

# SmartBev™ Ale

TUM 210



## Yeast fermentation is at the heart of great beer

- Yeast management is a crucial element of brewing good beer of consistent quality
- Yeast propagation is a complex and time-consuming process and can lead to inconsistent starting points across brews

## SmartBev™ Ale helps the brewing industry optimize yeast propagation

- Reduce complexity and planning time for propagations, streamlining the workflow for saved time and increased flexibility in production
- Increase consistency in the propagation as well as in the first brew to improve the beer and ease planning in production

## Specifications for Smartbev™ Ale - TUM 210

STRAIN	GENUS	YEAST CLASSIFICATION	DOSAGE	TOTAL CELL COUNT
TUM 210	<i>Saccharomyces cerevisiae</i>	Top-fermenting yeast	1 pouch pr. 10hL Wort	> 1 · 10 <sup>9</sup> CFU/g

## SmartBev™ Ale – TUM 210 is an ale strain delivered in an optimized frozen liquid (FLY) format to simplify your yeast propagation program

SmartBev™ Ale – TUM 210 is an English ale strain with a versatile range of applications. It is delivered in a **pouch format of > 1 · 10<sup>12</sup> CFU (active cells)** of high quality and can be used to brew a variety of ale beers. The frozen liquid format has a long **shelf life of 18 months** at < -45°C and keeps the yeast cells in a dormant state, which means they are ready to use as soon as they are thawed ( 1-1½ hours at 30°C). You can expect a > 10-fold increase in cell count in the first 24 hours of propagation.

SmartBev™ Ale – TUM 210 is a POF-negative ale strain with a low fruitiness compared to other English Ales. Its ester production can be controlled with the fermentation temperature, enabling the brewery to use the yeast in various beers.



Chr. Hansen will manage the logistics of ensuring a hassle-free yeast supply, freeing you up to focus on brewing flavorful ale.

**CHR HANSEN**

*Improving food & health*



## Weihenstephan and Chr. Hansen ensure a high-quality product for every brew

Every pouch goes through an extensive quality control analysis at Chr. Hansen and Weihenstephan, ensuring a high-quality product with a **total cell count of  $\geq 1.0 \cdot 10^9$  CFU/g.**

METHOD	SMARTBEV™ ALE
Beer spoiling bacteria - <i>Initial</i> examination and enrichment culture	Absence in 1mL
Top-fermenting yeasts in bottom-fermenting yeasts - 37°C-method <sup>1</sup>	
Wild yeasts - <i>Enrichment in YM-broth + CuSO<sub>4</sub></i>	Negative in 0.1mL
Bacteria in culture yeast - <i>Enrichment of yeast broth</i>	Negative in 1 mL
PCR Identification <i>S. cerevisiae</i> var. <i>diastaticus</i>	Negative in 0.1mL
Aerobic bacteria - <i>Enrichment wort + actidione</i>	Negative in 1.00mL
Aerobic bacteria - <i>Enrichment culture WLD-agar</i>	0 CFU in 0.1mL

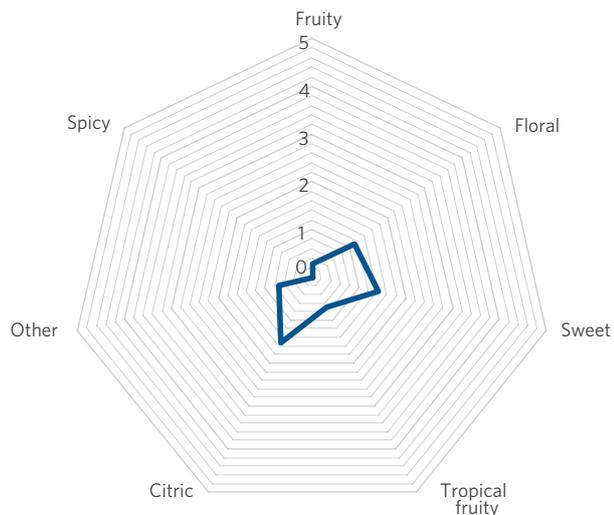
The products also go through a vitality test before released - acidification method (pH drop).

## TUM 210 can be used for all kinds of American or English Ales and POF-negative top-fermented beers

### Flavor profile of Pale Ale with SmartBev™ Ale - TUM 210

Sensory evaluation from 0 to 5, where 5 is high intensity of a certain attribute; 0 is not present for the taster.<sup>2</sup>

TUM 210 can produce refreshing Pale ales with citric and floral notes.



<sup>1</sup> The term "bottom- and top fermenting yeasts" do not describe well the behavior of modern yeast. However, this is the name of the method according to accreditation, so we continue to reference them for this reason.

<sup>2</sup> Data from TUM, based on propagation from slant