



**White Labs - 2018 Pure Pitchable Liquid Yeast Offerings**  
**Guaranteed fresh by Missouri Malt Supply**

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Your order is due by: **Sunday, October 28 @ 6 pm** Yeast pick up starts **Friday, November 2** Email order to: **kent@momalt.com**

Pricing: \$7.49 per each for an order of 3 or more vials (mix and match). \$7.99 per each for a 1 - 2 vial order.  
**Redeem your White Labs free vial coupons!**

Each White Labs vial contains ~ 100 billion yeast cells. For best results, make a yeast starter using a stir plate. Start 36 - 48 hrs before pitching into main wort.  
 For ales, pitch 1 billion yeast cells per L wort per degree Plato. For lagers, pitch 2 billion yeast cells per L wort per degree Plato.  
 For a 5 gallon (19 L) ale batch at 12.5 degrees Plato, you would need 237.5 billion yeast cells. For a 5 gal lager batch at 12.5 °P, you would need 475 billion yeast cells.  
 For a pitching rate calculator, go to [www.nrmalt.com](http://www.nrmalt.com) or [www.wyeastlab.com/hb\\_pitchrate.cfm](http://www.wyeastlab.com/hb_pitchrate.cfm)

| White Labs Vault Yeast Strains<br>Available in Sept, Oct, Nov and Dec |                                   | Description  | Attenuation   | Flocculation   | Optimum Temp. (°F) | Alcohol Tolerance |
|---|-----------------------------------|--|---------------|----------------|--------------------|-------------------|
| 1   | WLP515 Antwerp Ale Yeast          | Clean, almost lager like Belgian type ale yeast. Good for Belgian type pales ales and amber ales, or with blends to combine with other Belgian type yeast strains. Biscuity, ale like aroma present. Hop flavors and bitterness are accentuated. Slight sulfur will be produced during fermentation, which can give the yeast a lager-like flavor profile. <b>Source: De Koninck</b> | 73-80         | Medium         | 67-70              | M (5 - 10 %)      |
| 2   | WLP773 Scottish Cider Yeast Blend | This is an exciting blend of two ale strains and one wine strain. Unlike a lot of ale strains that typically dry out most ciders, this unique blend of Saccharomyces strains will leave some residual sweetness for a smooth mouthfeel. This strain is perfect for those looking for a still cider with some lingering apple characteristic or a dryer sparkling cider.              | 80 (12 Plato) | Medium to High | NA                 | NA                |
| 3   | WLP006 Bedford British Ale Yeast  | Ferments dry and flocculates very well, produces a distinct ester profile. This yeast yields a full mouthfeel, perfect for creating English-style ales, including bitters, pale ales, porters, stouts and browns.  | 72-80         | High           | 65-70              | M (5 - 10 %)      |
| 4   | WLP611 New Nordic Ale Yeast       | Isolated from spontaneously fermented apples on a remote island off the coast of Denmark in the fall of 2009, this culture is a unique blend of three yeast strains (two belonging to Saccharomyces cerevisiae and one Torulaspora delbrueckii).   | 65 - 75       | Medium to Low  | 50 - 86            | M-L (5 %)         |

| White Labs Original Pitchable Yeast Strains<br>Ales |                                     | WYEAST Comparison | Description   | Attenuation | Flocculation | Optimum Temp. (°F) | Alcohol Tolerance |
|---|-------------------------------------|-------------------|---|-------------|--------------|--------------------|-------------------|
| 1   | WLP090 **San Diego Super Yeast**    |                   | 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.  | 76-83       | M-H          | 65-68              | H                 |
| 2   | WLP001 California Ale Yeast         | 1056              | 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. <b>Source: Sierra-Nevada.</b>  | 73-80       | M            | 68-73              | H                 |
| 3   | WLP002 English Ale Yeast            | 1968              | A classic ESB strain from one of England's largest independent breweries. This yeast will leave a beer very clear, with some residual sweetness. <b>Source: Fuller's ESB.</b>   | 63-70       | VH           | 65-68              | M                 |
| 4   | WLP004 Irish Ale Yeast              | 1084              | From one of the oldest stout producing breweries in the world. It produces a slight hint of diacetyl, balanced by light fruitiness and slight dry crispness. <b>Source: Guinness.</b>   | 69-74       | M-H          | 65-68              | M-H               |
| 5   | WLP005 British Ale Yeast            | 1187              | This yeast is a little more attenuative than WLP002. Like most English strains, this yeast produces malty beers. Excellent for all English Style ales. <b>Source: Ringwood.</b>   | 69-74       | H            | 65-70              | M                 |
| 6   | WLP007 Dry English Ale Yeast        | 1098              | Clean, highly flocculent, 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 is also reaches terminal gravity quickly. 80% attenuation will be reached even with 10% ABV beers. <b>Source: Whitebread (dry).</b>                       | 70 - 80     | M-H          | 65-70              | M-H               |
| 7   | WLP008 East Coast Ale Yeast         |                   | This "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, slightly less flocculation, and a little tartness. Very clean and low esters. Great yeast for golden, blonde, honey, pales and German alt style ales. <b>Source: Boston Brewing Co.</b> | 70-75       | M-L          | 68-73              | M                 |
| 8   | WLP009 Australian Ale Yeast         |                   | Produces a clean, malty beer. Pleasant ester character, can be described as "bready." Can ferment successfully, and clean, at higher temperatures. This yeast combines good flocculation with good attenuation.   | 70-75       | High         | 65-70              | M (5 - 10 %)      |
| 9   | WLP011 European Ale Yeast           | 1338              | Malty, Northern European-origin ale yeast. Low ester production, giving a clean profile. Little to no sulfur production. Low attenuation helps to contribute to the malty character. Good for Alt, Kölsch, malty English ales, and fruit beers. <b>Source: Wissenschaftliche Station # 338 (Munich).</b>  | 65-70       | M            | 65-70              | M (5 - 10 %)      |
| 10  | WLP013 London Ale Yeast             | 1028              | Dry, malty ale yeast. Provides a complex, soaky ester character to your beer. Hop bitterness comes through well. This yeast is well suited for classic British pale ales, bitters, milds and stouts. Does not flocculate as much as WLP002 and WLP005. <b>Source: Worthington White Shield.</b>   | 67-75       | M            | 66-71              | M (5 - 10 %)      |
| 11  | WLP023 Burton Ale Yeast             | 1275              | 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. Great for all English styles, IPA's, bitters, and pales. Excellent in porters and stouts. <b>Source: Marston's.</b>   | 69-75       | M            | 68-73              | M (5 - 10 %)      |
| 12  | WLP028 Edinburgh Scottish Ale Yeast | 1728              | Scotland is famous for its malty, strong ales. This yeast can reproduce complex, flavorful Scottish style ales. This yeast can be an everyday strain, similar to WLP001. Hop character is not muted with this strain, as it is with WLP002. <b>Source: McKewan's.</b>   | 70-75       | M            | 65-70              | M-H               |
| 13  | WLP029 German/ Kölsch Ale Yeast     |                   | From a small brewpub in Cologne, Germany, this yeast works great in Kölsch and Alt style beers. Good for light beers like blonde 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.   | 72-78       | M            | 65-69              | M (5 - 10 %)      |
| 14  | WLP036 Düsseldorf Alt Yeast         |                   | Traditional Alt yeast from Düsseldorf, Germany. Produces clean, slightly sweet alt beers. Does not accentuate hop flavor as WLP029 does.  | 65-72       | M            | 65-69              | M (5 - 10 %)      |
| 15  | WLP041 Pacific Ale Yeast            |                   | 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 for English style ales including milds, bitters, IPA, porters, and English style stouts.   | 65-70       | H            | 65-68              | M (5 - 10 %)      |
| 16  | WLP045 Scotch Whiskey Yeast         |                   | A strain that was widely used for Scotch Whiskey production from the early 1950s, producing a complex array of ester compounds and fusel oils, as well as some spicy, clove character. Suitable for Scotch Whisky or American-style Whiskey. Used in high-gravity beers.  | 75-80       | M            | 72-77              | H                 |
| 17  | WLP050 Tennessee Whiskey Yeast      |                   | Suitable for American-style whiskey and bourbon. This yeast is famous for creating rich, smooth flavors. Clean and dry fermenting yeast. Will tolerate high alcohol concentrations (15%), and ester production is low. Also popular in high-gravity beers.  | 75-80       | M            | 75-79              | H                 |
| 18  | WLP051 California V Ale Yeast       | 1272              | From Northern California. This strain is more fruity than WLP001, and slightly more flocculent. Attenuation is lower, resulting in a fuller bodied beer than with WLP001. <b>Source: Anchor Liberty.</b>  | 70-75       | M-H          | 66-70              | M-H               |
| 19  | WLP065 American Whiskey Yeast       |                   | Yeast strain that produces low ester profile and moderate fusel oils. Temperature and alcohol tolerant and suitable for American-style whiskey using barley or corn base. Also used in high-gravity beers.  | 76-82       | M            | 75-82              | H                 |
| 20  | WLP070 Bourbon Yeast                |                   | From a traditional distillery in the heart of Bourbon country, this strain produces a caramel, malty character with balanced ester profile. Suitable for Bourbon or other American Whiskey with barley, rye, or corn as the base grain. Used in high-gravity beers.   | 75-80       | M            | 72-77              | H                 |
| 21  | WLP078 Neutral Grain Yeast          |                   | Marked by a clean, fast fermentation, this strain is ideal for any neutral grain spirit. Alcohol and temperature tolerant. Used in high-gravity beers.  | 77-84       | M            | 76-85              | H                 |
| 22  | WLP095 Burlington Ale Yeast         |                   | This yeast has proven to be great in IPAs. This is a great yeast for people who like WLP001 California Ale Yeast because this yeast throws a little personality and body into your beer. Esters are higher than WLP001. This yeast has been known to result in more diacetyl so increasing the temperature at the end of fermentation is suggested.   | 73 - 78     | M            | 67-70              | H                 |
| 23  | WLP099 Super High Gravity Ale Yeast |                   | Can ferment up to 25% alcohol. From England. Produces ester character that increases with increasing gravity. Malt character dominates at lower gravities. <b>Source: Thomas Hardy</b>  | >80         | M            | 65-69              | VH                |

| Original Pitchable Yeast Strains<br>Yeast Blends |   | WYEAST<br>Comparison | Description  | Attenuation | Flocculation   | Optimum<br>Temp. (°F) | Alcohol<br>Tolerance |
|--|---|----------------------|--|-------------|----------------|-----------------------|----------------------|
| 1  | WLP060 American Ale Yeast Blend             |                      | This blend celebrates the strengths of California Ale WLP001 - clean, neutral fermentation, versatile usage, and adds two other strains that belong to the same "clean/neutral" flavor category. The additional strains create complexity to the finished beer. This blend tastes more lager like than WLP001. Hop flavors and bitterness are accentuated, but not to the extreme of California. Slight sulfur will be produced during fermentation. | 72-80       | Medium         | 68-72                 | M-H                  |
| 2  | 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.   | 75 - 80     | Medium         | 65-70                 | M-H                  |
| 3  | WLP085 English Ale Yeast Blend              |                      | A blend of British ale yeast strains, designed to add complexity to your ale. Moderate fruitiness and mineral-like, with little to no sulfur. Drier than WLP002 and WLP005, but with similar flocculation properties. Good yeast blend for English Pale Ale, Bitter, Porter, Stout, and India Pale Ale.  | 69 - 76     | Medium to High | 68 - 72               | Medium               |
| 4  | 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.   | 70-80       | Medium         | 70-80                 | M-H                  |
| 5  | 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".   | 74-80       | Medium         | 65-75                 | M-H                  |
| 6  | WLP630 Berliner Weisse Blend                |                      | A blend of a traditional German Weizen yeast and Lactobacillus to create a subtle, tart, drinkable beer. Can take several months to develop tart character. Perfect for traditional Berliner Weisse.   | 73 - 80     | Medium         | 66 - 72               | 5 - 10 %             |
| 7  | 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 WLP 655 Belgian Sour Mix.  | 80 - 85 %+  | Low - Medium   | 68 - 80               | M - H                |
| 8  | 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 for farmhouse ales, Saisons, and other Belgian-inspired beers.  | 75 - 82     | Medium         | 68 - 72               | Medium               |

| White Labs Original Pitchable Yeast Strains<br>Specialty Ales |                                      | WYEAST<br>Comparison | Description  | Attenuation | Flocculation | Optimum<br>Temp. (°F) | Alcohol<br>Tolerance |
|---|--------------------------------------|----------------------|--|-------------|--------------|-----------------------|----------------------|
| 1   | WLP300 Hefeweizen Ale Yeast          | 3068                 | 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.  | 72-76       | L            | 68-72                 | M                    |
| 2   | WLP320 American Hefeweizen Ale Yeast |                      | 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.  | 70-75       | L            | 65-69                 | M                    |
| 3   | WLP351 Bavarian Weizen Ale Yeast     |                      | Former Yeast Lab W51 yeast strain, acquired from Dan McConnell. The description originally used by Yeast Lab still fits: "This strain produces a classic German-style wheat beer, with moderately high, spicy, phenolic overtones reminiscent of cloves."  | 73 - 77     | L            | 66-70                 | M                    |
| 4   | WLP380 Hefeweizen IV Ale Yeast       | 3333                 | Large clove and phenolic aroma and flavor, with minimal banana. Refreshing citrus and apricot notes. Crisp, drinkable hefeweizen. Less flocculent than WLP300, and sulfur production is higher.  | 73-80       | L            | 66-70                 | M                    |
| 5   | WLP400 Belgian Wit Ale Yeast         | 3944                 | Slightly phenolic and tart, this is the original yeast used to produce Wit in Belgium. Source: <b>Hoggarthen</b> .   | 74-78       | L-M          | 67-74                 | M                    |
| 6   | WLP500 Trappist Ale Yeast            | 1214                 | From one of the few remaining 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. Source: <b>Chimay</b> .  | 75-80       | L-M          | 67-72                 | H                    |
| 7   | WLP510 Bastogne Ale Yeast            |                      | A high gravity, Trappist style ale yeast. Produces dry beer with slight acidic finish. More "clean" fermentation character than WLP500 or WLP530. Not as spicy as WLP530 or WLP550. Excellent yeast for high gravity beers, Belgian ales, dubbels and trippels. Source: <b>Orval</b> .   | 74-80       | Medium       | 66-72                 | High                 |
| 8   | WLP530 Abbey Ale Yeast               | 3787                 | Used to produce Trappist style beers. Similar to WLP500, but is less fruity and more alcohol tolerant (up to 15% ABV). Excellent yeast for high gravity beers, Belgian ales, dubbels and trippels.   | 75-80       | M-H          | 66-72                 | H                    |
| 9   | WLP545 Belgian Strong Ale Yeast      |                      | 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.  | 75 - 85     | M            | 66 - 72               | H                    |
| 10  | WLP550 Belgian Ale Yeast             | 3522                 | 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.  | 65-75       | M-H          | 68-75                 | M                    |
| 11  | WLP565 Saison Ale Yeast              | 3724                 | 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. Source: <b>Brasserie DuPont</b> .  | 78-85       | M-H          | 68-78                 | M                    |
| 12  | WLP566 Saison II Ale Yeast           |                      | 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.  | 78-85       | M-H          | 68-78                 | M                    |
| 13  | WLP570 Belgian Golden Ale Yeast      | 1388                 | 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. Source: <b>Lefmans</b> . | 73-78       | L            | 68-75                 | H                    |
| 14  | WLP590 French Saison Ale Yeast       | 3711                 | Unique yeast strain producing farmhouse-style beers with a phenolic "bite" and moderate ester compounds. Producing a cleaner aroma profile than other farmhouse styles, this yeast is versatile and highly attenuating. The most popular saison strain in the White Labs Tasting Room. Source: <b>Brasserie Thiriez</b> .            | 73-80       | M            | 69-75                 | 5-10 %               |

| White Labs Original Pitchable Yeast Strains<br>Lager Yeast |  | WYEAST<br>Comparison | Description   | Attenuation | Flocculation | Optimum<br>Temp. (°F)      | Alcohol<br>Tolerance |
|--|--|----------------------|---|-------------|--------------|----------------------------|----------------------|
| 1  | WLP800 Pilsen Lager Yeast              | 2001                 | 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.  | 72-77       | M-H          | 50 - 55                    | M                    |
| 2  | WLP802 Czech Budejovice Lager Yeast    | 2278                 | Pilsner lager yeast from Southern Czech Republic. Produces dry and crisp lagers, with low diacetyl production.  | 75-80       | M            | 50 - 55                    | M                    |
| 3  | WLP810 San Francisco Lager Yeast       | 2112                 | 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 marzens, pilsners and other style lagers.   | 65-70       | H            | 58-65                      | M-H                  |
| 4  | WLP820 Oktoberfest/Märzen Lager Yeast  | 2206                 | This yeast produces a very malty, bock like style. It does not finish as dry as WLP830. This yeast is much slower in the first generation than WLP830, so we encourage a larger starter to be used the first generation or schedule a longer lagging time.  | 65-73       | M            | 52-58                      | M-H                  |
| 5  | WLP830 German Lager Yeast              | 2124                 | 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 Märzen.   | 74-79       | M            | 50 - 55                    | M                    |
| 6  | WLP833 German Bock Lager Yeast         |                      | 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, Doppelbocks, and Oktoberfest style beers. Very versatile lager yeast, it is so well balanced that it has gained tremendous popularity for use in Classic American style Pilsners. Also good for Helles style lager beer. | 70-76       | M            | 48-55                      | M-H                  |
| 7  | WLP838 Southern German Lager Yeast     | 2308                 | This yeast is characterized by a malty finish and balanced aroma. It is a strong fermenter, produces slight sulfur, and low diacetyl.   | 68-76       | M-H          | 50 - 55                    | M                    |
| 8  | WLP840 American Pilsner Lager Yeast    | 2007                 | This yeast is used to produce American style lagers. Dry and clean with a very slight apple fruitiness. Sulfur and diacetyl production is minimal. A Budweiser yeast.   | 75-80       | M            | 50 - 55                    | M                    |
| 9  | WLP850 Copenhagen Lager Yeast          |                      | Clean, crisp northern European lager yeast. Not as malty as the southern European lager yeast strains. Great for European style pilsners, European style dark lagers, Vienna, and American style lagers.  | 72-78       | M            | 50-58                      | M (5 - 10 %)         |
| 10   | WLP862 Cry Havoc from Charlie Papazian |                      | Licensed from Charlie Papazian, this strain can ferment at ale and lager temperatures, allowing brewers to produce diverse beer styles. The recipes in both Papazian's books, <i>The Complete Joy of Homebrewing</i> and <i>The Homebrewers Companion</i> , were originally developed and brewed with this yeast.   | 66-70       | M-L          | 68-74 Ales<br>55-58 Lagers | M-L                  |
| 11   | WLP920 Old Bavarian Lager Yeast        |                      | From Southern Germany, this yeast finishes malty with a slight ester profile. Use in beers such as Oktoberfests, bocks, and dark lagers.  | 66 - 73     | M            | 50 - 55                    | M-H                  |
| 12   | WLP925 High Pressure Lager Yeast       |                      | Used to ferment lager beer in one week. Ferment at room temperature; 62-68°F (17-20°C) under 1.0 bar (14.7 PSI) until final gravity is obtained, generally one week. Lager the beer at 35°F (2°C), 15 PSI, for 3-5 days to condition. Sulfur production is strong the first 2 days, then disappears by day 5.   | 73 - 82     | M            | 62 - 68                    | M (5 - 10 %)         |
| 13   | WLP940 Mexican Lager Yeast             |                      | From Mexico City, this yeast produces clean lager beer, with a crisp finish. Good for Mexican style light lagers, as well as dark lagers.   | 70 - 78     | M            | 50 - 55                    | M                    |

| White Labs Original Pitchable Yeast Strains<br>Wine - Mead - Cider - Sake Yeast |        | WYEAST<br>Comparison         | Description   | Attenuation | Flocculation | Optimum<br>Temp. (°F) | Alcohol<br>Tolerance |
|---|--------|------------------------------|---|-------------|--------------|-----------------------|----------------------|
| 1   | WLP700 | Flor Sherry Yeast            | 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 fermenter.                  | >80         |              | > 70                  | 16%                  |
| 2   | WLP705 | Sake Yeast                   | 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.  | >80         |              | > 70                  | 16%                  |
| 3   | WLP715 | Champagne Yeast              | Classic yeast, used to produce champagne, cider, dry meads, dry wines, or to fully attenuate barley wines/ strong ales. Neutral.  | >75         | Low          | 70-75                 | 17%                  |
| 4   | WLP718 | Avize Wine Yeast             | Champagne isolate used for complexity in whites. Contributes elegance, especially in barrel fermented Chardonnays.  | >80         | Low          | 60-90                 | 15%                  |
| 5   | WLP720 | Sweet Mead/ Wine Yeast       | 3463<br>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. | <75         | Low          | 70-75                 | 15%                  |
| 6   | WLP727 | Steinberg - Geisenheim Yeast | German in origin, this yeast has high fruit/ester production. Perfect for Riesling and Gewürztraminer. Moderate fermentation characteristics and cold tolerant.   | >80         | Low          | 50-90                 | 14%                  |
| 7   | WLP730 | Chardonnay White Wine Yeast  | Dry wine yeast. Slight ester production, low sulfur dioxide production. Enhances varietal character. WLP730 is a good choice for all white and blush wines, including Chablis, Chenin Blanc, Semillon, and Sauvignon Blanc. Fermentation speed is moderate.                 | >80         | Low          | 50-90                 | 14%                  |
| 8   | WLP735 | French White Wine Yeast      | Classic yeast for white wine fermentation. Slow to moderate fermenter and foam producer. Gives an enhanced creamy texture.  | >80         | Low          | 60-90                 | 16%                  |
| 9   | WLP740 | Merlot Red Wine Yeast        | Neutral, low fusel alcohol production. Will ferment to dryness, alcohol tolerance to 18%. Vigorous fermenter. WLP740 is well suited for Merlot, Shiraz, Pinot Noir, Chardonnay, Cabernet, Sauvignon Blanc, and Semillon.  | >80         | Low          | 60-90                 | 18%                  |
| 10  | WLP749 | Assmanshausen Wine Yeast     | German red wine yeast, which results in spicy, fruit aromas. Perfect for Pinot Noir and Zinfandel. Slow to moderate fermenter which is cold tolerant.   | >80         | Low          | 50-90                 | 16%                  |
| 11  | WLP750 | French Red Wine Yeast        | Classic Bordeaux yeast for red wine fermentations. Moderate fermentation characteristics. Tolerates lower fermentation temperatures. Rich, smooth flavor profile.   | >80         | Low          | 60-90                 | 17%                  |
| 12  | WLP760 | Cabernet Red Wine Yeast      | High temperature tolerance. Moderate fermentation speed. Excellent for full-bodied red wines, ester production complements flavor. WLP760 is also suitable for Merlot, Chardonnay, Cabernet, Chenin Blanc, and Sauvignon Blanc.   | >80         | Low          | 60-90                 | 16%                  |
| 13  | WLP770 | Suremain Burgundy Yeast      | Emphasizes fruit aromas in barrel fermentations. High nutrient requirement to avoid volatile acidity production.  | >80         | Low          | 60-90                 | 16%                  |
| 14  | WLP775 | English Cider Yeast          | 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.  | >80         | M            | 68-75                 | M-H                  |

| White Labs Original Pitchable Yeast Strains<br>Brettanomyces and Bacteria |        | WYEAST<br>Comparison                  | Description  | Attenuation | Flocculation | Optimum<br>Temp. (°F) | Alcohol<br>Tolerance |
|---|--------|---------------------------------------|--|-------------|--------------|-----------------------|----------------------|
| 1   | WLP600 | Kombucha SCOBY                        | White Labs now offers WLP600 Kombucha SCOBY, a symbiotic culture of bacteria and yeast that is used for fermenting sweet tea into kombucha. White Labs' SCOBY is free of food pathogens and has been genetically identified to know specially what yeast and bacteria are involved in the fermentation of kombucha. As we continue our genetic identification we will publish the data below. This SCOBY has medium acetic acid production and low alcohol production based on our recipe. The SCOBY diameter is 2.92 inches. Contains 11 bacteria strains plus 2 yeast strains. |             |              |                       |                      |
| 2   | WLP630 | Berliner Weisse Blend                 | A blend of a traditional German Weizen yeast and Lactobacillus to create a subtle, tart, drinkable beer. Can take several months to develop tart character. Perfect for traditional Berliner Weisse.   | 73 - 80     | Medium       | 66 - 72               | 5 - 10 %             |
| 3   | WLP644 | Saccharomyces bruxellensis trois      | This Belgian strain, used traditionally for 100% Brettanomyces fermentations, produces a slightly tart beer with delicate characteristics of mango and pineapple. Can also be used to produce effervescence when bottle-conditioning.  | 85 % +      | Low          | 70 - 85               | M - H                |
| 4   | WLP645 | Brettanomyces clausenii               | 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.  | 70 - 85 %   | Low          | 85 +                  | M - H                |
| 5   | WLP648 | Brettanomyces bruxellensis trois vrai | The vrai (true, in French) Brettanomyces bruxellensis Trois. The infamous strain used for all Brettanomyces fermentations, has a robust, complex sour character with aromas of pear. Best used as a primary fermentation strain.   | 85 % +      | Low          | 70 - 85               | M - H                |
| 6   | 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 fermentation and bottling to produce their characteristic flavor.  | 70 - 85 %   | Low          | 85 +                  | M - H                |
| 7   | 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.   | 70 - 85 %   | Low          | 85 +                  | M - H                |
| 8   | WLP661 | Pediococcus damnosus                  | Pediococcus damnosus is a cocci bacteria known for its souring capabilities by producing lactic acid. Perfect to add to any sour program. High diacetyl producer and slow growing.   | 65 %        | Low          | N/A                   | N/A                  |
| 9   | WLP655 | Belgian Sour Mix 1                    | A unique blend perfect for Belgian style beers. Includes Brettanomyces, Saccharomyces, and the bacterial strains Lactobacillus and Pediococcus.  | 70 - 80 %   | Medium - Low | 80 - 85 % +           | M - H                |
| 10  | 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 WLP 655 Belgian Sour Mix.  | 80 - 85 % + | Low - Medium | 68 - 80               | M - H                |
| 11  | 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 for farmhouse ales, Saisons, and other Belgian-inspired beers.  | 75 - 82     | Medium       | 68 - 72               | Medium               |
| 12  | WLP672 | Lactobacillus brevis                  | Lactobacillus brevis is a rod-shaped bacteria used for souring beers. Typically produces more lactic acid than Lactobacillus delbrueckii. Great addition to any sour program!  | 80 %        | N/A          | N/A                   | N/A                  |
| 13  | WLP675 | Malolactic Bacteria                   | Malolactic Fermentation is the conversion of malic acid to lactic acid by bacteria from the lactic acid bacteria family. Lactic acid is less acidic than malic acid, which in turn decreases acidity and helps to soften and/or round out some of the flavors in wine.   |             |              |                       |                      |
| 14  | WLP677 | Lactobacillus delbrueckii Bacteria    | This lactic acid bacteria produces moderate levels of acidity and sour flavors found in lambics, Berliner Weiss, sour brown ale and gueuze.  | 75 - 82 %   | Low          | 70 - 75               | M - H                |