

# WINDSOR

**BRITISH STYLE  
BEER YEAST**

*SACCHAROMYCES CEREVISIAE*

**NATURAL**

**KOSHER**

**GMO FREE**

## 1. Origin

Windsor British Ale yeast originated in the United Kingdom and is used by a number of commercial breweries to produce different types of ale. The propagation and drying processes have been specifically designed to deliver a high quality beer yeast that can be used simply and reliably to help produce ales of the finest quality. No colours, preservatives or other unnatural substances have been used in its preparation. The yeast is produced in ISO 9002 certified plants.

## 2. Microbiological Properties

- Classified as *Saccharomyces cerevisiae*.
  - A top fermenting yeast.
  - The typical analysis of the active dried strain:

Percent solids	93%–95%
Living yeast cells	$\geq 7 \times 10^9$ per gram of dry yeast
Wild yeast	$< 1$ per $10^6$ yeast cells (Lysine method)*
Bacteria	$< 1$ per $10^6$ yeast cells*
  - Finished product is released to the market only after passing a rigorous series of tests.
- \*According to ASBC and EBC methods of analysis.

## 3. Brewing Properties

- Quick start and vigorous fermentation, which can be completed in 3 days above 17°C.
- Moderate attenuation, which will leave a relatively high gravity.
- Fermentation rate, fermentation time and degree of attenuation is dependent on inoculation density, yeast handling, fermentation temperature and the nutritional quality of the wort.
- Non-flocculent strain, but some settling can be promoted by cooling and use of fining agents and isinglass.
- The aroma is estery to both palate and nose, and is usually described as a full-bodied, fruity British ale. Does not display malodours when properly handled. Windsor yeast has found great acceptance in producing strong-tasting bitter beer, stout, weizen and hefe weizen.
- Best used at traditional ale temperatures after rehydration in the recommended manner.

## 4. Usage

- When 100 g active dried yeast is used to inoculate 100 litres of wort, a yeast density of 7–15 million cells per millilitre is achieved. Brewer may experiment with the pitching rate to achieve a desired beer style or to suit processing conditions.
- Sprinkle the yeast on the surface of 10 times its weight of clean, sterilized (boiled) water at 30–35°C. Do not use wort, or distilled or reverse osmosis water, as loss in viability will result. DO NOT STIR. Leave undisturbed for 15 minutes, then stir to suspend the yeast completely, and leave it for 5 more minutes at 30–35°C. Then adjust temperature to that of the wort and inoculate without delay.
- Attemperate in steps at 5-minute intervals of 10°C to the temperature of the wort by mixing aliquots of wort. Do not allow attemperation to be carried out by natural heat loss. This will take too long and could result in loss of viability or vitality.
- Temperature shock, at greater than 10°C, will cause formation of petite mutants leading to long-term or incomplete fermentation and possible formation of undesirable flavours.
- Windsor British Ale yeast has been conditioned to survive rehydration. The yeast contains an adequate reservoir of carbohydrates and unsaturated fatty acids to achieve active growth. It is unnecessary to aerate wort.

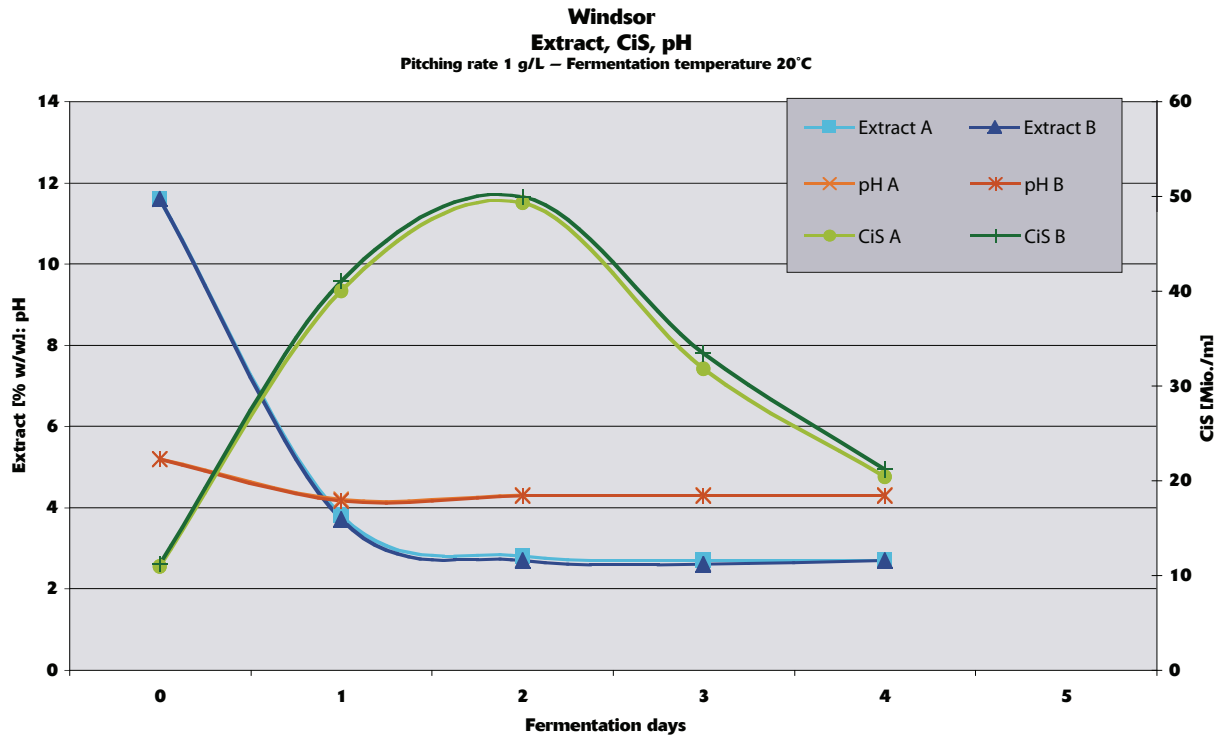
## 5. Storage

- All active dried yeast should be stored dry and below 8°C. The packaging should remain intact.
- Activity loss is about 25% per year at 8°C and 50% per year at 22°C in unopened sealed packs.
- Windsor will rapidly lose activity after exposure to air. Do not use 500 g or 10 kg packs that have lost vacuum. Opened packs must be re-closed, stored in dry conditions below 4°C and used within 3 days; 11 g sachets are not vacuum packed, but are flushed with nitrogen gas to protect the yeast.
- Do not use yeast after the expiry date printed on the pack.

**LALLEMAND**

[www.lallemandbrewing.com](http://www.lallemandbrewing.com)

MAY 2010



## LALLEMAND NATURAL BREWING YEAST

- SO EASY TO STORE** • Active dried brewing yeast has a shelf life of 2 years when stored below 8°C.
- SO EASY TO USE** • Follow simple rehydration instructions and addition rates.
- SO VERSATILE** • Suitable for many beer types:
  - I use the same Lallemmand yeast strain in eight different ales.
  - Douglas Ross, Bridge of Allan Brewery, Scotland
- SO SUCCESSFUL** • I am delighted to endorse Danstar yeast.
  - Graham Trott, Triple FFF Brewery, Alton, England
  - Double Gold Medal Winner, 2002 CAMRA Champion Beer of Britain competition
- SO INTERNATIONAL** • Used in hundreds of breweries in Britain, U.S.A., Canada, Japan, South America and worldwide.



Visit our Web site at [www.lallemmandbrewing.com](http://www.lallemmandbrewing.com)

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