Frequently Asked Questions on *Saccharomyces cerevisiae* var. *diastaticus*

What is Saccharomyces cerevisiae var. *diastaticus?*

Saccharomyces cerevisiae var. *diastaticus* is a natural variant of *Saccharomyces cerevisiae* that can cleave wort dextrins into fermentable sugars. This process has been linked to the presence of *STA* genes, which encode for the exoenzyme glucoamylase, also referred to as amyloglucosidase.

What is the definition of a wild yeast?

Any yeast present in the brewing process that is not intentionally added by the brewer.

Does White Labs do genetic testing, like polymerase chain reaction (PCR) and sequencing?

Yes, we utilize equipment like the Roche qPCR Lightcycler 480 and the BioRad T100 to conduct this research and testing. We have dedicated thousands of lab hours and made investments in understanding the genetic composition of the organisms we have in our yeast bank. Some of the results are published in this 2016 paper in *Cell* and we'll be releasing more information soon.

Does White Labs test for Saccharomyces cerevisiae var. *diastaticus?*

Yes, every lot of our yeast is tested for the presence of wild yeasts including *Saccharomyces cerevisiae* var. *diastaticus* using industry standard plating methods on Lin's Cupric Sulfate Medium (LCSM) media. We also use PCR on a randomized schedule. Using these tests, we have not detected *Saccharomyces cerevisiae* var. *diastaticus* as a contaminant in any lots produced by White Labs.

Are all STA1 positive yeast strains considered contaminants?

No, not all *STA1* positive yeast are considered contaminants, if used intentionally. Wild yeast are defined by brewers as any yeast that has not been deliberately added to the wort. There are several "classic" *STA1* positive brewing strains that have been used and cultivated for more than 30 years and are generally classified as "high-attenuators."

Does White Labs use polymerase chain reaction (PCR) *as part of quality checks?*

Polymerase chain reaction (PCR) is not part of our standard quality checks due to its narrow detection spectrum compared to plating, however, we routinely perform PCR analysis for contaminants as a validation to our microbiological analysis and strain verification purposes (fingerprinting). White Labs continually researches the latest advancements in molecular techniques and so far have not found a method that surpasses plating on selective media for our day-to-day testing. We offer additional genetic testing on our products or your samples by request. Please see our Analytical Services and Siebel Guide for more information.

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Can White Labs help me set up testing in-house to make sure I detect problems before they become large issues?
Absolutely. We take pride in sharing our 23 years of fermentation experience with your brewery and offer a variety of tailored consulting solutions as well as general pointers and support for your own lab operations. Please see our Analytical Services and Siebel Guide for more information.

Does White Labs offer testing for Saccharomyces cerevisiae var. *diastaticus?*
Yes, our on-site Analytical Lab in San Diego conducts testing for our customers and can help brewers detect *Saccharomyces cerevisiae* var. *diastaticus* is in their beers and/or processes. If identified, it can be fixed by microbiological detection and cleaning/sanitizing.

Is high attenuation desired in certain beer styles?
Yes, certain beer styles, like some dry saisons, are made with yeast strains that contain the *STA1* gene because this attribute contributes to a high attenuation and will result in a very dry and light bodied beer. However, the glucoamylase activity can, in some beers, result in over attenuation and downstream problems, for example in packaging so make sure your beer is fully attenuated before moving it to packaging. A forced fermentation test is advised.

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