

## HOP PELLETS - DOMESTIC 1 lb. Bags

2006 US AHTANUM™ 5.7% - 6.3% Reg \$19.10 Sale \$14.33

Used for its aromatic properties and moderate bittering. American Ales, Pale Ale, IPA, Lager.

2008 US AMARILLO® 8.0% - 11.0% Reg \$29.50 Sale \$22.13

Relatively new hop that was discovered as a mutation by a grower. Used for general kettle and aroma. American style Ales.

2009 US BREWER'S GOLD 8.0% - 10.0% Reg \$17.80 Sale \$13.35

A bittering hop that is noted to have a sharp bittering quality and imparts a fruity yet spicy aroma. Brewer's Gold can be used in a wide range of styles from English Ales to German Lagers and adds a decidedly "European" element to the beer. These make a good partner to noble varieties such as Tettnang and Hallertau.

2015 US CASCADE 4.5% - 7.0% Reg \$15.90 Sale \$11.93

Derived from a cross between Fuggles and the Russian hop Serebrianker. Good for flavor and aroma, but an acceptable bittering hop. Ales and Lagers.

2017 US CENTENNIAL 9.5% - 11.5% Reg \$21.00 Sale \$15.75

Selected from a cross between Brewer's Gold and a selected USDA male. Medium intensity aroma with floral and citrus tones. Very balanced hop, used for all U.S. Ale styles, including U.S. Wheat beer.

2020 US CHINOOK 12.0% - 14.0% Reg \$20.40 Sale \$15.30

A high alpha acid hop with a wonderful herbal, almost smoky character when used as an aromatic during the last few minutes of the boil when dry hopping. Excellent for hopping American-style Pale Ales, especially those brewed to higher gravities. Beta acid: 3.0-4.0%.

2022 US CITRA® 11.0% - 13.0% Reg \$27.50 Sale \$20.63

A new, moderately-high acid cross between Hallertau Mittelfreuh, U.S. Tettnanger, Bavarian, Brewers Gold and E.K. Golding. Very fruity. Used in Sierra Nevada Torpedo IPA and strong American and Belgian ales.

2025 US CLUSTER 5.5% - 8.5% Reg \$16.50 Sale \$12.38

Excellent general purpose hop with medium and well-balanced bittering potential and no undesirable aroma properties. Good for dark beers. Used for bittering, good flavor. Light and Dark American Lagers.

2026 US COLUMBUS 14.0% - 16.0% Reg \$16.50 Sale \$12.38

Relatively new variety becoming increasingly accepted. Used for bittering mainly, good flavor. IPA, Pale Ale and Stouts.

2012 US CRYSTAL 3.5% - 5.5% Reg \$19.10 Sale \$14.33

The most pungent of the new triploid Hallertau family. Lager, Kolsch, ESB, Pilsner, IPA, Pale Ale & Belgian Ales.

2005 US FALCONER'S FLIGHT® 11.4% Reg \$26.30 Sale \$19.73

Aroma descriptors: distinct tropical, citrus, floral, lemon and grapefruit tones. Used in IPA style beers. Beta: 4.4%, H.S.I.: 0.292, Co-humulone: 24.2%

2004 US FALCONER'S FLIGHT 7C'S™ 9.9% Reg \$26.30 Sale \$19.73

Aroma Descriptors: exact descriptors to be determined, but will be citrus and tropical as well. "C" hop blend for many beer styles. Beta: 5.0%, H.S.I.: 0.293, Co-humulone: TBD

2035 US FUGGLE 4.0% - 5.5% Reg \$21.70 Sale \$16.28

Traditional aroma hop, appeared in 1875 England. Also known overseas as Styrian Golding. Used for finishing, dry hopping. English Ales, especially Pale Ales, Porters and Stouts.

## HOP PELLETS - DOMESTIC 1 lb. Bags

2040 US GALENA 12.0% - 14.0% Reg \$18.50 Sale \$13.88

Galena is the most "mellow" hop of the high-alpha varieties, and has replaced Cluster as the most widely grown US hop. The bitterness is clean and well balanced. Great general purpose bittering hop. Alpha acid: 12.5-14.0% Beta acid: 7.5-9.0%.

2037 US GLACIER Average 5.63% Reg \$17.80 Sale \$13.35

Excellent variety with balanced bittering properties and a good aroma profile. Fuggle, Styrian Golding, Willamette.

2052 US GOLDING 4.0% - 6.0% Reg \$19.78 Sale \$14.84

Genuine long-established East Kent Golding variety group imported from England. Used for Pale Ales, ESB and English Style Beers.

2045 US HALLERTAU 3.5% - 5.5% Reg \$20.40 Sale \$15.30

Traditional variety with very mild, slightly flowery and somewhat spicy aroma. Used for Lagers, Pilsners, Bocks, Wheats, Kolsch, Munich Helles, Belgian-Style Ales.

2013 US HORIZON 11.0% - 13.0% Reg \$24.98 Sale \$18.74

Medium alpha, good aroma, dual purpose hop. Low co-humulone results in clean tasting beer. All ales and lagers.

2055 US LIBERTY 3.0% - 5.0% Reg \$22.38 Sale \$16.79

Released in 1991, aroma variety with close similarities to imported German aroma varieties. Used for finishing. American and German Ales and Lagers.

2098 US MAGNUM 10.0 - 14.0% Reg \$17.18 Sale \$12.89

First super alpha variety grown in Hallertau region. Grown in Yakima Valley, useful for all beer types.

2099 US MILLENNIUM 14.5 - 16.5% Reg \$16.50 Sale \$12.38

A triploid, high alpha acid variety with Nugget as the mother with a mild herbal aroma. Used for ales, stouts and barley wine.

2060 US MT HOOD 4.0 - 8.0% Reg \$20.40 Sale \$15.30

Aroma variety with similarities to the German Hallertau and Hersbrucker varieties, released in the U.S. in 1989. Used for aroma and flavor, American and German Ales and Lagers.

2061 US MT RAINIER 5.0 - 8.1% Reg \$19.80 Sale \$14.85

Excellent floral/noble aromas with citrus and licorice tones. Hallertauer, Fuggle.

2063 US NEWPORT 13.5 - 17.0% Reg \$20.40 Sale \$15.30

2065 US NORTHERN BREWER 8.6% Reg \$17.80 Sale \$13.35

Bred from a cross between a female hop of wild American parentage and an English male. A true dual-purpose hop, containing moderate amounts of alpha acids combined with a good aroma profile. Used for all English styles, American Ales, Kolsch and Munich Helles.

2070 US NUGGET 12.2% Reg \$16.50 Sale \$12.38

Selected from a cross between Brewers Gold and a high alpha male. Heavy, herbal and spicy aroma, extremely bitter. Used for medium to dark Ales and Lagers.

2072 US PALISADE® 5.6% Reg \$19.78 Sale \$14.84

2075 US PERLE 8.7% Reg \$22.38 Sale \$16.79

Derived from English Northern Brewer, new to the U.S. industry. Minty bittering and good "green hop" aromas. All non-Pilsner Lagers, Wheats.

## **HOP PELLETS - DOMESTIC 1 lb. Bags**

2083 US SAAZ 5.8% Reg \$22.38 Sale \$16.79

U.S. equivalent of the Czech variety, but lacks some of the fineness of aroma. Used for finishing, very flavorful. Pilsners, Continental Lagers and Wheats.

2089 US SANTIAM 6.1% Reg \$22.38 Sale \$16.79

2088 US SIMCOE® 12.2% Reg \$24.50 Sale \$18.38

A dual-purpose, unique American hybrid. Primarily a bittering hop, it has a clean, pine-like aroma and flavoring with a hint of citrus. It is less astringent than other pine-like hops and is sought after to make Pale Ales like Weyerbacher Double Simcoe IPA. Flavor is believed superior due to low cohumulone levels.

2030 US SORACHI 11.6% Reg \$28.18 Sale \$21.14

2082 US STERLING 7.0% Reg \$19.78 Sale \$14.84

2007 US SUMMIT Reg \$17.80 Sale \$13.35

2090 US TETTNANG 4.8% Reg \$23.00 Sale \$17.25

Commercially grown in the U.S. since the 1980's. Similar to Fuggle. A very popular hop with the craft-brewery industry. Used for Lagers, U.S. Ales, Pilsners, U.S. Wheats and Bitters.

2093 US VANGUARD 4.8% Reg \$19.78 Sale \$14.84

2094 US WARRIOR® 16.7% Reg \$17.80 Sale \$13.35

A general-purpose bittering hop that offers a neutral, clean bittering primarily in ale styles. It has a relative low cohumulone content which contributes to a smooth, pleasing bitterness.

2095 US WILLAMETTE 4.7% - 4.9% Reg \$15.20 Sale \$11.40

A quality aroma hop with a smooth soft flavor. Used for finishing, dry hopping. American and British Ales.

2096 US ZYTHOS™ 10.9% Reg \$21.78 Sale \$16.34

A proprietary hop blend created to embody the powerful tradition and aroma you expect from your finest ales and IPA brews. An IPA style blend created to optimize and exceed the aroma characteristics you require.

## **HOP PELLETS - IMPORTED 1 lb. Bags**

2097 AUSTRALIAN GALAXY 7.2% Reg \$32.50 Sale \$24.38

The Australian hop variety Galaxy is a high alpha dual purpose seedless cultivar with a marked and unique hop aroma. Galaxy, when added late in the boil, has been found to impart a unique and pleasant flavor to beer. Combination of citrus and passionfruit, significant bittering.

2019 AUSTRALIAN HELGA Reg \$39.50 Sale \$29.63

Mild and pleasant hop aroma. Good for ales and lagers.

2021 AUSTRALIAN PRIDE OF RINGWOOD Reg \$33.00 Sale \$24.75

Unique Australian flavor. Use as bittering and late kettle addition.

2023 AUSTRALIAN STELLA Reg \$34.50 Sale \$25.88

Hoppy and floral. Use in a wide range of beer styles.

2027 AUSTRALIAN SUPER PRIDE Reg \$33.00 Sale \$24.75

Excellent bittering qualities. Good for all beers with high bitterness.

## HOP PELLETS - IMPORTED 1 lb. Bags

2028 AUSTRALIAN SYLVA 5.8% Reg \$39.50 Sale \$29.63

Herbal, spicy and resinous. Good for all beer styles.

2029 AUSTRALIAN TOPAZ Reg \$29.50 Sale \$22.13

Very high alpha acid content. Good for IPA and other high alpha beers.

2080 CZECH SAAZ 2.8% Reg \$23.50 Sale \$17.63

Classical noble aroma hop with long and strong traditions. Associated with the renowned Pilsener Lager. Used for finishing. Bohemian-style Beers, Continental Lagers, Wheats, Pilsner Lagers.

2086 FRENCH STRISSELSPALT 2.3% Reg \$17.18 Sale \$12.89

2051 GERMAN BREWER'S GOLD 6.2% Reg \$19.78 Sale \$14.84

2050 GERMAN HALLERTAU 3.8% Reg \$19.78 Sale \$14.84

Traditionally a superior German aroma hop. Excellent flavor. Mild to semi-strong aroma, versatile bittering and finishing. Used for Wheats, Altbiers, Pilsners, Belgian Ales, American and German Lagers.

2042 GERMAN HERKULES 15.7% Reg \$17.80 Sale \$13.35

2041 GERMAN HERSBRUCKER 2.8% Reg \$20.40 Sale \$15.30

Traditional German landrace variety selected in the Hersbruck area. Good to very good aroma hop. Used for Lagers, Pilsners, Bocks, Weizen Bocks, Wheats, Belgian-Style Ales, Kolsch and Munich Helles.

2043 GERMAN MAGNUM 13.5% Reg \$18.50 Sale \$13.88

2056 GERMAN MERKUR 12.4% Reg \$19.10 Sale \$14.33

2066 GERMAN NORTHERN BREWER Reg \$18.50 Sale \$13.88

2057 GERMAN OPAL 6.3% Reg \$20.40 Sale \$15.30

2076 GERMAN PERLE 5.7% Reg \$20.40 Sale \$15.30

Bred at the Hull Hop Research Institute from the English Northern Brewery variety. Used for Pale Ales, Porters, Lagers.

2058 GERMAN SAPHIR 3.8% Reg \$20.40 Sale \$15.30

2054 GERMAN SELECT 5.3% Reg \$20.40 Sale \$15.30

2059 GERMAN SMARAGD Reg \$21.70 Sale \$16.28

2084 GERMAN SPALT 3.9% Reg \$21.70 Sale \$16.28

2091 GERMAN TETTANANG 3.7% - 5.0% Reg \$23.70 Sale \$17.78

Traditional German variety developed in the area of the same name. Very fine or noble aroma hop. Used for German Lagers, Wheat, Ales and American Lagers.

2092 GERMAN TRADITION 4.6% Reg \$19.10 Sale \$14.33

2044 NZ GREEN BULLET 12.5% Reg \$35.90 Sale \$26.93

Dual purpose hop (bittering and aroma). Good for all beer styles.

2046 NZ HALLERTAU 7.9% Reg \$25.90 Sale \$19.43

Distinct floral, slight citrus/lime. Use in Lagers, Pilsners, Bitters, Ales and Bocks.

## **HOP PELLETS - IMPORTED 1 lb. Bags**

2047 NZ MOTEUKA 7.1% Reg \$29.90 Sale \$22.43

Lemon, lime, tropical fruit. Use in Belgian and English Ales, Pilsners.

2049 NZ NELSON SAUVIN Reg \$37.90 Sale \$28.43

Distinctive white wine fruitiness. Use in Pale Ales and Lagers.

2048 NZ PACIFIC HALLERTAU 4.5% Reg \$27.90 Sale \$20.93

Clean floral, slight citrus. Use in Lagers, Porters, Bocks, Pale Ales, Stouts.

2069 NZ PACIFIC JADE 14.2% Reg \$16.50 Sale \$12.38

Bold, herbal, fresh citrus, black pepper. Use in Ales and Lagers.

2067 STYRIAN AURORA 8.1% Reg \$16.50 Sale \$12.38

2068 STYRIAN BOBEK 3.9% Reg \$15.20 Sale \$11.40

2062 STYRIAN CELEIA 4.0% Reg \$16.50 Sale \$12.38

2085 STYRIAN GOLDING 3.8% Reg \$17.80 Sale \$13.35

A world-renowned aroma hop with widespread usage in both ale and lager brewing. Used for English-Style Ales, ESB, Bitters, and Lagers.

2077 UK ADMIRAL Reg \$20.40 Sale \$15.30

2071 UK BRAMBLING CROSS 6.3% Reg \$20.40 Sale \$15.30

2018 UK CHALLENGER 7.2% Reg \$20.40 Sale \$15.30

2074 UK FIRST GOLD 3.3% Reg \$20.40 Sale \$15.30

2038 UK FUGGLE 4.2% Reg \$21.70 Sale \$16.28

2053 UK KENT GOLDING 4.8% - 5.8% Reg \$24.98 Sale \$18.74

Traditional Old English hop. Developed by clone selection from 1790 on starting from Canterbury Whitebine. Classic English ale hop used for kettle hopping and dry hopping. All English Style Ales and ESB Bitters.

2032 UK NORTHDOWN 7.2% Reg \$20.40 Sale \$15.30

2078 UK PHOENIX 10.8% Reg \$19.10 Sale \$14.33

2033 UK PILGRIM 10.5% Reg \$19.10 Sale \$14.33

2034 UK PROGRESS 6.2% Reg \$20.40 Sale \$15.30

2087 UK TARGET 10.7% Reg \$19.10 Sale \$14.33

Widely used for high alpha acid content combined with an acceptable aroma. Used for British Ales and Lagers.

2039 UK WGV 5.3% Reg \$23.70 Sale \$17.78

## **LEAF HOPS: 1 lb.**

2105 US AHTANUM™ YCR1 4.5% Reg \$23.50 Sale \$17.63

Used for its aromatic properties and moderate bittering. Used for Lagers and American Ales.

## LEAF HOPS: 1 lb. (continued)

2115 US CASCADE 7.1% Reg \$13.90 Sale \$10.43

Derived from a cross between Fuggles and the Russian hop Serebrianker. Good for flavor and aroma, but an acceptable bittering hop. Ales and Lagers.

2170 US CENTENNIAL/CENTENNIAL TYPE 9.9% Reg \$19.50 Sale \$14.63

Selected from a cross between Brewer's Gold and a selected USDA male. Medium intensity aroma with floral and citrus tones. Very balanced hop, used for all U.S. Ale styles, including U.S. Wheat beer.

2185 US CHINOOK 11.8% Reg \$18.20 Sale \$13.65

Adds spice, pine and grapefruit flavors. Used for US Style Pale Ale, IPA, Stout, Porter, barley Wine, Lager (Bittering).

2175 US CITRA® HBC394 13.6% Reg \$25.50 Sale \$19.13

Adds citrus and pine flavors.

2108 US CLUSTER 7.6% Reg \$14.50 Sale \$10.88

Excellent general purpose hop with medium and well-balanced bittering potential and no undesirable aroma properties. Good for dark beers. Used for bittering, good flavor. Light and Dark American Lagers.

2110 US COLUMBUS 13.0% Reg \$14.50 Sale \$10.88

Relatively new variety becoming increasingly accepted. Used for bittering mainly, good flavor. IPA's, Pale Ales and Stouts.

2112 US CRYSTAL 3.4% Reg \$19.98 Sale \$14.99

Very popular in the craft-brewing industry. Viewed as the most pungent of the new triploid Hallertau family of hops. Used for Pilsners, Lagers, Kölsch, ESB, Alt, Belgian-Style Ales.

2130 US FUGGLE 5.2% Reg \$21.18 Sale \$15.89

Traditional aroma hop, appeared in 1875 England. Also known overseas as Styrian Golding. Used for finishing, dry hopping. English Ales, especially Pale Ales, Porters and Stouts.

2133 US GOLDING 5.7% Reg \$17.50 Sale \$13.13

Genuine long-established East Kent Golding variety group imported from England. Used for Pale Ales, ESB and English Style Beers

2135 US NORTHERN BREWER 9.1% Reg \$15.70 Sale \$11.78

Bred from a cross between a female hop of wild American parentage and an English male. A true dual-purpose hop, containing moderate amounts of alpha acids combined with a good aroma profile. Used for all English styles, American Ales, Kolsch and Munich Helles.

2180 US SIMCOE® 12.0% Reg \$23.00 Sale \$17.25

Adds spice, citrus and pine flavors. Used primarily for American Ales.

2160 US SORACHI ACE 15.1% Reg \$29.70 Sale \$22.28

Developed for Sapporo Breweries and used in their beers. Used for any beer that would work with a lemon taste such as Saison or an IPA with other hops that have citrusy tastes.

2117 US SUMMIT™ 17.6% Reg \$15.70 Sale \$11.78

Typically used as a bittering hop for IPAs and Imperial IPAs with orange, tangerine, and citrus notes.

2140 US TETTNANG 6.3% Reg \$20.58 Sale \$15.44

Commercially grown in the U.S. since the 1980's. Similar to Fuggle. A very popular hop with the craft-brewery industry. Used for Lagers, U.S. Ales, Pilsners, U.S. Wheats and Bitters.

## **LEAF HOPS: 1 lb. (continued)**

2125 US WILLAMETTE 5.7% Reg \$13.30 Sale \$9.98

A quality aroma hop with a smooth soft flavor. Can be used for ales and lagers. Used for finishing, dry hopping. American and British Ales.

2150 CZECH SAAZ 2.6% Reg \$23.10 Sale \$17.33

Classical noble aroma hop with long and strong traditions. Associated with the renowned Pilsner Lager. Used for finishing. Bohemian-style Beers, Continental Lagers, Wheats, Pilsner Lagers

2120 GERMAN HALLERTAU 3.3% Reg \$17.50 Sale \$13.13

Traditionally a superior German aroma hop. Excellent flavor. Mild to semi-strong aroma, versatile bittering and finishing. Used for Wheats, Altbiers, Pilsners, Belgian Ales, American and German Lagers.

2145 UK KENT GOLDING 6.7% Reg \$22.38 Sale \$16.79

The classic English Ale hop which has been used extensively in kettle hopping and for dry hopping. Used for all English style Ales, Belgian-Style Ales.

**WHITE LABS PURE LIQUID BREWERY YEAST** Reg \$9.39 Sale \$7.05

### **WLP001 CALIFORNIA ALE**

This yeast is famous for its clean flavors, balance and ability to be used in almost any style ale. It accentuates the hop flavors and is extremely versatile.

Attenuation: 73-80%; Flocculation: High; Optimum Ferm Temp: 68°-73°F

### **WLP002 ENGLISH ALE**

A classic ESB strain from one of England's largest independent breweries. This yeast is best suited for English style ales including milds, bitters, porters, and English style stouts. This yeast will leave a beer very clear, and will leave some residual sweetness.

Attenuation: 63-70%; Flocculation: Very High; Optimum Ferm Temp: 65°-68°F

### **WLP004 IRISH ALE**

This is the yeast from one of the oldest stout producing breweries in the world. It produces a slight hint of diacetyl, balanced by a light fruitiness and slight dry crispness. Great for Irish ales, stouts, porters, browns, reds and a very interesting pale ale.

Attenuation: 69-74%; Flocculation: medium to high; Optimum Ferm Temp: 65°-68°F

### **WLP005 BRITISH ALE**

This yeast is a little more attenuative than WLP002. Like most English strains, this yeast produces malty beers. Excellent for all English style ales including bitter, pale ale, porter, and brown ale.

Attenuation: 67-74%; Flocculation: High; Optimum Ferm Temp: 65°-70°F

### **WLP007 DRY ENGLISH ALE**

Clean, highly flocculant, and highly attenuative yeast. This yeast is similar to WLP002 in flavor profile, but is 10% more attenuative. This eliminates the residual sweetness, and makes the yeast well suited for high gravity ales. It also reaches terminal gravity quickly. 80% attenuation will be reached even with 10% ABV beers.

Attenuation: 70-80%; Flocculation: High; Optimum Ferm Temp: 65°-70°F

### **WLP008 EAST COAST ALE**

The "Brewer Patriot" strain can be used to reproduce many of the American versions of classic beer styles. Similar neutral character of WLP001, but less attenuation, less accentuation of hop bitterness, increased flocculation, and a little tartness. Very clean and low esters. Great yeast for golden, blonde, honey, pales and German alt style ales.

Attenuation: 70-75%; Flocculation: low to medium; Optimum Ferm Temp: 68°-73°F

**WHITE LABS PURE LIQUID BREWERY YEAST (continued)** Reg \$9.39 Sale \$7.05

**WLP011 EUROPEAN ALE**

Malty, Northern European-origin ale yeast. Low ester production, giving a clean profile. Little to no sulfur production. Low attenuation helps contribute to the malty character. Good for Alt, Kolsch, malty English ales, and fruit beers.

Attenuation: 65-70%; Flocculation: Medium; Optimum Ferm Temp: 65°-70°F

**WLP013 LONDON ALE**

Dry, malty ale yeast. Provides a complex, oakey ester character to your beer. Hop bitterness comes through well. This yeast is well suited for classic British pale ales, bitters, and stouts. Does not flocculate as much as WLP002 and WLP005.

**WLP023 BURTON ALE**

From the famous brewing town of Burton upon Trent, England, this yeast is packed with character. It provides delicious subtle fruity flavors like apple, clover honey and pear. For all English styles, IPA's, bitters, and pales. Excellent in porters and stouts. Attenuation: 69-75%; Flocculation: Medium; Optimum Ferm Temp: 68° - 73°F

**WLP028 EDINBURGH/SCOTTISH ALE**

Scotland is famous for its malty, strong ales. This yeast can reproduce complex, flavorful Scottish style ales and can be an everyday strain, similar to WLP001. Hop character is not muted with this strain, as with WLP002.

**WLP029 GERMAN KOLSCH ALE**

From a small brewpub in Cologne, Germany, this yeast works great in Kölsch and Alt style beers. Good for light beers like blond and honey. Accentuates hop flavors, similar to WLP001. The slight sulfur produced during fermentation will disappear with age and leave a super clean, lager like ale.

Attenuation: 72-78%; Flocculation: Medium; Optimum Ferm Temp: 65°-69°F

**WLP036 DUSSELDORF ALT**

Traditional Alt yeast from Dusseldorf, Germany. Produces clean, slightly sweet alt beer. Does not accentuate hop flavor as WLP029 does.

Attenuation: 76-75%; Flocculation: Medium; Optimum Ferm Temp: 65°-69°F

**WLP041 PACIFIC ALE**

A popular ale yeast from the Pacific Northwest. The yeast will clear from the beer well, and leave a malty profile. More fruity than WLP002 English Ale yeast. Good yeast from English style ales including mild, bitter, IPA, porter and English style stout.

Attenuation: 65-70%; Flocculation: Medium; Optimum Ferm. Temp: 65°-68°F

**WLP051 CALIFORNIA V ALE**

From Northern California. This strain is more fruity than WLP001 and slightly more flocculant. Attenuation is lower, resulting in a fuller bodied beer than with WLP001.

Attenuation: 70-75%; Flocculation: Medium to high; Optimum Ferm Temp: 66°-70°F

**WLP090 SAN DIEGO SUPER**

A super clean, super-fast fermenting strain. A low ester-producing strain that results in a balanced, neutral flavor and aroma profile. Alcohol-tolerant and very versatile for a wide variety of styles. Similar to California Ale Yeast WLP001 but it generally ferments faster.

Optimal Fermentation Temperature: 65-68F Attenuation: 76-83%+ Flocculation: Medium-High Alcohol Tolerance: High (check availability)

**WLP099 SUPER HIGH GRAVITY ALE**

Can ferment up to 25% alcohol. From England.

Attenuation: 80%; Flocculation: Low; Optimum Ferm. Temp: 69°-74°F



## **WHITE LABS PURE LIQUID BREWERY YEAST (continued) Reg \$9.39 Sale \$7.05**

### **WLP351 BAVARIAN WEIZEN YEAST**

Produces a classic German-style wheat beer, with moderately high, spicy, phenolic overtones reminiscent of cloves. Attenuation: 73-77% Flocculation: Low Optimum Ferm Temp: 66-70F Alcohol Tolerance: Medium

### **WLP665 FLEMISH ALE BLEND**

Blended culture used to produce the classic beer styles of the West Flanders region of Belgium. A proprietary blend of *Saccharomyces* yeasts, *Brettanomyces*, *Lactobacillus*, and *Pediococcus*, this culture creates a more complex, dark stone fruit characteristic than WLP655 Belgian Sour Mix. Attenuation: 80-85%+ Flocculation: Low-Medium Optimum Ferm Temp: 68-80F° (20-26°C) Alcohol Tolerance: Medium-High

### **WLP060 AMERICAN ALE YEAST BLEND**

Our most popular strain is WLP001-California Ale yeast. This blend celebrates the strengths of California - clean, neutral fermentation, versatile usage and adds two other strains that belong in the same "clean/neutral" flavor category. The additional strains create complexity to the finished beer, and will taste more lager like than just WLP001. Hops flavors and bitterness are accentuated, but to the extreme of WLP001. Slight sulfur will be produced during fermentation.

Attenuation: 72-80%; Flocculation: Medium; Optimum Ferm Temp: 68°-73°F

### **WLP080 CREAM ALE YEAST BLEND**

This is a blend of ale and lager yeast strains. The strains work together to create a clean, crisp, light American lager style ale. A pleasing estery aroma may be perceived from the ale yeast contribution. Hop flavors and bitterness are slightly subdued. Slight sulfur will be produced during fermentation, from the lager yeast.

Attenuation: 75-80%; Flocculation: Medium; Optimum Ferm Temp: 65°-70°F; Alcohol Tolerance: Medium High

### **WLP568 BELGIAN STYLE SAISON ALE YEAST BLEND**

This blend melds Belgian style ale and saison strains. The strains work in harmony to create complex, fruity aromas and flavors. The blend of yeast strains encourages complete fermentation in a timely manner. Phenolic, spicy, earthy, and clove like flavors are also created.

Attenuation: 70-80% Flocculation: Medium Optimum Ferm Temp: 70°-80°F Alcohol Tolerance: Medium

### **WLP575 BELGIAN STYLE ALE YEAST BLEND**

A blend of Trappist type yeast (2) and one Belgian ale type yeast. This creates a versatile blend that can be used for Trappist type beer, or a myriad of beers that can be described as 'Belgian type'.

Attenuation: 74-80%; Flocculation: Medium; Optimum Ferm Temp: 68°-75°F

### **WLP630 BERLINER WEISSE BLEND**

A blend of a traditional German Wiezen yeast and *Lactobacillus* to create a subtle, tart, drinkable beer. Can take several months to develop tart character. Perfect for traditional Berliner Weisse.

Attenuation: 73-80% Flocculation: Medium Optimum Ferm Temp: 68-72°F (20-22°C) Alcohol Tolerance: 5-10%

### **WLP670 AMERICAN FARMHOUSE BLEND**

Inspired by local American brewers crafting semi-traditional Belgian-style ales, this blend creates a complex flavor profile with a moderate level of sourness. It consists of a traditional farmhouse yeast strain and *Brettanomyces*. Great yeast to use for farmhouse ales, Saisons, and other Belgian-inspired beers.

Attenuation: 75-82%; Flocculation: Medium; Optimum Ferm Temp: 68-72F (20-22C); Alcohol Tolerance: 5-10%

### **WLP300 HEFEWEIZEN ALE**

This famous German yeast is a strain used in the production of traditional, authentic wheat beers. It produces the banana and clove nose traditionally associated with German wheat beers and leaves the desired cloudy look of traditional German wheat beers.

Attenuation: 72-76%; Flocculation: Low; Optimum Ferm Temp: 68°-72°F

**WHITE LABS PURE LIQUID BREWERY YEAST (continued)** Reg \$9.39 Sale \$7.05

**WLP320 AMERICAN HEFEWEIZEN ALE**

This yeast is used to produce the Oregon style American Hefeweizen. Unlike WLP300, this yeast produces a very slight amount of the banana and clove notes. It produces some sulfur, but is otherwise a clean fermenting yeast, which does not flocculate well, producing a cloudy beer.

Attenuation: 70-75%; Flocculation: Low; Optimum Ferm Temp: 65°-69°F

**WLP380 HEFEWEIZEN IV ALE**

Large clove and phenolic aroma and flavor, with minimal banana. Refreshing citrus and apricot notes.

Crisp, drinkable. Less flocculent than WLP300, sulfur production is higher.

Attenuation: 73-80%; Flocculation: Low; Optimum Ferm Temp: 66°-70°F

**WLP400 BELGIAN WIT ALE**

Slightly phenolic and tart, this is the original yeast used to produce Wit in Belgium.

Attenuation: 74-78%; Flocculation: low-medium; Optimum Ferm Temp: 67°-74°F

**WLP500 TRAPPIST ALE**

From one of the six Trappist breweries remaining in the world, this yeast produces the distinctive fruitiness and plum characteristics. Excellent yeast for high gravity beers, Belgian ales, dubbels and trippels.

Attenuation: 73-78%; Flocculation: low to medium; Optimum Ferm Temp: 65°-72°F

**WLP530 ABBEY ALE**

Used in two of the six Trappist breweries remaining in the world, this yeast produces the distinctive fruitiness and plum characteristics. Excellent yeast for high gravity beers, Belgian ales, dubbels & trippels.

Attenuation: 73-78%; Flocculation: medium to high; Optimum Ferm Temp: 66°-72°F

**WLP545 BELGIAN STRONG ALE**

From the Ardennes region of Belgium, this classic yeast strain produces moderate levels of ester and spicy phenolic character. Typically results in a dry, but balanced finish. This yeast is well suited for Belgian dark strong, Abbey Ales, and Christmas beers.

Attenuation: 78-85%; Flocculation: Medium; Optimal Fermentation Temperature: 66-72F; Alcohol Tolerance: High

**WLP550 BELGIAN ALE**

Saisons, Belgian Ales, Belgian Reds, Belgian Browns, and White beers are just a few of the classic Belgian beer styles that can be created with this yeast strain. Phenolic and spicy flavors dominate the profile, with less fruitiness than WLP500.

**WLP565 SAISON ALE**

Classic Saison yeast from Wallonia. It produces earthy, peppery, and spicy notes. Slightly sweet. With high gravity saisons, brewers may wish to dry the beer with an alternate yeast added after 75% fermentation.

Attenuation: 65-75%; Flocculation: Medium; Optimum Ferm Temp: 68°-75°F

**WLP566 BELGIAN SAISON II ALE**

Saison strain with more fruity ester production than with WLP565. Moderately phenolic, with a clove-like characteristic in finished beer flavor and aroma. Ferments faster than WLP565.

Attenuation: 78-85% Flocculation: Medium Optimum Ferm Temp: 68-78 F Alcohol Tolerance: Medium

**WLP570 BELGIAN GOLDEN ALE**

From East Flanders, versatile yeast that can produce light Belgian ales to high gravity Belgian beers (12% ABV). A combination of fruitiness and phenolic characteristics dominate the flavor profile. Some sulfur is produced during fermentation, which will dissipate following the end of fermentation.

Attenuation: 75-80%; Flocculation: Low; Optimum Ferm Temp: 68°-75°F

**WHITE LABS PURE LIQUID BREWERY YEAST (continued)** Reg \$9.39 Sale \$7.05

**WLP800 PILSEN LAGER**

Classic pilsner strain from the premier pilsner producer in the Czech Republic. Somewhat dry with a malty finish, this yeast is best suited for European pilsner production.

Attenuation: 72-77%; Flocculation: medium to high; Optimum Ferm Temp: 50°-55°F

**WLP802 CZECH BUDEJOVICE LAGER**

Pilsner lager yeast from Southern Czech Republic. Produces dry and crisp lagers, with low diacetyl production.

Attenuation: 75-80%; Flocculation: Medium; Optimum Ferm Temp: 50°-55°F

**WLP810 SAN FRANCISCO LAGER**

This yeast is used to produce the "California Common" style beer. A unique lager strain which has the ability to ferment up to 65 degrees while retaining lager characteristics. Can also be fermented down to 50 degrees for production of arzens, pilsners and other style lagers.

Attenuation: 65-70%; Flocculation: High; Optimum Ferm Temp: 58°-65°F

**WLP820 OKTOBERFEST LAGER**

This yeast produces a very malty, bock like style. It does not finish as dry as WLP830, as it is much slower in the first generation. We encourage a larger starter to be used the first generation or schedule a longer lagering time.

Attenuation: 65-73%; Flocculation: Medium; Optimum Ferm Temp: 52°-58°F

**WLP830 GERMAN LAGER**

This yeast is one of the most widely used lager yeasts in the world. Very malty and clean, great for all German lagers, pilsner, Oktoberfest, and marzen.

Attenuation: 74-79%; Flocculation: Medium; Optimum Ferm Temp: 50°-55°F

**WLP833 GERMAN BOCK**

From the alps of southern Bavaria, this yeast produces a beer that is well balanced between malt and hop character. The excellent malt profile makes it well suited for Bocks, Dopplebocks, and Oktoberfest style beers. Very versatile lager yeast.

Attenuation: 70-76%; Flocculation: Medium; Optimum Ferm Temp: 48°-55°F

**WLP838 SOUTHERN GERMAN LAGER**

This yeast is characterized by a malty finish and balanced aroma. It is a strong fermenter, produces slight sulfur, and low diacetyl.

Attenuation: 68-76%; Flocculation: medium to high; Optimum Ferm Temp: 50°-55°F

**WLP840 AMERICAN PILSNER LAGER**

This yeast is used to produce American style lagers. Dry and clean with a very slight apple fruitiness. Sulfur and diacetyl production is minimal.

Attenuation: 75-80%; Flocculation: Medium; Optimum Ferm Temp: 50°-55°F

**WLP862 CRY HAVOC**

This signature strain, licensed from Charlie Papazian, has the ability to ferment at both ale and lager temperatures allowing the brewer to produce diverse beer styles. When fermented at ale temperatures, the yeast produces fruity esters reminiscent of berries and apples. Hop character comes through well with hop accented beers. Diacetyl production will be very low when proper fermentation techniques are used. When fermented at lager temperatures, esters are low in high gravity beers and negligible in other beers. Pleasant baked bread-like yeast aroma is often perceived in malt accented lagers. Slightly extended fermentation times may be experienced compared to other lagers. Some fermentation circumstances may produce sulfur aroma compounds, but these will usually dissipate with time. Good yeast for bottle conditioning. Alt beers can be cellared at lagering temperatures.

For Lagers: Attenuation: 66-70%; Flocculation: L; Optimim Ferm Temp: 55°-58°F; Optimim lagering temp: 32°-37°F.

**WHITE LABS PURE LIQUID BREWERY YEAST (continued)** Reg \$9.39 Sale \$7.05

**WLP940 MEXICAN LAGER**

From Mexico City, this yeast produces clean lager beer with a crisp finish. It is good for Mexican style light lagers as well as dark lagers. Attenuation: 70-78%. Flocculation: Medium. Optimum Fermentation Temperature: 50-55 degrees F, (10-13 degrees C). Alcohol Tolerance: Medium.

**WHITE LABS PURE LIQUID WINE/MEAD/CIDERS YEAST** Reg \$9.39 Sale \$7.05

**WLP700 FLOR SHERRY**

This yeast develops a film (flor) on the surface of the wine. Creates green almond, granny smith and nougat characteristics found in sherry. Can also be used for Port, Madeira and other sweet styles. For use in secondary fermentation. Slow fermentor.

Alcohol Tolerance: 16%; Attenuation: >80%; Flocculation: N/A; Optimum Fermentation Temperature: >70% F

**WLP705 SAKE**

For use in rice based fermentations. For sake, use this yeast in conjunction with koji (to produce fermentable sugar). WLP705 produces full body sake character, and subtle fragrance.

Alcohol Tolerance: 16%; Attenuation: >80%; Flocculation: N/A; Optimum Fermentation Temperature: >70%

**WLP715 CHAMPAGNE**

Classic yeast, used to produce champagne, cider, dry meads, dry wines, or to fully attenuate barley wines/strong ales. Can tolerate alcohol concentrations up to 17%. Neutral.

Attenuation: 75%; Flocculation: Low; Optimum Ferm Temp: 70°-75°F

**WLP718 AVIZE**

Champagne isolate used for complexity in whites. Contributes elegance, especially in barrel fermented Chardonnays. Attenuation: 80%; Flocculation: Low; Optimum Ferm. Temp: 60°-90°F. (Special order only.)

**WLP720 SWEET MEAD/WINE**

A wine yeast strain that is less attenuative than WLP715, leaving some residual sweetness. Slightly fruity and will tolerate alcohol concentrations up to 15%. A good choice for sweet mead and cider, as well as Blush wines, Gewürztraminer, Sauternes, Riesling. Attenuation: 75%; Flocculation: Low; Optimum Ferm Temp: 70°-75°F

**WLP727 STEINBERG-GEISENHEIM**

German in origin, this yeast has high fruit/ester production. Perfect for Riesling and Gewurztraminer. Moderate fermentation characteristics and cold tolerant.

Attenuation: 80%; Flocculation: Low; Optimum Ferm Temp: 50°-90°F

**WLP730 CHARDONNAY WINE**

Dry wine yeast. Slight ester production, low sulfur dioxide production. Enhances varietal character. Good choice for all white and blush wines, including Chablis, Chenin Blanc, Semillon, and Sauvignon Blanc.

Fermentation speed is moderate. Attenuation: 80%; Flocculation: Low; Optimum Ferm Temp: 50°-90%

**WLP735 FRENCH WHITE WINE**

Classic yeast for white wine fermentation. Slow to moderate fermenter and foam producer. Gives an enhanced creamy texture. Attenuation: 80%; Flocculation: Low; Optimum Ferm Temp: 60°-90°F

**WLP740 MERLOT RED WINE**

Neutral, low fusel alcohol production. Will ferment to dryness, alcohol tolerance to 18%. Vigorous fermenter.

WLP740 is also well suited for Cabernet, Shiraz, Pinot Noir, Chardonnay, Sauvignon Blanc, and Semillon.

Attenuation: 80%; Flocculation: Low; Optimum Ferm Temp: 60°-90°F

**WHITE LABS PURE LIQUID WINE/MEAD/CIDERS YEAST ( continued) Reg \$9.39 Sale \$7.05**

**WLP750 FRENCH RED WINE**

Classic Bordeaux yeast for red wine fermentations. Moderate fermentation characteristics. Tolerates lower fermentation temperatures. Rich, smooth flavor profile.

Attenuation: 80%; Flocculation: Low; Optimum Ferm Temp: 60°-90°F

**WLP760 CABERNET RED WINE**

High temperature tolerance. Moderate fermentation speed. Excellent for full bodied red wines, ester production complements flavor. WLP760 is also suitable for Merlot, Chardonnay, Chenin Blanc, and Sauvignon Blanc.

Attenuation: 80%; Flocculation: Low; Optimum Ferm Temp: 60°-90°F

**WLP770 SUREMAIN BURGUNDY**

**WLP775 ENGLISH CIDER**

Classic cider yeast. Ferments dry, but retains flavor from apples. Sulfur is produced during fermentation, but will disappear in first two weeks of aging. Can also be used for wine and high gravity beers.

Attenuation: 80%; Flocculation: Medium; Optimum Ferm Temp: 68°-75°F

**WHITE LABS PURE LIQUID BRETTANOMYCES AND BACTERIA Reg \$9.39 Sale \$7.05**

**WLP644 BRETTANOYMCES BRUXELLENSIS TRIOS**

**WLP645 BRETTANOMYCES CLAUSSENI**

Low Intensity Brett character. Originally isolated from strong English stock beer, in the early 20th century. The Brett flavors produced are more subtle than WLP650 and WLP653. More aroma than flavor contribution.

Fruity, pineapple like aroma. *B. clausenii* is closely related to *B. anomalus*.

Attenuation: N/A; Flocculation: N/A; Optimum Ferm. Temp: N/A.

**WLP650 BRETTANOMYCES BRUXELLENSIS**

Medium intensity Brett character. Classic strain used in secondary fermentation for Belgian style beers and lambics. One Trappist brewery uses this strain in secondary and bottling to produce their characteristic flavor.

Attenuation: N/A; Flocculation: N/A; Optimum Ferm. Temp: N/A.

**WLP653 BRETTANOMYCES LAMBICUS**

High intensity Brett character. Defines the "Brett character": horsey, smoky and spicy flavors. As the name suggests, this strain is found most often in Lambic style beers, which are spontaneously fermented beers.

Also found in Flanders and sour brown style beers.

Attenuation: N/A; Flocculation: N/A; Optimum Ferm. Temp: N/A.

**WLP655 BELGIAN SOUR MIX**

A unique blend perfect for Belgian style beers. Includes *Brettanomyces*, *Saccharomyces*, and the bacterial strains *Lactobacillus* and *Pediococcus*.

Attenuation: N/A; Flocculation: N/A; Optimum Ferm. Temp: N/A.

**WLP790 MALOLACTIC BACTERIA (MCW Liquid Culture)**

(White Labs item #WLP675)

**WLN3200 SERVOMYCES YEAST NUTRIENT Reg \$15.00 Sale \$11.25**

A nutritional yeast supplement (GMO free) originally developed for German brewers by Weihenstephan and the Munich University. Conforms to the restrictions of Reinheitsgebot. Enables any yeast strain's ability to incorporate essential nutrients into its cellular structure. 6 capsules/each.