

MANGROVE JACK'S

BREWING COMPANY

TRADE MARK

CRAFT SERIES

EXPERT

*Hand
Crafted*

FERMENTING

DRIED BEER
YEAST STRAINS



BORN IN EUROPE



≡ EXPERTLY HAND CRAFTED ≡

YEASTS

SELECTED TO SUIT

EXPERT

**YOUR STYLE
OF BEER**

FERMENTING

AVAILABLE WORLDWIDE

www.mangrovejacks.com



SUPERIOR YEASTS FOR CRAFT BREWING

The character and complexity of beer is driven by hops, malt and the type of yeast you use. Having the right yeast is critical when creating craft beers with true personality.

This range of dried pure yeast strains have been brought to market after years of development, extensive brewing trials and rigorous screening. This breakthrough now gives the brewer the ability to brew a wide range of craft beer styles, previously requiring liquid yeast.

Each yeast has been propagated and dried using state of the art manufacturing facilities to give you correct pitching counts, superior shelf stability, and ease of use. You can be assured that with Mangrove Jack's Craft Series Yeast, you will get consistent, top quality results with each brew.



CONTENTS

| | |
|--|----|
| Superior Yeasts for Craft Brewing | 1 |
| Brewing with Mangrove Jack's Craft Series Dried Yeasts | 3 |
| Rehydration Instructions | 3 |
| Number of Sachets to Use | 3 |
| Storage of Sachets | 3 |
| How the Yeast Works | 4 |
| Selecting the Right Yeast | 5 |
| The Dried Yeast Range: Individual Descriptions and Specifications | |
| Bavarian Wheat Yeast M20 | 8 |
| British Ale Yeast M07 | 9 |
| US West Coast Yeast M44 | 10 |
| Burton Union Yeast M79 | 11 |
| Bohemian Lager Yeast M84 | 12 |
| Belgian Ale Yeast M27 | 13 |
| Newcastle Dark Ale Yeast M03 | 14 |
| Workhorse Beer Yeast M10 | 15 |
| Cider Yeast M02 | 16 |

BREWING WITH MANGROVE JACK'S CRAFT SERIES DRIED YEASTS

When using these yeasts, there is no need to propagate or make starters. They offer a cost effective and convenient alternative to liquid yeast products, and have the advantage of extended shelf life with consistent high performance.

REHYDRATION INSTRUCTIONS

Although Mangrove Jack's Craft Series Yeasts do not require pre-hydration, cleaner and more professional results may be produced if rehydrated before use.

For all strains **except the Bohemian Lager Yeast**, add the sachet contents to 100ml of water previously adjusted to a temperature between 86–95°F (30–35°C). For Bohemian Lager Yeast, rehydrate using 3.4 fl.oz (100 ml) of 68–77°F (20–25°C) water. Stir gently into a yeast cream for between 8 and 12 minutes then add yeast cream directly to wort. Alternatively the dry yeast can be added directly into the wort by sprinkling onto the surface and leaving to stand for 10-15 minutes before stirring.

ADD YEAST SACHET TO:

3.4 fl.oz
(100 ml)
WATER

WATER
TEMP:
86–95°F
(30–35°C)

FOR ALL YEAST STRAINS
(EXCEPT BOHEMIAN LAGER YEAST)

WATER
TEMP:
68–77°F
(20–25°C)

FOR BOHEMIAN LAGER YEAST

STORAGE OF SACHETS

Store in original packaging at below 50°F (10°C) for optimum 30 month life. At 68°F (20°C) storage temperature viability will remain high for 12 months. At 86°F (30°C) storage temperature viability will remain high for 4 months. Above 86°F (30°C) viability and yeast condition will become seriously compromised within 6 weeks.

NUMBER OF SACHETS TO USE

In most cases Mangrove Jack's Beer Yeast can be used at a ratio of one 10 gram pack for up to 6.6 US gal (25L). However, for best results take note of the following exceptions to the rule:

| EXCEPTION | RECOMMENDATION |
|--|--|
| Ales of original gravity over 1.050 | Use 2 x 10g packets per 6.6 US Gal (25L) |
| Lagers to be fermented at 57°F (14°C) or lower | Use 2 x 10g packets per 6.6 US Gal (25L) |

Under-pitching yeast in lagers or stronger ales will result in extended lag times (the time between pitching your yeast and the commencement of fermentation) which can allow undesirable microbes to multiply, tainting your beer. The yeast will become "stressed" and may produce excessive and undesirable fruity esters and/or sulphur compounds.

High end gravities are also possible where lower pitch rates are used, leading to sweet and worty unfinished beer.

HOW THE YEAST WORKS

1. Lag Phase:

After pitching Mangrove Jack's Beer Yeast to your wort, you will experience a lag period which varies from strain to strain, and from beer to beer; 12-24 hours is normal. The lag phase will also be impacted by the degree of oxygenation of your wort and by temperature. During the lag phase the yeast is acclimatising to its new surroundings, multiplying by budding, taking up free oxygen and nutrients from the wort, and its metabolism is shifting out of dormancy to active state.

2. Fermentation:

For the first 48hrs, don't be concerned by the little or absence of activity in your airlock or in the beer. Most strains will show vigorous activity within 12 hours, but lagers in particular such as our Bohemian Lager Yeast will nearly always require over 24 hours to produce any krausen or bubbling in your airlock.

3. Maturation:

Generally, our ale strains produce beer that reaches premium flavor potential after approximately 4 weeks maturation: 1-2 weeks in fermenter, followed by 2-3 weeks in bottles or other storage vessel. However, the following table shows some exceptions to this rule:

| EXCEPTION | RECOMMENDATION |
|----------------------|---|
| Lagers | 8-10 weeks: with 3 weeks in fermenter and 5-7 weeks in bottle |
| Strong Ales | Allow at least 4 weeks: 2 weeks in fermenter and 2 weeks in bottle (longer if above 1.050 original gravity) |
| Bavarian Wheat Yeast | 3 weeks: 1 or 2 weeks in fermenter and 1 or 2 weeks in bottle |
| Cider Yeast | 3 weeks: 1 week in fermenter and 1-2 weeks in bottle |

4. Reuse:

As a result of the drying process, Mangrove Jack's dried yeasts are not suitable for harvesting and/or repitching. For best results, always use a fresh sachet of yeast with every brew.



SELECTING THE RIGHT YEAST

Selecting the right yeast strain for the style of beer you are wishing to brew is critical. Each yeast strain will provide the beer with different flavor characteristics as well as body and clarity. Use the table below, as well as the yeast technical notes on the following pages to ensure you select the best yeast for your chosen beer style. **Please note:** Workhorse yeast is not mentioned in the below table as this can be used to ferment all beer styles. Workhorse yeast is also an excellent yeast to use for brewing lagers when cool fermentation temperatures are not achievable.

| NATIONALITY | BEER STYLE(S) | RECOMMENDED YEAST STRAIN |
|-----------------|--|--------------------------|
| British | Classic English Style Pale Ale | Burton Union Yeast |
| | India Pale Ale UK | British Ale Yeast |
| | English Style Dark Mild Ale | Newcastle Dark Ale Yeast |
| | English Style Brown Ale | Newcastle Dark Ale Yeast |
| | Ordinary Bitter | Burton Union Yeast |
| | Best Bitter | Burton Union Yeast |
| | English-Style Extra Special Bitter | Burton Union Yeast |
| | British-Style Imperial Stout | British Ale Yeast |
| | Barley Wine British | British Ale Yeast |
| | Strong Ale | British Ale Yeast |
| | Old Ale | Newcastle Dark Ale Yeast |
| | Golden or Blonde Ale or Summer ale | Burton Union Yeast |
| | Porter | British Ale Yeast |
| | Foreign Style Stout | British Ale Yeast |
| Oatmeal Stout | British Ale Yeast | |
| American | American Style Lager (incl. Light or Premium) | Bohemian Lager Yeast |
| | American Style Pale Ale | US West Coast Yeast |
| | India Pale Ale US | US West Coast Yeast |
| | Imperial India Pale Ale | US West Coast Yeast |
| | American-Style Imperial Stout | US West Coast Yeast |



| NATIONALITY | BEER STYLE(S) | RECOMMENDED YEAST STRAIN |
|-------------------------------|-----------------------------------|--------------------------|
| German | Bamberg-Style Rauchbier | Bohemian Lager Yeast |
| | German/Bohemian Style Pilsener | Bohemian Lager Yeast |
| | Munich Style Helles | Bohemian Lager Yeast |
| | Dortmunder/European-Style Export | Bohemian Lager Yeast |
| | Vienna Style Lager | Bohemian Lager Yeast |
| | German Style Schwarzbier | Bohemian Lager Yeast |
| | German Style Märzen/Okttoberfest | Bohemian Lager Yeast |
| | Traditional German Style Bock | Bohemian Lager Yeast |
| | German Style Heller Bock/Maibock | Bohemian Lager Yeast |
| | German Style Doppelbock | Bohemian Lager Yeast |
| | South German Style Hefeweizen | Bavarian Wheat Yeast |
| | South German-Style Kristal Weizen | Bavarian Wheat Yeast |
| | South German-Style Dunkel Weizen | Bavarian Wheat Yeast |
| South German-Style Weizenbock | Bavarian Wheat Yeast | |
| Belgian | French and Belgian Style Saison | Belgian Ale Yeast |
| | Belgian Style Dubbel | Belgian Ale Yeast |
| | Belgian Style Tripel | Belgian Ale Yeast |
| | Belgian Style Quadrupel | Belgian Ale Yeast |
| | Belgian Style Pale Strong Ale | Belgian Ale Yeast |
| | Belgian Style Dark Strong Ale | Belgian Ale Yeast |
| Others | Traditional Scotch Ale | British Ale Yeast |
| | Scottish Style Heavy Ale | Newcastle Dark Ale Yeast |
| | Scottish Style Export Ale | Newcastle Dark Ale Yeast |
| | Classic Irish Style Dry Stout | British Ale Yeast |
| | Ciders | Cider Yeast |
| | Ginger Beer | Workhorse Yeast |
| | Fruit Beers | US West Coast Yeast |

THE DRIED YEAST RANGE:

Individual Descriptions and Specifications

GENERAL NOTE

The following pages contain detailed technical information on the strains in the Mangrove Jack's Craft Series dried beer yeast range.

All brewers know that results will vary dependent on many non-yeast-strain-determined factors, and even that yeast performance may be manipulated by temperature control and pitch rates, among other factors.

The results described in the following pages are based on optimum brewing conditions, with ales fermented in the temperature range 64-68°F (18-20°C) and pitch rate of 10 grams to 6.6 US Gal (25L) wort; lagers fermented at 54-57°F (12-14°C) and pitch rate of 20 grams to 6.6 US Gal (25L) wort.

EXPERT



FERMENTING

— CRAFT SERIES —

M20

Bavarian Wheat Yeast

Active Dried Brewing Yeast promoting high levels of esters and clove phenolics for enhanced complexity of German-style wheat beer

YEAST STRAIN DESCRIPTION

A classic top-fermenting yeast suited for brewing a range of German Weizens as well as Belgian Witbier. It has a very low flocculation rate and a clean, “yeasty” aroma which makes it ideal for beers that are traditionally served cloudy. This yeast creates beer with a low to completely dry level of sweetness, medium body with a silky mouth feel, and a delicious banana and spice aroma.

TECHNICAL CHARACTERISTICS

STRAIN CLASSIFICATION:

Saccharomyces cerevisiae

RECOMMENDED TEMPERATURE RANGE:

59-86°F (18-30°C)

PERFORMANCE CHARACTERISTICS:

(5- high, 1- low)

ATTENUATION: 3

FLOCCULATION RATE: 2

COMPACTION: 2

VIALE YEAST CELLS: >5 x 10⁹ CFU/gram

DRY WEIGHT: 93 – 96%

WILD YEAST: <1 per 10⁶ cells

TOTAL BACTERIA: <1 per 10⁶ cells

GMO STATUS: GMO Free

FERMENTATION OBSERVATIONS

Fermentation starts within 24-36 hours and builds a dense krausen that does not rise as high in the fermenter as with most other weizen yeast strains.

This is a slow and low flocculating strain, although it eventually will settle out and leave moderately clear beer. Quick to condition, beers fermented with this strain can be ready to drink in as little as 10 days. Recommended fermentation temperature is between 59–75°F (18–24°C); however this strain can be fermented at up to 30°C (86°F) if excessive ester production is desired.

OBSERVABLE TRAITS

AROMA CHARACTERISTICS:

Lots of classic banana and clove esters, balanced with clove and cinnamon-like phenolic aromas; these aromas tend to overwhelm any malt or hops character in the beer. Only intense chocolate or roast malt aromas in dark ales will overcome.

FLAVOR/MOUTH FEEL CHARACTERISTICS:

While this strain has only a moderate tendency to attenuate, the final beer will not be sweet. Instead, it will have a creamy, silky mouth feel and full, rich, but medium- not heavy- body. Most caramel and complex malt flavors are stripped away by this strain. Deep roast and chocolate flavors will show through. Slight acidity produced greatly enhances wheat malt characteristics.

HIGHER ALCOHOL BEERS:

In higher alcohol beers, the phenolic character presented by this strain becomes a bit smoky and esters burst forth. Low attenuation rate may result in a sweet beer.

M07

British Ale Yeast

A versatile Active Dried Brewing Yeast suitable for a wide range of British ales, including high gravity ales

YEAST STRAIN DESCRIPTION

A neutral top-fermenting strain especially suited for brewing silky smooth light ales with a neutral yeast aroma and flavor contribution. This strain also works well for stronger ales where a soft and balanced mouth feel is desired and where the nutty, spicy and earthy hop and malt characteristics should be enhanced. This yeast strain is highly flocculent and not prone to autolysis, making it an excellent choice for both cask and bottle conditioned beer.

TECHNICAL CHARACTERISTICS

STRAIN CLASSIFICATION:

Saccharomyces cerevisiae

RECOMMENDED TEMPERATURE RANGE:

57-72°F (16-22°C)

PERFORMANCE CHARACTERISTICS:

(5- high, 1- low)

ATTENUATION: 4

FLOCCULATION RATE: 5

COMPACTION: 5

VIALE YEAST CELLS: >5 x 10⁹ CFU/gram

DRY WEIGHT: 93 – 96%

WILD YEAST: <1 per 10⁶ cells

TOTAL BACTERIA: <1 per 10⁶ cells

GMO STATUS: GMO Free

FERMENTATION OBSERVATIONS

Generally fast starting, activity may be seen between 12-24 hours and krausen will be voluminous. Temperature range for fermentation is broad and can perform well at cool temperatures. This strain will ferment reliably down to 54°F (12°C) and is an outstanding choice as a neutral strain for delicate, light malty ales, as well as malt-balanced medium to strong ales.

This strain of English origin has a low tendency to produce esters unless fermented above 74°F (23°C), after which ester like aromas can become pronounced.

OBSERVABLE TRAITS

AROMA CHARACTERISTICS:

Hops and malt aromas are enhanced and will tend toward earthy, nutty, orange peel, and mild spice. Esters will be nearly absent in normal strength beers fermented cool; below 68°F (20°C).

FLAVOR/MOUTH FEEL CHARACTERISTICS:

Beers fermented with this strain will finish dry, but very light beers will not be thin or watery. Acidity will be low, and mouth feel will be light and soft on the palate with smooth, not astringent texture. Highly flocculent and resilient, and not prone to autolysis, this is an excellent strain for cask or bottle conditioning.

HIGHER ALCOHOL BEERS:

Ester formation will be slightly elevated in higher alcohol beers, but the character of esters will be pleasant with ripe apple and pear dominating, along with faint banana. Beer will be dry, but a perception of malt sweetness will survive in the aftertaste along with malt character and complexity. Alcohol should be warming, not hot.

US West Coast Yeast

Active Dried Brewing Yeast suited for American style ales, promoting exceptionally clean flavor to accentuate hop character

YEAST STRAIN DESCRIPTION

With the craft beer movement being lead by the USA, there has been a demand for a yeast strain which emphasizes the expressive flavors of the unique ingredients used. U.S. West Coast Yeast is a high attenuating, top-fermenting strain that ferments with almost completely neutral attributes across a wide range of wort strengths and temperature ranges. It produces a moderately high acidity which allows the tangy citrus hop aromas to really punch through, while also enhancing toasted and dark malt characters. If you plan to use a lot of expensive flavourful hops as the prominent feature of your beer, use this yeast.

TECHNICAL CHARACTERISTICS

STRAIN CLASSIFICATION:

Saccharomyces cerevisiae

RECOMMENDED TEMPERATURE RANGE:

59-74°F (18-23°C)

PERFORMANCE CHARACTERISTICS:

(5- high, 1- low)

ATTENUATION: 4

FLOCCULATION RATE: 4

COMPACTION: 3

VIABLE YEAST CELLS: >5 x 10⁹ CFU/gram

DRY WEIGHT: 93 – 96%

WILD YEAST: <1 per 10⁶ cells

TOTAL BACTERIA: <1 per 10⁶ cells

GMO STATUS: GMO Free

FERMENTATION OBSERVATIONS

Quick to start, this strain will linger through primary and secondary fermentation, achieving final gravity after 2 weeks. Krausen will be dense and creamy, occasionally voluminous. Patience in conditioning will reward brewers with a nicely dry, yeast-neutral beer.

OBSERVABLE TRAITS

AROMA CHARACTERISTICS:

A very neutral strain, even when fermented in higher gravity worts and warmer temperatures. Tangy citrus and pine hops aromas will be enhanced, as well as toasted and dark malt aromas.

FLAVOR/MOUTH FEEL CHARACTERISTICS:

Beers fermented with this strain will finish dry and crisp. This strain is at its best in hop prominent American style ales. Very light ales may turn out a bit stripped, thin or astringent if care is not taken with the mash to favor dextrins and avoid over-extraction. Acidity is moderately high, boosting hop flavors and creating a clipped finish.

HIGHER ALCOHOL BEERS:

Remaining very neutral, and producing a bit of acid to balance alcohol and malt, this strain excels in strong ales with simple malt bills. Alcohol will be a dominant flavor and aroma constituent, and may be quite warming but not harsh.

M79

Burton Union Yeast

An Active Dried Brewing Yeast suitable for a wide range of hoppy and characterful English beer styles

YEAST STRAIN DESCRIPTION

Famous the world over for its crisp, dry and uniquely malty and hoppy ales, this strain has been isolated and developed especially for the home and craft brewer from a commercial brewery in the heartland of British Brewing. Burton Union Yeast is a gentle but rapid fermenter that generates light and delicate ripe pear esters and does not strip away light malt character or body. Moderate acidity balances the silky smooth texture of beers fermented with this strain. When hops or malt aromas are stronger, the yeast contribution will be neutral. When used in lighter quality malt bases, the hops and esters are able to shine. Beers made with this yeast are quick to condition, giving you great beer in as little as 3 weeks.

TECHNICAL CHARACTERISTICS

STRAIN CLASSIFICATION:

Saccharomyces cerevisiae

RECOMMENDED TEMPERATURE RANGE:

62-74°F (18-23°C)

PERFORMANCE CHARACTERISTICS:

(5- high, 1- low)

ATTENUATION: 4

FLOCCULATION RATE: 4

COMPACTION: 3

VIABLE YEAST CELLS: >5 x 10⁹ CFU/gram

DRY WEIGHT: 93 – 96%

WILD YEAST: <1 per 10⁶ cells

TOTAL BACTERIA: <1 per 10⁶ cells

GMO STATUS: GMO Free

FERMENTATION OBSERVATIONS

Very fast start, 12-24 hours to high krausen, and this strain forms a massive, thick and dense raft in primary fermentation- often over-running the top of the fermenter if not given plenty of head space. Achieves final gravity in a week or less unless wort is of very high gravity. Produces very mild sulphur which fades.

|11

OBSERVABLE TRAITS

AROMA CHARACTERISTICS:

Some pear esters, possibly strawberry or kiwi-like aromas can be expected, clean, delicate malt and hop aromas will survive fermentation. If hops and/or malt aromas are big in the beer, this strain's fermentation aroma characteristics will fade to the background.

FLAVOR/MOUTH FEEL CHARACTERISTICS:

Clean, mostly neutral, and smooth. Finishes beers moderately dry, but does not strip away body. Silky, lightly smooth texture, light to medium body, mild acidity, and mostly neutral flavor and aroma contributions from this yeast strain makes it a good all-rounder for a wide range of ales.

HIGHER ALCOHOL BEERS:

A very good strain for strong ales which do not require dominant ester fruitiness or sweetness. This yeast provides brews with plenty of body, without being heavy or dense.

M84

Bohemian Lager Yeast

Bottom-fermenting Active Dried Brewing Yeast suitable for European lager and Pilsner style beers

YEAST STRAIN DESCRIPTION

Bohemian Lager is a classic bottom-fermenting, continental lager strain that produces elegant, well balanced beers. Bohemian Lager Yeast is characterized by its dry and clean palate, typical of traditional Czech brewing. This strain confers smooth, subtle yeast characteristics with muted fruit notes, resulting in refreshingly crisp lagers with expressive hop character. While rich and chewy, the beers fermented with this strain will not be sweet, but may have an elusive sweet malt flavor in the aftertaste. Lagering periods as short as 4 weeks may produce acceptable beer, but allowing beer to lager 6-8 weeks will result in beer that is richer, smoother, with a more refined aroma and flavor.

TECHNICAL CHARACTERISTICS

STRAIN CLASSIFICATION:

Saccharomyces cerevisiae

RECOMMENDED TEMPERATURE RANGE:

50-59°F (10-15°C)

PERFORMANCE CHARACTERISTICS:

(5- high, 1- low)

ATTENUATION: 4

FLOCCULATION RATE: 4

COMPACTION: 4

VIABLE YEAST CELLS: >5 x 10⁹ CFU/gram

DRY WEIGHT: 93 – 96%

WILD YEAST: <1 per 10⁶ cells

TOTAL BACTERIA: <1 per 10⁶ cells

GMO STATUS: GMO Free

FERMENTATION OBSERVATIONS

Starts quite quickly for a lager strain, building a thick krausen by 24 hours. Reaches final gravity in 2 weeks except for strong worts, which will require longer secondary fermentation. Lagering period with this strain can be fairly short, as little as 4 weeks with good results - although 6-8 weeks will result in a richer, smoother beer with more refined aroma.

OBSERVABLE TRAITS

AROMA CHARACTERISTICS:

Classic Bohemian Pilsner strain aroma and flavor characteristics can be expected.

FLAVOR/MOUTH FEEL CHARACTERISTICS:

Earthy spiciness of both noble hops and pilsner malt will be enhanced and supported by moderate to full body. In wort from simple grist bills, delicate malt flavors will survive. Beer fermented with this strain is generally rich and chewy without being heavy at all. Light and delicately balanced beers call for this strain.

HIGHER ALCOHOL BEERS:

This strain will perform reasonably well in higher alcohol beer production, but only to 9% alcohol. Beer of over 7% alcohol will be slightly sweet, and the alcohol may be a bit hot.

Belgian Ale Yeast

Highly attenuative Active Dried Brewing Yeast suitable for a wide range of Belgian ale styles

YEAST STRAIN DESCRIPTION

With a myriad of flavours and aromas embraced by master brewers all over Belgium, this strain has been specially developed to bring the best of these flavors to the home or craft brewer. Belgian ale yeast is an exceptional top-fermenting yeast strain creating distinctive beers with spicy, fruity and peppery notes. Ideal for fermentation of Belgian Saison or farmhouse style beers, but also suitable for other Belgian styles. This yeast is highly attenuative and has a high ethanol tolerance that makes it ideal for creating most Belgian beer styles, including Quadrupel styles of up to 14% ABV. At higher alcohol levels fermentation may take longer but the strain is robust enough to deal with almost anything. This strain successfully brings the sophistication of classic Belgian ale production to the home and small brewery.

TECHNICAL CHARACTERISTICS

STRAIN CLASSIFICATION:

Saccharomyces cerevisiae

RECOMMENDED TEMPERATURE RANGE:

79-90°F (26-32°C)

PERFORMANCE CHARACTERISTICS:

(5- high, 1- low)

ATTENUATION: 5

FLOCCULATION RATE: 3

COMPACTION: 3

VIALBE YEAST CELLS: >5 x 10⁹ CFU/gram

DRY WEIGHT: 93 – 96%

WILD YEAST: <1 per 10⁶ cells

TOTAL BACTERIA: <1 per 10⁶ cells

GMO STATUS: GMO Free

FERMENTATION OBSERVATIONS

The Belgian Ale Yeast strain is a long slow fermenter especially at very high gravities producing a moderately light krausen that never threatens to overflow the fermenter. A fairly long lag phase is typical and can extend to a full 24 hours after pitching, primary fermentation will build in intensity and temperature after this period while never threatening to get out of hand, wort of 1.050 can be at 1.010 in 7 days but this strain will ferment down to between 1.002 and 1.005 so care must be taken at bottling. This strain has an extremely high alcohol tolerance up to 14% abv although this can take as long as a month to finish. Warmer fermentation temperatures of 79-90 °F (26-32 °C) are recommended when brewing with this strain to avoid sluggish or stalled fermentations and to produce more expressive beers.

|13

OBSERVABLE TRAITS

AROMA CHARACTERISTICS:

Belgian yeast strain brings all the sophistication and complexity of classic Belgian ale production to the home brew and small brewery setting. Spicy and peppery characteristics are prominent with an undertone of the ubiquitous fruity Belgian character.

FLAVOR/MOUTH FEEL CHARACTERISTICS:

This is a highly characterful yeast strain that will dominate all but the highest hopping rates and complex malt bills. Beers fermented with this yeast will tend to be dry in the finish often with a slight drying acidity and peppery notes that aids drinkability at higher alcohol levels. Higher alcohol beers may have an increased ester production and warming alcohol notes.

HIGHER ALCOHOL BEERS:

This yeast strain will perform exceptionally well up to 14% ABV making it suitable for a large range of Belgian beer styles, including Quadrupel style beers.

Newcastle Dark Ale Yeast

An Active Dried Brewing Yeast suitable for variety of full bodied British ale styles, promoting exceptional body and full flavor

YEAST STRAIN DESCRIPTION

Newcastle Dark Ale Yeast successfully brings classic cask ale production into the homebrew or craft setting. This is a top-fermentation strain well suited for fermenting British ales, particularly dark and full bodied ales, mild brown ales and Scottish Heavy ales. Selected to not over attenuate, this strain will stop short of the low end gravities exhibited by other yeast strains. Dark fruity esters are pronounced when fermented at the appropriate temperature. Care should be taken to adjust hop bitterness to ensure it suits the ester character and complements the fuller bodied finish.

TECHNICAL CHARACTERISTICS

STRAIN CLASSIFICATION:

Saccharomyces cerevisiae

RECOMMENDED TEMPERATURE RANGE:

64-72°F (18-22°C)

PERFORMANCE CHARACTERISTICS:

(5- high, 1- low)

ATTENUATION: 3

FLOCCULATION RATE: 3

COMPACTION: 3

VIABLE YEAST CELLS: >5 x 10⁹ CFU/gram

DRY WEIGHT: 93 – 96%

WILD YEAST: <1 per 10⁶ cells

TOTAL BACTERIA: <1 per 10⁶ cells

GMO STATUS: GMO Free

FERMENTATION OBSERVATIONS

Moderately fast starter taking between 12-24 hours to show activity. Newcastle dark ale yeast successfully brings classic cask ale production into the homebrew setting mimicking the full bodied finish sought after by most cask producers. Selected to not over attenuate, this yeast strain ferments with a full krausen but will stop short of the higher attenuative yeast strains giving a heavier fuller bodied beer with fruity esters when fermented at the optimum temperature.

Flocculation is average but will create a crystal clear beer if it undergoes secondary fermentation or if fining agents are used. Lower mash temperatures may help attenuation if a lighter bodied beer is required.

OBSERVABLE TRAITS

AROMA CHARACTERISTICS:

When fermented at the correct temperature, Newcastle dark ale yeast exhibits extremely characterful and appetizing estery aromas reminiscent of rich dark fruit.

FLAVOR/MOUTH FEEL CHARACTERISTICS:

This yeast strain has been carefully selected to aid mouth feel in the finished beer. Body should be full with a leaning towards rich dark fruit character, care must be taken when designing the beer to adjust hop bitterness to alleviate an over sweet finished beer.

HIGHER ALCOHOL BEERS:

Higher alcohol beers will tend to be slightly too sweet and heavy due to the moderate attenuative capabilities of the strain although a lower mash temperature may help the fermentability and lower the final gravity.

Workhorse Beer Yeast

Active Dried Brewing Yeast strain conferring neutral flavor characteristics for ales and lager-style beers brewed at ambient temperatures. Suitable for ALL styles of beer

YEAST STRAIN DESCRIPTION

Workhorse Beer yeast is a true all rounder, suitable for a myriad of beer styles at extremely high gravities and different brewing temperatures. From Baltic porter to ambient temperature fermented lagers, this top-fermenting strain has such a clean flavor and aroma profile that it is suitable for almost every application. It is a robust strain with rapid and reliable fermentation performance, good attenuation properties, and ideally suited to making cask or bottle conditioned beers. This highly versatile strain also has very good ethanol tolerance up to 9% ABV and excellent temperature tolerance up to 90°F (32°C).

TECHNICAL CHARACTERISTICS

STRAIN CLASSIFICATION:

Saccharomyces cerevisiae

Recommended Temperature Range

- Lager styles: 59-68°F (15-20°C)

Recommended Temperature Range

- Ales: 68-90°F (20-32°C)

PERFORMANCE CHARACTERISTICS:

(5- high, 1- low)

ATTENUATION: 4

FLOCCULATION RATE: 3

COMPACTION: 3

VIALE YEAST CELLS: >5 x 10⁹ CFU/gram

DRY WEIGHT: 93 – 96%

WILD YEAST: <1 per 10⁶ cells

TOTAL BACTERIA: <1 per 10⁶ cells

GMO STATUS: GMO Free

FERMENTATION OBSERVATIONS

Very fast starter this top-fermenting all round yeast produces a medium to high krausen within 24 hours of pitching. This workhorse beer yeast has a high ethanol tolerance up to 9% ABV and a large temperature range to 90 °F (32 °C). With very little in the way of ester production or distinguishable flavor and aroma characteristics, this yeast is suitable for a range of beer styles from light lager to Baltic porter. Moderately flocculent, extended secondary fermentation may be required for some styles of beer to achieve required clarity.

|15

OBSERVABLE TRAITS

AROMA CHARACTERISTICS:

Workhorse beer yeast has a neutral and clean aroma making it suitable for all styles, some sulphur production at low temperatures nicely imitates lager strain characteristics.

FLAVOR/MOUTH FEEL CHARACTERISTICS:

As a neutral fermenter, Workhorse Beer yeast produces very clean and crisp product. Mouth feel will be light and unassuming, low acidity in the finished beer makes this yeast strain suitable for most beer styles although hopping rates will need to be monitored closely to achieve the flavor and aroma required.

HIGHER ALCOHOL BEERS:

This strain will perform well in higher alcohol beer production up to 9% ABV leaving a full and flavorsome beer.

MO2

Cider Yeast

A high ester-producing Active Dried Yeast suitable for all cider types

YEAST STRAIN DESCRIPTION

Mangrove Jack's Cider Yeast is a high ester-producing strain, imparting wonderful flavor depth, revealing the full fruit potential of the juice. Ciders fermented using this strain are exceptionally crisp, flavorsome and refreshing in taste. This highly robust yeast has good fructose assimilation and is capable of fermenting under challenging conditions and over a wide temperature range. Mangrove Jack's Cider Yeast is a highly flocculent strain, suitable for all styles of cider. Trace nutrients have been blended with the yeast in Mangrove Jack's Cider Yeast sachets for optimum yeast health, fermentation performance and cider quality.

TECHNICAL CHARACTERISTICS

STRAIN CLASSIFICATION:

Saccharomyces cerevisiae

RECOMMENDED TEMPERATURE RANGE:

54-82°F (12-28°C)

PERFORMANCE CHARACTERISTICS:

(5- high, 1- low)

ATTENUATION: 5

FLOCCULATION RATE: 5

COMPACTION: 5

VIABLE YEAST CELLS: >5 x 10⁹ CFU/gram

DRY WEIGHT: 93 – 96%

WILD YEAST: <1 per 10⁶ cells

TOTAL BACTERIA: <1 per 10⁶ cells

GMO STATUS: GMO Free

FERMENTATION OBSERVATIONS

Very fast to start, activity may be seen between 12-24 hours. Fermentation is rapid and reliable, this strain ferments to very high attenuation in a short space of time. Temperature range for fermentation is broad and can perform well at cool temperatures. This strain will ferment reliably down to 54°F (12°C) and is an outstanding choice for all ciders, especially continental styles.

This strain produces high quantities of esters at warmer temperatures giving pronounced aroma and flavor characteristics. Nitrogen requirement is low and SO₂ tolerance is high.

OBSERVABLE TRAITS

AROMA CHARACTERISTICS:

This strain promotes fruity aromas through high ester production, especially at warmer temperatures.

FLAVOR/MOUTH FEEL CHARACTERISTICS:

Ciders fermented with this strain will finish dry and be relatively full-bodied with exceptional depth and full-flavored fruit character.

HIGHER ALCOHOL BEERS:

This strain has high alcohol tolerance up to >12% ABV.



Mangrove Jack's Craft Series has been developed to give you quality tools and ingredients needed to make premium craft beer at home.

For more info on available kits, equipment, videos and tips, visit our website:

www.mangrovejacks.com

MANGROVE JACK'S

BREWING COMPANY

