

IOC DIRECT UNIVERSE™

YEAST

Yeast specifically developed for direct inoculation into the must.

↘ OENOLOGICAL APPLICATIONS

IOC DIRECT UNIVERSE™ yeast is the result of the YEASTCELL™ research program led by Lallemand in collaboration with the INRAE Sciences pour l'oenologie [National Research Institute for Agriculture, Food and the Environment - Science for oenology]. This project focused on selecting, through adaptive evolution, different yeasts that acclimatise more efficiently to the stressful conditions of the grape must encountered during seeding (sugars, acidity, sulphites, temperature). Therefore, its unique genetic characteristics allow it to be used in direct inoculation without going through a prior rehydration phase and without suffering any loss of effectiveness, under a wide range of conditions of use.

IOC DIRECT UNIVERSE™ simplifies the work of winemakers, without compromising its performance. It is successfully used on red, white and rosé musts. It guarantees a clear and respectful expression of the aromatic potential of the wines.

↘ OENOLOGICAL CHARACTERISTICS

- Species: *Saccharomyces cerevisiae*.
- Alcohol resistance: <15.5% vol.
- SO₂ resistance: high.
- Vitality and fermentative capacity: high.
- Nitrogen requirement: low to moderate.
- Optimum fermentation temperature: 15-30°C.
- Lag phase: short to medium.
- Volatile acidity production: low.
- Foam formation: very low.

↘ MICROBIOLOGICAL CHARACTERISTICS

- Revivable yeasts: > 10 billion cells/g
- Microbiological purity: less than 10 wild yeasts per million cells.

↘ DOSAGE AND IMPLEMENTATION

- Dosage: 20 - 30 g/hL
- Add the yeast without prior rehydration, directly at the top of the tank or, better still, during filling. Pumping-over for homogenisation is recommended.

Note: there is no counter-argument to inoculating the yeast after prior rehydration.

↘ PACKAGING AND STORAGE

- 10 kg vacuum-packed polyethylene aluminium laminate bags.

Store in a cool and dry place. Once opened, the product must be used quickly.

IOC DIRECT UNIVERSE™

EASIER AND FASTER SEEDING OF MUSTS AND GRAPES...

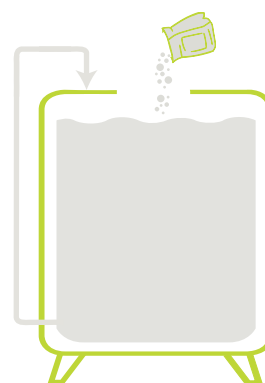
Open the yeast bag, sprinkle the active dry yeast during vatting and then simply homogenise the must: that's all it takes to start fermentation with **IOC DIRECT UNIVERSE™**.

Numerous studies have shown the considerable benefit of rehydrating all types of *Saccharomyces cerevisiae*, oenological yeasts: better cellular vitality and better aromatic expression of the must.

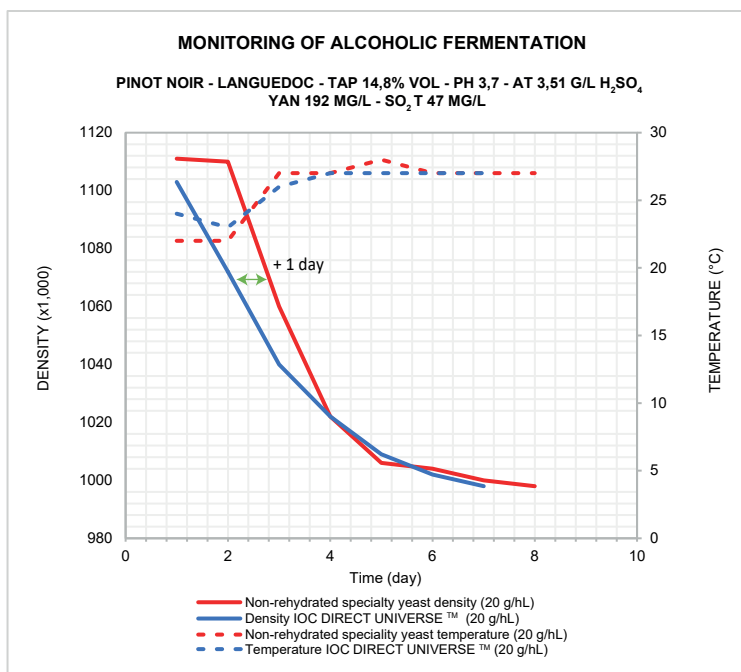
However, thanks to its specific genetic heritage revealed during a selection of yeasts by adaptive evolution¹ (100% non-GMO technique), **IOC DIRECT UNIVERSE™** truly introduces you to the world of direct must yeasting without the need for prior rehydration.

Well beyond simple validation tests, it is therefore its intrinsic capacity to resist the multiple stresses of the must that allows **IOC DIRECT UNIVERSE™** to be inoculated directly without compromising the quality of the fermentation and the wines. This uniqueness offers winemakers a tool to simplify the process for conducting clean and clear fermentations that express the fruitiness of the wines.

For more precise sensory objectives (thiols, esters, volume on the palate), we recommend that you continue to use our dedicated speciality yeasts, with prior rehydration.



...WITHOUT COMPROMISING THE COMPLETION OF FERMENTATION!



IOC DIRECT UNIVERSE™ used in direct inoculation has shown exemplary kinetic behaviour in all the tests and field uses that have been carried out.

Complete fermentation, controlled volatile acidity, sensory characteristics expressed without any reductive or oxidative mask, whether in white or red musts.

A wide range of fermentation conditions were presented to the yeast [temperatures, potential level of alcohol, turbidities] without disturbing it. In comparison, the use of classic yeasts inoculated without rehydration resulted in sluggish fermentations or even stuck fermentations.

¹ Reference: Ferreira D. (2017) Stress resistance during the lag phase of wine fermentation and development of optimized yeasts. PhD Thesis, GAIA Doctoral School, Montpellier.