡椒，甘草与微妙的柑橘色彩特性	Citrus 柑橘 Spicy 芳香	USA 美国	Pale Ale 淡色艾尔	Chinook Galena Millennium Nugget	Bittering 苦味
Comet	9.0 - 11.0%	4.0 - 6.1%	40 - 45%	1.4 - 3.3 mL / 100g	A pungent, wild American aroma with citrus (grapefruit) flavours 一股刺鼻的，野生美国香气柑橘（柚）口味	Citrus 柑橘 Tobacco / Earthy 烟草 / 泥土	USA 美国	Lager 拉咯	Galena Summit	Bittering 苦味
Crystal	3.5 - 5.5%	4.5 - 6.7%	20 - 26%	0.8 - 2.1 mL / 100g	Mild, spicy and floral 温和香料和花香	Floral 花似 Spicy 芳香	USA 美国	IPA	Hallertau Liberty Mt. Hood French Strisselpalt German Hersbrucker	Aroma 香气
Czech Premiant	7.0 - 11.0%	3.5 - 6.0%	18 - 23%	0.9 - 1.3 mL / 100g	Pleasant, mild aroma 宜人温和的香气	Floral 花似 Fruity 果味 Herbal 草本	Czechoslovakia 捷克	Pilsner 比尔森	Saaz	Aroma 香气
Czech Saaz	2.0 - 5.0%	7.0 - 8.0%	23 - 28%	0.4 - 1.0 mL / 100g	Very mild, with pleasant earthy, herbal and floral overtones 非常温和，宜人的泥土，草药和花的色彩	Floral 花似 Herbal 草本 Tobacco / Earthy 烟草 / 泥土	Czechoslovakia 捷克	Lager 拉咯	Sterling Polish Lublin	Aroma 香气
Czech Sladek	5.0 - 9.0%	8.0 - 11.0%	22 - 28%	0.8 - 1.0 mL / 100g	Fruity flavor profile including hints of peach, grapefruit and passion fruit 水果风味，包括桃子，柚子和百香果	Citrus 柑橘 Spicy 芳香 Tropical Fruit 热带水果	Czechoslovakia 捷克	Lager 拉咯	Premiant Saaz	Aroma 香气
Delta	5.5 - 7.0%	5.5 - 7.0%	22 - 24%	0.5 - 1.1 mL / 100g	Mild and pleasant aroma that is slightly spicy with a hint of citrus 温和宜人的香气是略带香料与柑橘的口味	Citrus 柑橘 Spicy 芳香	USA 美国	American Ale 美式艾尔		Aroma & Bittering 香气和苦味
El Dorado	14.0 - 16.0 %	7.0 - 8.0%	30%	2.5 - 2.8 mL / 100g	Aromas of watermelon, pear, candy, or stone fruit. There is often an undertone of citrus, and sometimes an identifiable fresh-cut-grass taste 西瓜，梨，糖果，或核果的香气。经常有柑橘的底色，有时可识别的鲜切草的味道	Citrus 柑橘 Grassy 草地 Stone Fruit 核果	USA 美国	American Pale Ale 美式淡色艾尔	Citra Nelson Sauvin Rakau	Aroma & Bittering 香气和苦味
Equinox™	14.4 - 15.6%	4.6 - 5.1%	31.7 - 38%	2.9 mL / 100g	A pronounced aroma profile with citrus, tropical fruit, floral and herbal characteristics. Specific descriptors include lemon, lime, papaya, apple, and green pepper 一个明显的芳香型柑橘，热带水果，花卉和草药的特性。具体描述符包括柠檬，酸橙，木瓜，苹果，青椒	Citrus 柑橘 Herbal 草本 Tropical Fruit 热带水果	USA 美国	American Ale 美式艾尔 IPA		Aroma 香气
Eroica	7.3 - 14.9%	3.0 - 5.3%	~40%	~0.9 mL / 100g	Forward fruit flavours 水果口味	Fruity 果味	USA 美国	American Ale 美式艾尔	Brewer's Gold Galena Glacier Bullion	Bittering 苦味
Exp - HBC 291	11.2 - 13.1%	5.1 - 6.1%	19.8 - 23.8%	2.3 mL / 100g	Typically described as peppery, floral and fruity 通常被描述为暴躁，花果香调	Floral 花似 Fruity 果味 Spicy 芳香				
Exp - HBC 342	11 - 14%			mL / 100g	Mild citrus, tropical fruit and melon notes 温和的柑橘，热带水果和甜瓜	Citrus 柑橘 Fruity 果味 Tropical Fruit 热带水果				
Falconer's Flight® 7C's	9.0 - 10.5%	4.7 - 5.1%		~1.72 mL / 100g	Strong fruit and citrus characteristics, with layers of spicy and earthy overtones 强大的水果和柑橘的特点，具有香料和泥土的味道	Citrus 柑橘 Fruity 果味 Tobacco / Earthy 烟草 / 泥土	USA 美国	Pale Ale 淡色艾尔		Aroma 香气
Falconer's Flight®	9.5 - 12.0%	4.0 - 5.0%	20 - 25%	~1.6 mL / 100g	Distinct tropical, floral, lemon and grapefruit characteristics 独特的热带风光，花卉，柠檬和葡萄柚特点	Citrus 柑橘 Floral 花似 Tropical Fruit 热带水果	USA 美国			Aroma 香气
French Aramis	7.9 - 8.3%	3.8 - 4.5%	~42 %	1.2 - 1.6 mL / 100g	Very fine spice and herbal notes with subtle citrus characteristics 极细的香料和草药票据与微妙的柑橘特色	Citrus 柑橘 Herbal 草本 Spicy 芳香	France 法国	Belgian Ale 比利时艾尔	Centennial Chinook Hallertau Tett nang	Aroma 香气
French Strisselpalt	1.8 - 2.5%	3.0 - 6.0%	20 - 23%	0.6 - 0.8 mL / 100g	Very fine spicy, herbal, floral, lemon and other fruit tones 极细的辣，中草药，花卉，柠檬等水果色调	Citrus 柑橘 Floral 花似 Herbal 草本	France 法国	Belgian Ale 比利时艾尔	Crystal Liberty Mt. Hood German Hersbrucker	Aroma 香气
French Triskel	~2.6%	~6.7%	20 - 23%	~0.7 mL / 100g	Strong floral, fruit and citrus characteristics 强烈的花香，水果和柑橘特点	Citrus 柑橘 Floral 花似 Fruity 果味	France 法国	Belgian Ale 比利时艾尔	Ahtanum Centennial Chinook Simcoe	Aroma 香气

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Fuggle	4.0 - 5.5%	1.5 - 2.0%	25 - 32%	0.7 - 1.2 mL / 100g	Mild wood and fruit characteristics 轻度木材和水果特点	Fruity 果味 Tobacco / Earthy 烟草 / 泥土	England 英国	English Ale 英式艾尔	Styrian Savinjski Golding Willamette	Aroma 香气
Galena	12.0 - 14.0%	7.0 - 9.0%	37 - 42%	0.9 - 1.2 mL / 100g	Spicy,blackcurrant and citrus (grapefruit) tones 香料，黑加仑和柑橘（柚）	Citrus 柑橘 Spicy 芳香 Stone Fruit 核果	USA 美国	English Ale 英式艾尔	Brewer's Gold Columbus Nugget	Bittering 苦味
German Brewer's Gold	5.0 - 9.0%	2.5 - 3.5%	40 - 48%	1.8 - 2.2 mL / 100g	Black currant, fruit and spice characteristics 黑加仑，水果和香料的特性	Fruity 果味 Spicy 芳香	Germany 德国	Ale 艾尔	Galena Northern Brewer UK Northdown	Bittering 苦味
German Hallertau Blanc	9.0 - 12.0%	4.5 - 5.5%	22 - 26%	1.2 - 1.5 mL / 100g	Floral and fruity with passion fruit, grapefruit, pineapple, grape and lemongrass overtones 花果香调与百香果，葡萄柚，菠萝，葡萄和柠檬草	Floral 花似 Fruity 果味 Grassy 草地	Germany 德国	American Ale 美式艾尔	Liberty Mt. Hood Tettnanger	Aroma 香气
German Hallertau Mittelfrüh	3.0 - 5.5%	3.0 - 5.0%	18 - 28%	0.7 - 1.3 mL / 100g	Mild, yet spicy, with floral and citrus tones 温和的但芳香，有花卉和柑橘	Citrus 柑橘 Floral 花似 Spicy 芳香	Germany 德国	Lager 拉路	German Tradition Liberty Vanguard	Aroma 香气
German Herkules	12.0 - 17.0%	4.0 - 5.5%	32 - 38%	1.6 - 2.4 mL / 100g	Spicy, floral and hop notes with hints of pine, black pepper and melon 芳香花香和跳跃的特性，松木的香味，黑胡椒和甜瓜	Floral 花似 Pine 松树 Spicy 芳香	Germany 德国	German Ale 德式艾尔		Bittering 苦味
German Hersbrucker	2.0 - 5.0%	2.5 - 6.0%	18 - 25%	0.7 - 1.3 mL / 100g	Mild, herbal and floral characteristics, with fruity overtones 温和草药和花的特点，果味色彩	Floral 花似 Fruity 果味 Herbal 草本	Germany 德国	Belgian Ale 比利时艾尔	Mt. Hood French Strisselpalt	Aroma 香气
German Hull Melon	6.9 - 7.5%	7.3 - 7.9%	25 - 30%	~0.8 mL / 100g	Distinct fruit characteristics including honeydew melon and strawberry flavours 鲜明的特色水果，包括蜜瓜和草莓口味	Fruity 果味 Tropical Fruit 热带水果	Germany 德国	German Ale 德式艾尔	Citra	Aroma 香气
German Magnum	11.0 - 16.0%	5.0 - 7.0%	21 - 29%	1.6 - 2.6 mL / 100g	A delicate aroma with inclinations towards floral and fruit flavourings and a prevalent hoppy tang 一种微妙的香气对花卉和水果香料和普遍的啤酒花的味道	Floral 花似 Fruity 果味	Germany 德国	Ale 艾尔	Columbus Nugget	Bittering 苦味
German Mandarina Bavaria	7.0 - 10.0%	5.0 - 6.5%	31 - 35%	~2.2 mL / 100g	Distinct tangerine and citrus flavours 独特的橘子和柠檬香料	Citrus 柑橘 Fruity 果味 Tropical Fruit 热带水果	Germany 德国	Ale 艾尔	Citra	Aroma 香气
German Merkur	12.0 - 15.0%	3.5 - 7.0%	16 - 20%	2.2 - 2.8 mL / 100g	Strong earthy, floral and citrus impressions 强大的泥土，花香和柑橘印象	Citrus 柑橘 Floral 花似 Tobacco / Earthy 烟草 / 泥土	Germany 德国	Lager 拉路	Magnum German Taurus German Tradition	Bittering 苦味
German Northern Brewer	7.0 - 10.0%	3.5 - 5.0%	27 - 33%	1.6 - 2.1 mL / 100g	Medium intense herbal and floral tones 中激烈的草药和花	Floral 花似 Herbal 草本	Germany 德国	Bitter 英式苦啤	Chinook Columbus Galena Magnum Northern Brewer German Brewer's Gold	Aroma & Bittering 香气和苦味
German Opal	5.0 - 8.0%	3.5 - 5.5%	13.0 - 17.0%	0.8 - 1.3 mL / 100g	Even dispersal of all aroma characteristics - fruity, floral, herbal and hoppy tones all appear 即使分散的所有特征香气 - 果香，花香，草药和啤酒花	Floral 花似 Fruity 果味 Herbal 草本	Germany 德国	Belgian Ale 比利时艾尔	Tettnang UK East Kent Golding Styrian Savinjski Golding	Aroma 香气
German Perle	6.0 - 10.0%	2.5 - 5.0%	28 - 32%	0.8 - 1.3 mL / 100g	Delicate floral, fruit, spice and mint tones 精致的花卉，水果，香料和薄荷	Floral 花似 Fruity 果味 Spicy 芳香	Germany 德国	Ale 艾尔	Northern Brewer Perle	Aroma 香气
German Polaris	18.0 - 23.0%	4.5 - 6.0%	22 - 28%	4.0 - 5.0 mL / 100g	Intense floral and pleasant mint tones 强烈的花香宜人的薄荷	Floral 花似 Herbal 草本	Germany 德国	Ale 艾尔		Aroma 香气
German Saphir	2.0 - 4.5%	4.0 - 7.0%	12 - 17%	0.8 - 1.4 mL / 100g	Distinct spicy, fruit and citrus (tangerine) tones 独特的芳香，水果和柑橘（橘子）	Citrus 柑橘 Fruity 果味 Spicy 芳香	Germany 德国	Belgian Ale 比利时艾尔	Hallertau	Aroma 香气
German Select	3.0 - 6.5%	2.5 - 5.0%	21 - 27%	0.6 - 0.9 mL / 100g	Floral and fruit characteristics 花和果实特征	Floral 花似 Fruity 果味	Germany 德国	Lager 拉路	Saaz Tettnang German Hersbrucker German Spalt	Aroma 香气
German Smaragd (Emerald)	4.0 - 6.0%	3.5 - 5.5%	13 - 18%	0.7 - 1.7 mL / 100g	Predominantly fruity with strong floral and hop tones 主要是果味与强烈的花香	Floral 花似 Fruity 果味	Germany 德国	Ale 艾尔		Aroma 香气
German Spalt	2.5 - 5.5%	3.0 - 5.0%	22 - 29%	0.5 - 0.9 mL / 100g	Mild and herbal, with spicy, floral and fruit tones 轻度和草药香料花香和水果	Floral 花似 Fruity 果味 Herbal 草本	Germany 德国	Bock 博克	Saaz Tettnang	Aroma 香气
German Tettnang	3.0 - 6.0%	3.0 - 5.0%	22 - 29%	0.5 - 0.9 mL / 100g	Mild and pleasant with balanced earthy, herbal and floral aroma impressions 温和宜人与平衡的泥土，草药和花的香味印象	Floral 花似 Herbal 草本 Tobacco / Earthy 烟草 / 泥土	Germany 德国	Belgian Ale 比利时艾尔	Saaz German Hersbrucker German Spalt German Select	Aroma 香气
German Traditon	5.0 - 7.0%	4.0 - 5.0%	26 - 29%	1.0 - 1.4 mL / 100g	Medium intense floral and herbal (grassy) tones 中激烈的花卉和草本（草）	Floral 花似 Grassy 草地 Herbal 草本	Germany 德国	Bock 博克	Liberty German Hallertau Mittelfrüh	Aroma 香气

HOP NAME 酒话名称	ALPHA ACID % 阿尔法酸 %	BETA ACID % 倍塔酸 %	COHUMULONE 联合葎草酮	TOTAL OIL 油总量	DESCRIPTION 描述	FLAVOUR TYPE 味道类型	ORIGIN 起源	BEER STYLES 啤酒类型	SUBSTITUTIONS 替代	PRIMARY USE 主要用途
Glacier	~5.5%	~8.2%	11 - 13%	0.7 - 1.6 mL / 100g	Pleasant hop aroma 酒花香	Herbal 草本	USA 美国	American Pale Ale 美式淡色艾尔	Fuggles Willamette Styrian Savinjski Golding	Aroma & Bittering 香气和苦味
Golding	4.0 - 6.0%	2.0 - 3.0%	20 - 25%	0.4 - 1.0 mL / 100g	Mild and delicate with sweet floral characteristics 温和细腻甜美的花香特色	Floral 花似 Spicy 芳香	England 英国	Bitter 英式苦啤	Fuggles Willamette UK East Kent Golding Styrian Savinjski Golding	Aroma 香气
Hallertau	3.5 - 5.5%	3.5 - 5.5%	18 - 25%	0.6 - 1.5 mL / 100g	Mild and pleasant, yet spicy, with herbal and floral characteristics 温和宜人，又芳香，用草药和花的特性	Floral 花似 Herbal 草本 Spicy 芳香	USA 美国	Belgian Ale 比利时 艾尔	Liberty Mt. Hood German Magnum German Merkur German Taurus German Tradition German Hallertau Mittelfrüh	Aroma 香气
Horizon	11.0 - 13.0%	6.5 - 8.5%	16 - 19%	1.5 - 2.0 mL / 100g	Pleasant and spicy, with floral characteristics 芳香，以花卉特色	Floral 花似 Spicy 芳香	USA 美国	American Ale 美式 艾尔	Magnum	Aroma & Bittering 香气和苦味
Liberty	3.0 - 5.0%	3.0 - 4.0%	24 - 30%	0.6 - 1.8 mL / 100g	Mild and spicy with subtle lemon and citrus characteristics 轻度和香料带有微妙的柠檬和柑橘特点	Citrus 柑橘 Spicy 芳香	USA 美国	Bock 博克	Hallertau Mt. Hood German Tradition	Aroma 香气
Millennium	14.5 - 16.5%	4.3 - 5.3%	28 - 32%	1.8 - 2.2 mL / 100g	Mild and resinous with floral and herbal tones 轻度和树脂与花卉和草药	Floral 花似 Herbal 草本 Tobacco / Earthy 烟草 / 泥土	USA 美国	Stout 烈性黑啤	Columbus Nugget Summit™	Bittering 苦味
Mosaic™	11.5 - 13.5%	3.2 - 3.9%	24 - 26%	1.0 - 1.5 mL / 100g	A complex array of tropical fruit, citrus, berry, herbal, earthy and pine characteristics 热带水果，柑橘，草莓，花草，泥土和松树特性的复杂阵列	Citrus 柑橘 Grassy 草地 Floral 花似	USA 美国	IPA	City Galaxy	Aroma 香气
Mt. Hood	4.0 - 8.0%	5.0 - 7.5%	22 - 27%	1.6 - 3.4 mL / 100g	Mild, herbal and somewhat pungent or spicy 温和，草药，有点刺鼻或香料	Herbal 草本 Spicy 芳香 Tobacco / Earthy 烟草 / 泥土	USA 美国	Lager 拉咯	French Strisselpalt German Hersbrucker German Hallertau Mittelfrüh	Aroma 香气
Mt. Rainier	5.0 - 8.1%	5.0 - 7.0%	21 - 24%	0.2 - 0.5 mL / 100g	Excellent floral and noble aromas, with citrus and liquorice overtones 优秀的花香和高贵的香气，柑橘和甘草色彩	Citrus 柑橘 Floral 花似 Spicy 芳香	USA 美国	Lager 拉咯	Brewer's Gold Juggle Hallertau	Aroma & Bittering 香气和苦味
New Zealand Dr. Rudi	10 - 12%	7 - 8.5%	33 - 36%	1.3 mL / 100g	Fresh citrus peel, pine and lemongrass flavours 新鲜柑橘皮，松树和柠檬草的味道	Citrus 柑橘 Pine 松树	New Zealand 新西兰	Ale 艾尔		Aroma & Bittering 香气和苦味
New Zealand Green Bullet	11.0 - 14.0%	6.5 - 7.0%	41 - 43%	~1.1 mL / 100g	Subtle spiciness 微妙的芳香	Spicy 芳香	New Zealand 新西兰	Lager 拉咯	Fuggles Willamette	Bittering 苦味
New Zealand Motueka	6.5 - 8.5%	5.0 - 5.5%	~29%	~0.8 mL / 100g	Lively lemon and lime tones with background hints of tropical fruit 活泼的柠檬和酸橙色调的热带水果背景提示	Citrus 柑橘 Fruity 果味 Tropical Fruit 热带水果	New Zealand 新西兰	Ale 艾尔	Sterling Saaz	Aroma 香气
New Zealand Nelson Sauvin	12.0 - 13.0%	6.0 - 8.0%	~24%	~1.1 mL / 100g	Distinct cool climate and white wine "fruitiness" with fresh crushed gooseberry and grape infused flavours 独特的凉爽气候葡萄酒和白葡萄酒“果香”新鲜碎猕猴桃和葡萄口味的注入	Fruity 果味 Tropical Fruit 热带水果	New Zealand 新西兰	American Pale Ale 美式淡色艾尔		Aroma & Bittering 香气和苦味
New Zealand Pacific Gem	13.5 - 15.0%	7.0 - 9.0%	37 - 40%	~1.2 mL / 100g	No distinct characteristics. Some brewers have noted delicate blackberry and floral or oak tones 没有鲜明的特色。一些酿酒师已经注意到微妙的黑莓和花卉或橡木味道	Floral 花似	New Zealand 新西兰	Lager 拉咯	Galena	Bittering 苦味
New Zealand Pacific Jade	12.0 - 14.0%	7.0 - 8.0%	~24%	~1.4 mL / 100g	Bold herbal aromas with hints of fresh citrus and crushed black pepper 大胆的草药香味的新鲜柑橘的提示和黑胡椒碎	Citrus 柑橘 Herbal 草本 Spicy 芳香	New Zealand 新西兰	Lager 拉咯		Aroma & Bittering 香气和苦味
New Zealand Pacifica	5.0 - 6.0%	~6.0%	~25%	~1.0 mL / 100g	Classic Hallertau character with some citrus and floral notes 一些柑橘和花香经典哈拉道特性	Citrus 柑橘 Floral 花似	New Zealand 新西兰	IPA	Hallertau	Aroma 香气
New Zealand Rakau	10.0 - 11.0%	5.0 - 6.0%	~24%	~2.2 mL / 100g	Fresh orchard fruits, specifically apricot with some resinous pine needle characteristics are noted 新鲜的果园水果，特别是与被注意到，一些树脂松针特点杏	Pine 松树 Stone Fruit 核果	New Zealand 新西兰	Ale 艾尔	Amarillo® Summit™	Aroma & Bittering 香气和苦味
New Zealand Southern Cross	11.0 - 14.0%	5.0 - 6.0%	25 - 28%	~1.2 mL / 100g	A delicate balance of citrus and spice, including a heady mix of lemon peel and pine needles 柑橘和香料的一种微妙的平衡，包括柠檬皮和松针的兴奋混合	Citrus 柑橘 Pine 松树 Spicy 芳香	New Zealand 新西兰	Lager 拉咯		Aroma & Bittering 香气和苦味
New Zealand Sticklebract	13.0 - 14.2%	7.5 - 8.5%	40 - 45%	0.8 - 1.7 mL / 100g		Citrus 柑橘 Pine 松树	New Zealand 新西兰	Pale Ale 淡色艾尔	German Northern Brewer	Aroma & Bittering 香气和苦味
New Zealand Waimea	16.0 - 19.0%	7.0 - 9.0%	22 - 24%	~2.1 mL / 100g	Intense tangelo and citrus fruit with subtle pine characteristics 激烈桔柚和柑桔类水果与微妙的松树特点	Citrus 柑橘 Pine 松树	New Zealand 新西兰	IPA		Aroma & Bittering 香气和苦味

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New Zealand Wakatu	6.5 - 8.5%	~8.5%	28 - 30%	~1.0 mL / 100g	Restrained floral notes and freshly zested lime 约束花香和新鲜青柠檬皮	Citrus 柑橘 Floral 花似	New Zealand 新西兰	Lager 拉略		Aroma & Bittering 香气和苦味
Northern Brewer	8.0 - 10.0%	3.0 - 5.0%	20 - 30%	1.5 - 2.0 mL / 100g	Medium intensity, pine and mint characteristics 中等强度松树和薄荷特点	Pine 松树 Tobacco / Earthy 烟草 / 泥土	England 英国	Ale 艾尔	Chinook Galena German Northern Brewer	Aroma & Bittering 香气和苦味
Nugget	12.0 - 14.5%	4.0 - 6.0%	22 - 26%	1.8 - 2.2 mL / 100g	Mild and pleasant with spicy, herbal tones 温和宜人香料草药	Herbal 草本 Spicy 芳香	USA 美国	Barley Wine 麦子酒	Columbus Galena Magnum	Bittering 苦味
Olympic	10.6 - 13.8%	3.8 - 6.1%	~31%	0.86 - 2.55 mL / 100g	Citrus characteristics with subtle spicy notes 与微妙的香料柑橘特色	Citrus 柑橘 Spicy 芳香	USA 美国	American Ale 美式艾尔	Chinook	Bittering 苦味
Palisade®	5.5 - 9.5%	6.0 - 8.0%	24 - 29%	1.4 - 1.6 mL / 100g	Apricot, grass and clean floral characteristics 杏, 草和干净的花卉特性	Grassy 草地 Herbal 草本 Stone Fruit 核果	USA 美国	English Ale 英式艾尔	Willamette	Aroma 香气
Perle	7.0 - 9.5%	4.0 - 5.0%	27 - 32%	0.7 - 0.9 mL / 100g	Slightly spicy with herbal and floral characteristics 略带香料草药和花的特点	Floral 花似 Herbal 草本 Spicy 芳香	Germany 德国	Stout 烈性黑啤	Northern Brewer German Northern Brewer German Perle	Aroma & Bittering 香气和苦味
Polish Lublin	3.0 - 4.5%	2.5 - 3.5%	25 - 30%	0.7 - 1.2 mL / 100g	Mild aroma typical of classic noble hops 温和的香气典型的古典高贵啤酒花	Herbal 草本 Spicy 芳香	Poland 波兰	Lager 拉略		Aroma 香气
Qingdao Flower	6.2 - 7.0%	3.0 - 4.2%	~30%	0.4 - 0.6 mL / 100g	Floral, spicy. Cream, tobacco, honeydew melon, cassis (blackcurrant), grapefruit with spicy nuances of clove 碎花, 香料, 奶油, 烟草, 蜜瓜, 黑加仑, 葡萄柚与丁香的细微之处	Floral 花似 Spicy 芳香	China 中国	All Styles 所有款式	Cluster Galena	Bittering 苦味
Saaz	3.0 - 4.5%	3.0 - 4.5%	24 - 28%	0.5 - 1.0 mL / 100g	Mild spice and earth tones 温和香料和大地色系	Spicy 芳香 Tobacco / Earthy 烟草 / 泥土	USA 美国	Belgian Ale 比利时艾尔	Czech Saaz Sterling Polish Lublin	Aroma 香气
Santiam	5.0 - 7.0%	6.0 - 8.5%	20 - 24%	1.3 - 1.7 mL / 100g	Slightly spicy with herbal and floral characteristics 略带芳香草药和花的特点	Floral 花似 Herbal 草本 Spicy 芳香	USA 美国	Bock 博克	German Spalt German Tett nang German Select	Aroma 香气
Simcoe®	12.0 - 14.0%	4.0 - 5.0%	15 - 20%	2.0 - 2.5 mL / 100g	Unique passionfruit, pine, earth and citrus characteristics 独特的百香果, 松, 泥土和柑橘特点	Citrus 柑橘 Pine 松树 Tobacco / Earthy 烟草 / 泥土	USA 美国	IPA	Magnum Summit	Aroma & Bittering 香气和苦味
Sorachi Ace	10.0 - 16.0%	6.0 - 7.0%	~23%	2.0 - 2.8 mL / 100g	Unique lemon and dill characteristics 独特的柠檬和莳萝特点	Citrus 柑橘 Grassy 草地 Herbal 草本	Japan 日本	Pale Ale 淡色艾尔		Aroma & Bittering 香气和苦味
Sterling	6.0 - 9.0%	4.0 - 6.0%	22 - 28%	1.3 - 1.9 mL / 100g	Herbal and spicy, with a hint of floral, citrus (lemon/pineapple) characteristics 草药和辛辣, 有花卉, 柑橘 (柠檬/菠萝) 的暗示特征	Citrus 柑橘 Floral 花似 Spicy 芳香	USA 美国	Belgian Ale 比利时艾尔	Saaz Polish Lublin	Aroma 香气
Styrian Aurora	7.0 - 9.5%	2.7 - 4.4%	22 - 26%	0.9 - 1.6 mL / 100g	Intense and pleasant displaying floral, pine and hoppy characteristics 激烈宜人显示花香, 松树和啤酒花特点	Floral 花似 Pine 松树	Slovenia 斯洛文尼亚	Ale 艾尔	Styrian Bobek Styrian Savinjski Golding	Aroma 香气
Styrian Bobek	3.5 - 7.0%	4.0 - 6.1%	27 - 31%	0.7 - 4.0 mL / 100g	Intense and pleasant with floral, pine and hop overtones 激烈和愉快的花香, 松树和啤酒花的弦外之音	Floral 花似 Pine 松树	Slovenia 斯洛文尼亚	English Ale 英式艾尔		Aroma 香气
Styrian Celeia	3.0 - 6.0%	2.0 - 3.3%	26 - 29%	0.6 - 3.6 mL / 100g	Pleasant and hoppy, similar to traditional European varieties 啤酒花, 类似于传统的欧洲品种	Floral 花似	Slovenia 斯洛文尼亚	English Ale 英式艾尔	Saaz Styrian Bobek Styrian Savinjski Golding	Aroma 香气
Styrian Savinjski Golding	2.8 - 5.5%	2.0 - 3.0%	25 - 30%	0.3 - 1.0 mL / 100g	Very mild, noble hop flavour 很温和, 高贵的酒花风味	Fruity 果味 Herbal 草本 Tobacco / Earthy 烟草 / 泥土	Slovenia 斯洛文尼亚	Belgian Ale 比利时艾尔	Juggle Styrian Bobek	Aroma 香气
Summit™	16.0 - 19.0%	3.3 - 6.0%	26 - 33%	1.5 - 2.5 mL / 100g	Distinct spice, earthy, onion, garlic and citrus (pink grapefruit, orange and tangerine) tones 不同的香料, 泥土, 洋葱, 大蒜和柑橘 (粉红葡萄柚, 橘子和橘子)	Citrus 柑橘 Spicy 芳香 Tobacco / Earthy 烟草 / 泥土	USA 美国	IPA	Columbus Millennium Simcoe® Warrior®	Bittering 苦味
Tahoma	7.2 - 8.2%	8.5 - 9.5%	15 - 17%	1.0 - 2.0 mL / 100g	Predominate citrus and lemon notes with cedar, pine, floral, pepper and subtle green melon notes 占主导地位的柑橘和柠檬的音符杉树, 松树, 花卉, 胡椒和微妙的绿色瓜	Cedar 雪松 Citrus 柑橘 Pine 松树	USA 美国			Aroma 香气
Tett nang	4.0 - 5.0%	3.0 - 4.5%	20 - 25%	0.4 - 0.8 mL / 100g	Noble aroma that is pleasant and spicy 高贵的香料香气宜人	Spicy 芳香	Germany 德国	American Ale 美式艾尔	Fuggle Santiam German Spalt	Aroma 香气
Triplepearl	10.25 - 11.2%	3.3 - 4.2%	21 - 25%	1.1 - 1.79 mL / 100g	Pleasant and balanced with notes of melon, orange citrus, resin, spice and pepper 甜瓜, 橘柑, 树脂, 香料和胡椒的味道平衡	Citrus 柑橘 Spicy 芳香	USA 美国	Pale Ale 淡色艾尔	Perle	Aroma 香气



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UK Admiral	13.0 - 16.0%	4.0 - 6.0%	37 - 45%	1.0 - 1.7 mL / 100g	Pleasant, resinous hop aroma with hints of citrus (orange) and herbal flavours 树脂啤酒花的香气与柑橘的香味（橙色）和草药的味道	Citrus 柑橘 Herbal 草本 Tobacco / Earthy 烟草 / 泥土	England 英国	English Ale 英式艾尔	UK Northdown UK Target UK Challenger	Bittering 苦味
UK Boadicea	7.0 - 10.0%	3.0 - 4.0%	~26%	1.4 - 2.0 mL / 100g	Mild floral and spicy characteristics with slightly grassy overtones 略有草香色彩柔和花香和芳香的特点	Grassy 草地 Floral 花似 Spicy 芳香	England 英国			Aroma & Bittering 香气和苦味
UK Bramling Cross	6.0 - 8.0%	2.3 - 3.5%	34%	0.7 - 1.2 mL / 100g	Strong spice, blackcurrant, loganberry and lemon characteristics 强大的香料，黑加仑，杨莓和柠檬特点	Citrus 柑橘 Fruity 果味 Spicy 芳香	England 英国	All Styles 所有款式	UK East Kent Golding UK Progress	Aroma 香气
UK Challenger	6.5 - 9.0%	3.2 - 4.2%	20 - 25%	1.0 - 1.5 mL / 100g	Cedar, green tea and sweet floral characteristics (as a late addition, it can provide crisp, fruity flavours) 雪松，绿茶和甜花香的特性（如后期此外，它还可以提供脆果味）	Cedar 雪松 Floral 花似 Spicy 芳香	England 英国	English Ale 英式艾尔	Northern Brewer German Perle	Aroma & Bittering 香气和苦味
UK East Kent Golding	4.0 - 6.0%	1.9 - 3.0%	25 - 30%	0.4 - 0.8 mL / 100g	Smooth and delicate with floral, lavender, spice, honey, earth, lemon and thyme overtones 细腻的花卉，薰衣草，香料，蜂蜜，土，柠檬和百里香色彩	Floral 花似 Spicy 芳香 Tobacco / Earthy 烟草 / 泥土	England 英国	English Ale 英式艾尔	Golding UK Progress	Aroma & Bittering 香气和苦味
UK First Gold	6.5 - 10.0%	3.0 - 4.5%	32 - 35%	0.7 - 1.7 mL / 100g	Slightly spicy, but smooth, with tangerine, orange marmalade, magnolia and floral flavours 微香，有橘子，玉兰花香的味道	Citrus 柑橘 Floral 花似 Spicy 芳香	England 英国	Ale 艾尔	Crystal UK East Kent Golding	Aroma & Bittering 香气和苦味
UK Fuggle	3.5 - 6.5%	2.0 - 4.0%	27 - 33%	0.7 - 1.1 mL / 100g	Delicate and pleasant mint, grass and floral tones 精致宜人的薄荷，青草和花香	Floral 花似 Grassy 草地	England 英国	Belgian Ale 比利时艾尔	Willamette Styrian Savinjski Golding	Aroma 香气
UK Northdown	7.0 - 10.0%	4.0 - 5.0%	~31%	1.2 - 2.2 mL / 100g	Pleasant spice, cedar and pine characteristics with hints of floral and berry flavours 宜人的香料，用花卉和浆果风味的提示杉树和松树特点	Cedar 雪松 Pine 松树 Spicy 芳香	England 英国	Ale 艾尔	Northern Brewer UK Challenger	Aroma & Bittering 香气和苦味
UK Phoenix	8.0 - 12.0%	3.8 - 5.4%	~30%	1.2 - 2.5 mL / 100g	Crisp and mellow tones of pine, chocolate, molasses and spice characteristics 松，巧克力，糖蜜和香料的特性	Citrus 柑橘 Pine 松树 Spicy 芳香	England 英国	English Ale 英式艾尔	UK Northdown UK Challenger	Aroma & Bittering 香气和苦味
UK Pilgrim	9.0 - 13.0%	4.0 - 5.0%	~35%	1.0 - 1.8 mL / 100g	Distinct fruit and spice characteristics with pleasant lemon, grapefruit, pear and berry flavours 宜人的柠檬，柚子，梨和浆果口味独特的水果和香料的特性	Citrus 柑橘 Fruity 果味 Spicy 芳香	England 英国	Ale 艾尔	UK Target UK Challenger	Aroma & Bittering 香气和苦味
UK Pioneer	8.0 - 10.5%	3.5 - 4.0%	~36%	0.8 - 1.8 mL / 100g	Distinctly hoppy with pleasant citrus (lemon and grapefruit) tones and hints of herbal, cedar flavours 明显的啤酒花宜人的柑橘（柠檬和葡萄柚），草药，雪松的味道提示	Cedar 雪松 Citrus 柑橘 Herbal 草本	England 英国	Ale 艾尔	UK East Kent Golding	Aroma & Bittering 香气和苦味
UK Progress	6.0 - 7.5%	2.0 - 3.3%	~33%	0.8 - 1.0 mL / 100g	Moderately strong spicy, grassy, floral, mint, earth and honey tones 适度强烈的香料，草香，花香，薄荷，土蜂蜜	Grassy 草地 Spicy 芳香 Tobacco / Earthy 烟草 / 泥土	England 英国	Ale 艾尔	Juggle UK East Kent Golding	Aroma 香气
UK Sovereign	4.5 - 6.5%	2.1 - 3.1%	26 - 30%	0.6 - 1.0 mL / 100g	Pleasant but intense fruity flavours with mild floral, grassy, herbal and mint characteristics 强烈的果香与花香温和，草香，草药和薄荷特点	Floral 花似 Grassy 草地 Herbal 草本	England 英国	Pale Ale 淡色艾尔		Aroma 香气
UK Target	8.5 - 13.5%	4.0 - 5.7%	~37%	1.2 - 1.8 mL / 100g	An intense English hop aroma with distinct spicy, floral, sage and citrus characteristics 一种强烈的英式啤酒花的香气具有独特的香料香气，花香，鼠尾草和柑橘特点	Floral 花似 Pine 松树 Spicy 芳香	England 英国	Ale 艾尔	Fuggle Willamette	Bittering 苦味
UK WGV	5.0 - 7.5%	2.5 - 3.5%	~37%	0.8 - 1.2 mL / 100g	Fresh earthy, botanical and floral flavours 新鲜的泥土，植物和花卉的味道	Floral 花似 Herbal 草本 Tobacco / Earthy 烟草 / 泥土	England 英国	Pale Ale 淡色艾尔	UK East Kent Golding UK Progress	Aroma 香气
Ultra	2.0 - 3.5%	3.0 - 4.5%	23 - 38%	1.3 - 1.5 mL / 100g	Mild and pleasant with spicy, floral tones 温和宜人香料，花香	Floral 花似 Spicy 芳香	USA 美国	Lager 拉咯	Hallertau	Aroma 香气
Vanguard	5.0 - 6.0%	5.0 - 7.0%	14 - 16%	0.8 - 1.2 mL / 100g	Herbal and floral tones 草药和花	Floral 花似 Herbal 草本	USA 美国	Belgian Ale 比利时艾尔	Hallertau Liberty Mt. Hood German Hersbrucker	Aroma 香气
Warrior®	15.0 - 17.0%	4.5 - 5.5%	24 - 26%	1.0 - 2.0 mL / 100g	Mild and resinous with subtle citrus, pine and herbal characteristics 轻度和树脂与微妙的柑橘，松树和草药的特性	Citrus 柑橘 Herbal 草本 Pine 松树	USA 美国	IPA	Columbus Magnum Nugget	Bittering 苦味

HOP NAME 酒话名称	ALPHA ACID % 阿尔法酸 %	BETA ACID % 倍塔酸 %	COHUMULONE 联合葎草酮	TOTAL OIL 油总量	DESCRIPTION 描述	FLAVOUR TYPE 味道类型	ORIGIN 起源	BEER STYLES 啤酒类型	SUBSTITUTIONS 替代	PRIMARY USE 主要用途
Willamette	4.0 - 6.0%	3.0 - 4.5%	30 - 35%	1.0 - 1.5 mL / 100g	Mild and pleasant, with slightly spicy and floral tones 温和宜人略有香料和花香	Floral 花似 Spicy 芳香	USA 美国	English Ale 英式艾尔	Fuggie Glacier Tettnang Styrian Savinjski Golding	Aroma 香气
Zythos™	10.0 - 12.5%	4.7 - 6.2%	28 -31%	0.7 - 1.2 mL / 100g	Superior aromatic qualities, imparting distinct tangerine, citrus, floral, pine and grapefruit tones 高级芳香特质，赋予不同的橘子，柑橘，花卉，松树和柚子的味道	Citrus 柑橘 Floral 花似 Pine 松树	USA 美国	IPA	Amarillo Cascade	Aroma & Bittering 香气和苦味