

TERROIR SELECTION : LANGUEDOC

Lalvin ICV-D21

ULTRA-PREMIUM REDS & WHITES FROM HIGH BALANCED MATURITY GRAPES

APPLICATIONS

ICV-D21 was isolated in 1999 from one of the best Languedoc “terroirs” during a special regional program run by the Institut Coopératif du Vin (ICV)’s Natural Micro-Flora Observatory and Conservatory. Dominique Delteil selected ICV-D21 for fermenting red wines with stable color, intense fore-mouth, mid-palate tannin structure, and fresh aftertaste. Unlike most wine yeasts, ICV-D21 contributes both higher acidity and polyphenol reactive polysaccharides. Strong interactions of the polysaccharides with the floral and fruity volatile compounds (β -ionone, ethyl hexanoate) contribute to a more stable aromatic profile in the mouth. These attributes inhibit development of cooked jam and burning-alcohol sensations in highly mature and concentrated Cabernet Sauvignon, Merlot and Syrah. During fermentation, ICV-D21 produces very few sulfide compounds and it is also noted for its relatively good fermentation performance even under high temperature and low nutrient conditions. It allows for the expression of fruit from the grapes while reducing the potential for herbaceous characters in Cabernet Sauvignon. When blended with wines fermented with ICV-D254 and ICVD80, ICV-D21 brings fresher, deep fruit. Such finished wines are noted for continuous intensity beginning in the fore-mouth and carrying through to the aftertaste. ICV-D21 is also used in very ripe white grapes, barrel-fermented to develop fresh fruit aromas, volume and acidity which compliments wines fermented with ICV-D254 and ICV D47 in blends.

MICROBIOLOGICAL AND OENOLOGICAL PROPERTIES

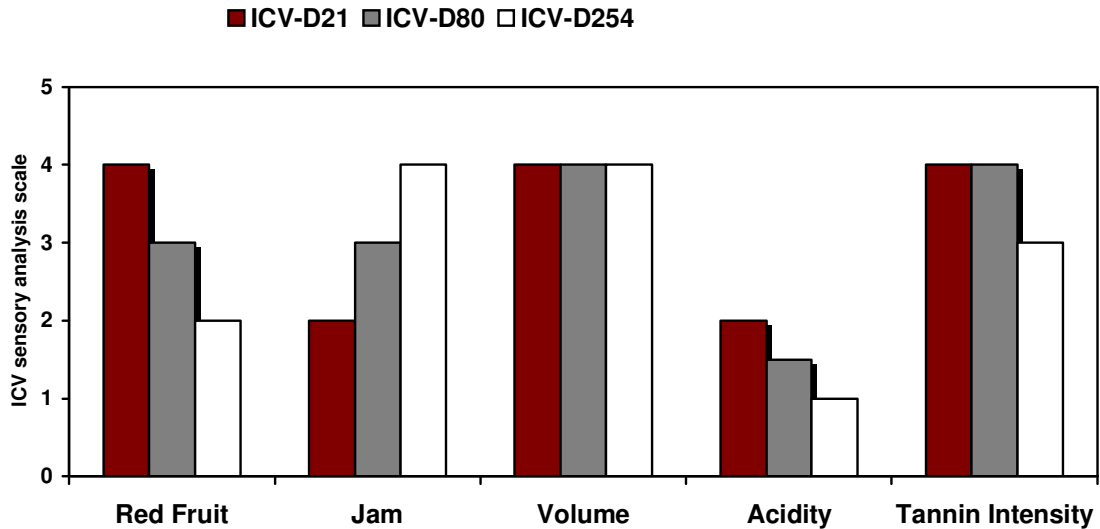
- *Saccharomyces cerevisiae cerevisiae*
- Competitive factor K2
- Tolerance to alcohol: up to 16% alcohol
- Average lag phase
- Fast to moderate fermentation rate
- Optimal range of temperatures for fermentation: between 15°C to 25°C but easily tolerate higher temperatures.
- Low requirement in assimilable nitrogen but responds well to an aeration at 1/3rd sugar depletion
- Average production of volatile acidity
- Low H₂S production
- Low foam formation
- Low SO₂ production
- Retains higher acidity

DOSAGE

Red winemaking:	25 to 40 g/hl
White winemaking:	25 to 35 g/hL

Note: dosage range is based on the must sugar content and sanitary state of the grapes and winery.

ICV YEAST SENSORY PROFILE COMPARISON IN 2002 SYRAH. *ICV R&D, 2003*



HOW TO USE

Rehydrate ICV D21 in 10 times its weight of water at 40 °C. If using Go-Ferm, prepare Go-Ferm suspension in 20 times its weight of water at 42 °C prior to adding the active dried yeast. Let stand for at least 20 minutes then gently stir occasionally to break up any clumps. Add to the must.

- THE TOTAL REHYDRATION DURATION SHOULD NEVER EXCEED 45 MINUTES
- AVOID COLD SHOCKING THE YEAST. THE TEMPERATURE DROP BETWEEN THE MUST TO BE INOCULATED AND THE REHYDRATION MEDIUM SHOULD NEVER BE >10 °C (if any doubt, please contact your supplier or Lallemand)
- IT IS ESSENTIAL TO REHYDRATE THE YEAST IN A CLEAN CONTAINER.
- INITIAL REHYDRATION IN MUST IS NOT ADVISABLE.

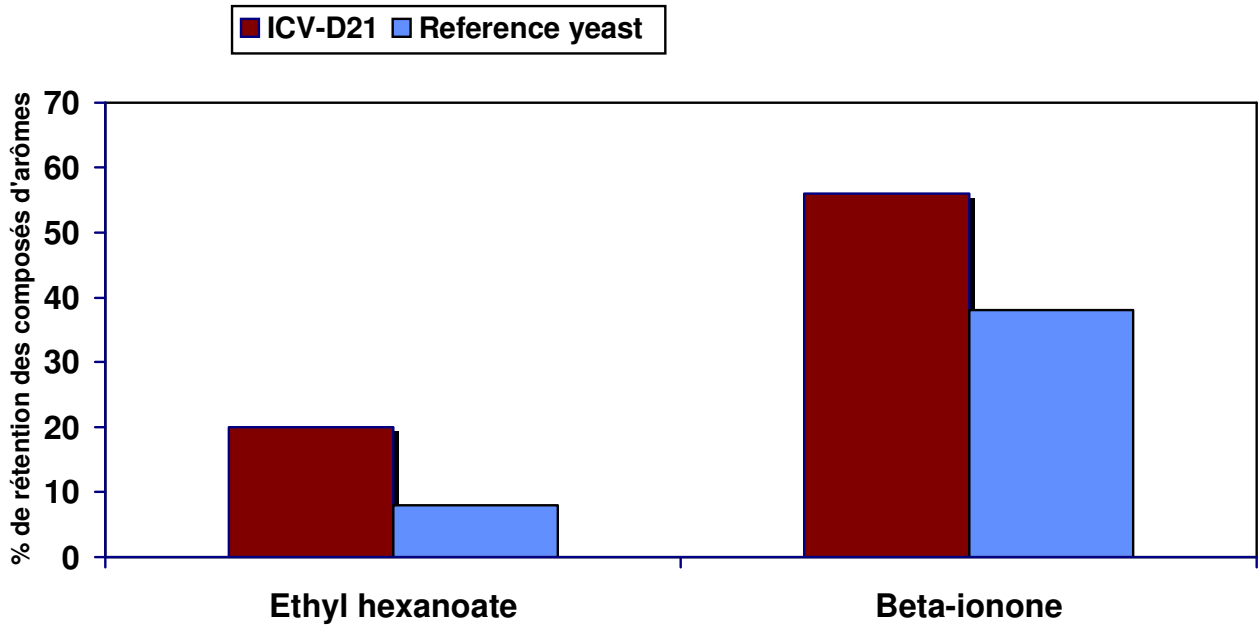
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FOR MORE INFORMATION: www.lallemandwine.com

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ICV D21 mannoprotein fractions influence on the retention of aromatic compounds (from Chalier, Angot, Delteil, Doco et Gunata, 2003). Legend :



Ethyl hexanoate: volatile components with exotic fruit (mango).
 Beta-ionone : volatile component with a violet or rose smell .

Comments: The higher the rate of retention and the more that manno proteins are able to react directly with the volatile components, the more complete the reaction. The aroma components will be more balanced in the initial perception and then later liberated in the mouthfeel perceptions adding to the 'length of finish'.



ICV-D21 effect on the sensory profile of a Mediterranean CHARDONNAY with a good aromatic maturity. ICV R&D Department, 2001.

