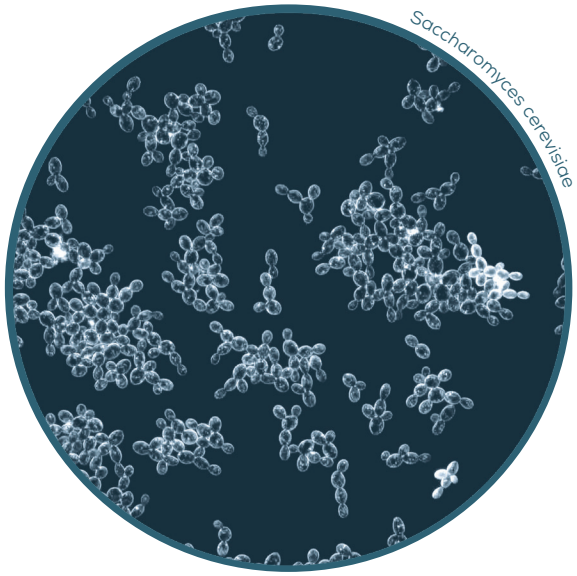
Premium Liquid Yeast *for* Professional Brewing

Wyeast Laboratories, Inc. Technical Data Sheet

PRODUCTS

Premium Liquid Yeast
- *Saccharomyces cerevisiae* and *S. cerevisiae* blends
- *Saccharomyces pastorianus* and *S. Pastorianus* blends
- *Saccharomyces cerevisiae* var. *diastaticus*



DESCRIPTION

A liquid suspension of yeast grown in a sterile, malt-based nutrient-enriched medium.

PACKAGING

Available in 0.5 and 1.0 liter increments in any volume or split.

INOCULATION RATES

Suggested Volumes for Direct Pitch:

STARTING GRAVITY		ALE PITCH RATE			LAGER PITCH RATE			
°Plato	Specific Gravity	Million Cells/mL	Million Cells/mL/°P	Liters/BBL (hectoliter)	Million Cells/mL	Million Cells/mL/°P	Liters/BBL (hL) minimum	Liters/BBL (hL) optimal
≤ 12.0	≤ 1.048	6	0.5	0.5	12	1.0–1.5	1.0	1.75
12.0–14.0	1.048–1.056	6–7	0.5	0.5–0.75	12–14	1.0–1.5	1.0–1.5	2.0
14.0–16.0	1.056–1.065	7–12	0.5–0.75	0.75–1.0	14–16	1.0–1.5	1.5	2.0–2.5
16.0–18.0	1.065–1.074	12–18	0.75–1.0	1.0–1.75	16–18	1.0–1.5	1.5–1.75	2.5
18.0–20.0	1.074–1.082	18–20	1.0	1.75–2.0	20–22	1.1–1.5	2.0–2.25	2.5–3.0
20.0–25.0	1.084–1.105	20–25	1.0	2.0–2.5	22–27.5	1.1–1.5	2.25–2.75	3.0–3.75

STABILITY

Store at 34-40 °F (1-4 °C) immediately upon arrival. Best when used fresh. Use within 14 days.

INSTRUCTIONS FOR USE

Allow to come to ambient temperature just prior to use. Sanitize package before opening. Homogenize contents and pour the contents into well-aerated or oxygenated wort.

CERTIFICATION

Every yeast strain is certified Kosher by the Orthodox Union.

PRODUCTION

All *Saccharomyces* strains are produced in Wyeast's licensed food manufacturing facility from an archival -80 °F (-62 °C) ultra-low temperature bank in order to maintain genomic stability and assure that cultures have consistent fermentation kinetics, flavor profiles, and flocculation characteristics.

Cultures are propagated on premium malt extract as the primary carbohydrate source, ensuring that the yeast is conditioned to an environment similar to brewers wort. Minimal processing is required once propagation is complete, and therefore has no detectable effect on the integrity of the culture and significantly limits the possibility of contamination.

INTEGRITY

- Yeast cultures are packaged at 1.2 billion viable cells/mL, resulting in > 99.9% viability of your pitch rate.
- All cultures meet or exceed strict quality standards and specifications prior to shipment. A combination of traditional and innovative technologies are used to prove product purity for every phase of propagation to the finished product.
- Quality assurance samples are archived and routinely tested for ongoing confirmation of product integrity.
- Yeast cultures are guaranteed by our Product Warranty to produce a healthy and complete fermentation under typical brewing conditions within 14 days of use.

PROFESSIONAL SPECIFICATIONS

Saccharomyces Ale & Lager Strains

ANALYSIS	METHOD	SPECIFICATION
Viable yeast cell concentration *	Image Cytometry with Propidium Iodide stain	1.2 x 10^9 cells per mL
Colony Morphology	ASBC Microbial Control - 2 (WLN)	single morphology
Anerobic Bacteria	ASBC Microbial Control - 5 (UBA with Cycloheximide)	< 1 CFU / 7.5 x 10^7 yeast cells
Aerobic Bacteria	ASBC Microbial Control - 5 (UBA with Cycloheximide)	< 1 CFU / 7.5 x 10^7 yeast cells
Non-*Saccharomyces* Wild Yeast	ASBC Microbial Control - 5 (LCSM)	< 1 CFU / 1.0x 10^6 yeast cells
Saccharomyces Wild Yeast	ASBC Microbial Control - 5 (LWYM)	< 1 CFU / 1.0x 10^6 yeast cells
S. cerevisiae var. *diastaticus* (STA1+)	qPCR GEN-IAL QuickGEN P1 and *Diastaticus*	not detected
Megasphera/Pectinatus spp.	qPCR GEN-IAL QuickGEN P1 and *Diastaticus*	not detected
Lactobacillus/Pediococcus spp.	qPCR GEN-IAL QuickGEN P1 and *Diastaticus*	not detected

** some yeast strain specifications are based on percent solids analysis (ASBC Yeast-5)*

Diastatic STA1+ & Belgian Strains

ANALYSIS	METHOD	SPECIFICATION
Viable yeast cell concentration	Image Cytometry with Propidium Iodide stain	1.2 x 10^9 cells per mL
Colony Morphology	ASBC Microbial Control - 2 (WLN)	single morphology
Anerobic Bacteria	ASBC Microbial Control - 5 (UBA with Cycloheximide)	< 1 CFU / 7.5 x 10^7 yeast cells
Aerobic Bacteria	ASBC Microbial Control - 5 (UBA with Cycloheximide)	< 1 CFU / 7.5 x 10^7 yeast cells
Non-*Saccharomyces* Wild Yeast	ASBC Microbial Control - 5 (LCSM)	varies by strain **
Saccharomyces Wild Yeast	ASBC Microbial Control - 5 (LWYM)	varies by strain **
S. cerevisiae var. *diastaticus* (STA1+)	qPCR GEN-IAL QuickGEN P1 and *Diastaticus*	varies by strain **
Megasphera/Pectinatus spp.	qPCR GEN-IAL QuickGEN P1 and *Diastaticus*	not detected
Lactobacillus/Pediococcus spp.	qPCR GEN-IAL QuickGEN P1 and *Diastaticus*	not detected

*** request a Certificate of Analysis for exact specification and conformity*