

# Vitilevure EC 1118

## Selected yeast

### ASSURED IMPLANTATION FOR A RAPID FERMENTATION

With its “killer” character, its aptitude to ferment rapidly at low or high temperatures, strain **EC1118** is, nowadays, one of the best performing strains in a large range of applications.

#### ENOLOGICAL PROPERTIES

##### ◆ “KILLER” CHARACTER

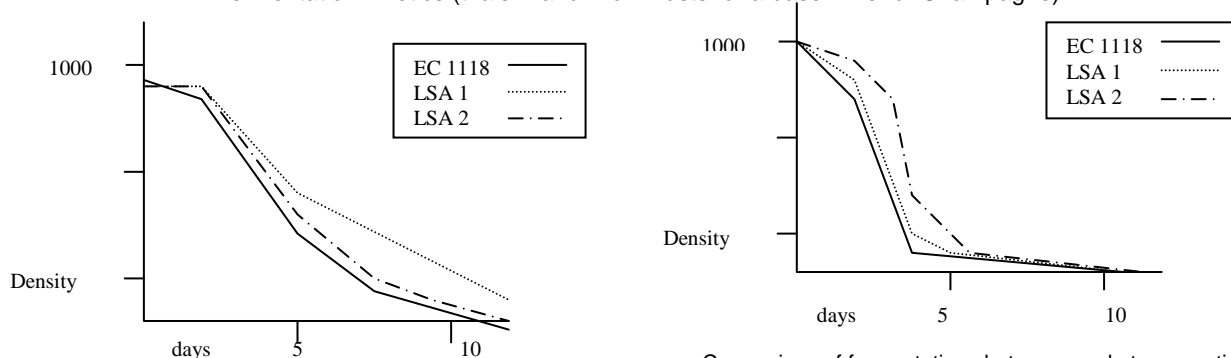
Selected yeasts' implantation in the medium to be fermented (must or wine) is the first condition of inoculation success.

With its “killer” character, strain **EC 1118** is in a very good position to assure this implantation, and to dominate or inhibit sensitive wild yeasts.

##### ◆ FERMENTATION KINETIC

Fermentation speed : from several trials, strain **EC 1118** is one of the best performing among tested, market preparations.

Fermentation kinetics (trials A and B on musts for a base wine for Champagne)



Comparison of fermentations between market preparations (dose 15 g/hl ; 500 l ; Riesling 82 - pasteurized)

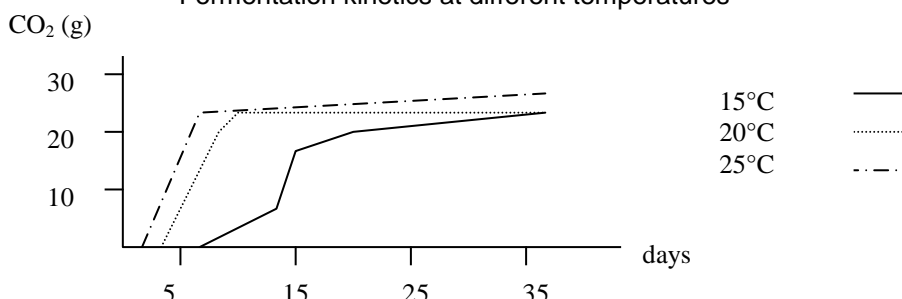
|                          | LALVIN K1 V-1116 | VITILEVURE EC 1118 | LSA1 | LSA2 | LSA3 | LSA4 |
|--------------------------|------------------|--------------------|------|------|------|------|
| Start Ferment. (days)    | 1.2              | 1.3                | 2.2  | 1.7  | 1.6  | 1.2  |
| Duration Ferment. (days) | 8.5              | 8                  | 10   | 15   | 9    | 10   |

In different conditions, strain EC 1118 is more rapid

##### ◆ OPTIMUM TEMPERATURE RANGE

**EC 1118** ferments well at very low temperatures, even at 4°C. It also well ferments at 15°C, 20°C and 28°C.

Fermentation kinetics at different temperatures



The accepted temperature range is very large. It allows a lot of applications like alcoholic fermentation and “prise de mousse” to take place at low temperatures, and alcoholic fermentation at high temperatures (non-published trials shows that **EC 1118** is able to ferment at 35°C)

#### ◆ VOLATIL ACIDITY PRODUCTION

Medium about 0.22 g/L (H<sub>2</sub>SO<sub>4</sub>) and 0.31 g/L (acetic acid) (1, 2, 4).

#### ◆ PRODUCTION OF SO<sub>2</sub> AND SO<sub>2</sub> COMBINING COMPOUNDS

In comparison with others market preparations (LSA), SO<sub>2</sub> production in must and synthetic medium is average. However, regarding acetaldehyde and pyruvate strain performances they are better (124).

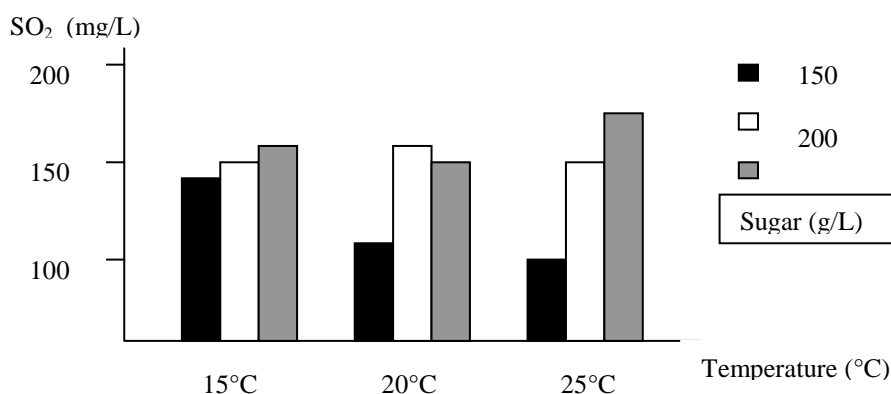
SO<sub>2</sub> and SO<sub>2</sub> combining compounds production

| Yeast starter | Acétaldéhyde (mg/L) | Pyruvate (mg/L) | Total SO <sub>2</sub> (mg/L) |
|---------------|---------------------|-----------------|------------------------------|
| EC 1118       | 9                   | 14              | 25                           |
| LSA1          | 16                  | 12              | 18                           |
| LSA2          | 17                  | 21              | 25                           |
| LSA3          | 7                   | 17              | 22                           |
| LSA4          | 10                  | 15              | 15                           |

SO<sub>2</sub> production is lower than the majority of wild strains in Champagne.

- ◆ It is important to note that the SO<sub>2</sub> production depends on the temperature and initial sugar content in the must.

SO<sub>2</sub> production at different T°C and sugar content in the must



The low production of SO<sub>2</sub> and SO<sub>2</sub> combining compounds is a primordial advantage of **EC1118** each time that malolactic fermentation takes place in the wine.

#### ◆ H<sub>2</sub>S PRODUCTION

EC 1118 produces less H<sub>2</sub>S than other market preparations.

| H <sub>2</sub> S (mm)         | EC 1118 | Lalvin V 1116 | LSA1 | LSA2 | LSA3 | LSA4 |
|-------------------------------|---------|---------------|------|------|------|------|
| Riesling 82 (500 L)           | 17      | /             | 27   | 55   | 46   | 57   |
| Muller-Thurgau 81 pasteurized | 0       | 0             | 2    | 2    | 8    | /    |
| Muller-Thurgau 81 filtered    | 0       | 1             | 1    | 9    | 8.5  | /    |

#### ◆ FROTH PRODUCTION

Froth formation is very low, in comparison to other market preparations in must or synthetic medium.

| Froth (mL)                        | EC 1118 | Lalvin V 1116 | LSA1 | LSA2 | LSA3 | LSA4 |
|-----------------------------------|---------|---------------|------|------|------|------|
| Muller-Thurgau 81 (1) pasteurized | 40      | 40            | 360  | 180  | /    | /    |
| Muller-Thurgau 81 (1) filtered    | 30      | 10            | 80   | 50   | /    | /    |
| Riesling 82 (2)                   | 8       | 5             | 8    | 15   | 9    | 10   |
| Synthetic medium                  | 7       | 15            | 12   | 16   | 40   | /    |

#### ◆ ORGANOLEPTIC QUALITIES

Among 3 market preparations tested in white winemaking, on base wine to make Champagne, **EC 1118** is noted the noted regarding taste.

Results of tasting at the end of alcoholic fermentation (KRAMER test)

|         | Number of tasters | Ranges addition |      |      |
|---------|-------------------|-----------------|------|------|
|         |                   | EC 1118         | LSA1 | LSA2 |
| Trial A | 21                | 68              | 89   | 79   |
| Trial B | 22                | 64              | 98   | 95   |
| Trial D | 21                | 45              | 74   | /    |

#### ◆ SUGAR/ALCOHOL YIELD

When the initial sugar quantities are equal in synthetic medium, **EC 1118** performs the best, regarding to the quantity of alcohol produced, 16.45 g sugar per % alcohol.

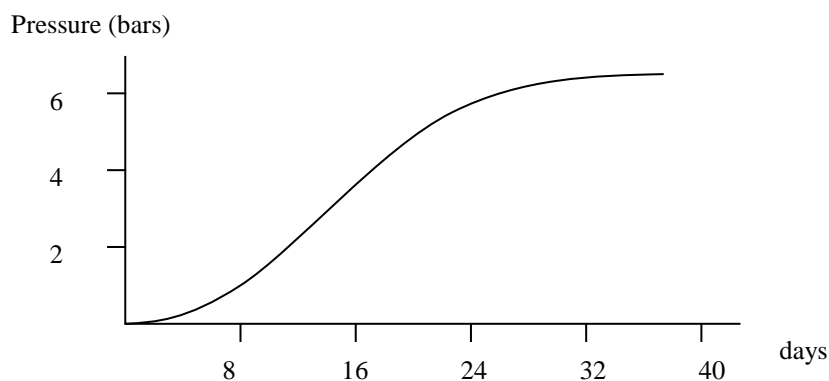
In must, it uses 16.80 g sugar per % alcohol. The alcoholic yield remains constant in winemaking at 15, 20 or 28°C even when the initial sugar concentration of the must goes from 150 to 200 g/L.

Alcoholic yield regarding to T°C and initial sugar content

| Initial sugar (g/L) | Temperature (° C) |       |       |
|---------------------|-------------------|-------|-------|
|                     | 15                | 20    | 28    |
| 150                 | 16.96             | 17.12 | 17.18 |
| 200                 | 16.72             | 16.82 | 17.02 |

### FIELD OF APPLICATION

- ◆ To elaborate the base wine, practical references from several French regions show that **EC 1118** is active at **low temperatures** (4°C) and at **high temperatures** (30°C or more).
- ◆ Regarding refermentation, **EC 1118** is able to referment at 15% alcohol with 5 or 6 g/L residual sugar.
- ◆ Regarding "prise de mousse" : a performant strain must have a good fermentation speed but with the capacity to form a deposit able to sediment quickly.
- ◆ Speed fermentation under pressure: strain **EC 1118** produces more than 6 atmospheres at the end of bottle fermentation with more than 2 atmospheres during the 2 first weeks.



Fermentation kinetic under pressure

#### ◆ SEDIMENTATION

It is important for decantation and riddling. Strain **EC 1118** sediments as well as the other market preparations.



STATION  
OENOTECHNIQUE  
de CHAMPAGNE

**Table : sedimentation**

Riesling 82 (2)

|               | EC 1118   | Lalvin V 1116 | LSA1   | LSA2 | LSA3   | LSA4      |
|---------------|-----------|---------------|--------|------|--------|-----------|
| Sedimentation | Very good | Normal        | Normal | Bad  | Normal | Very good |

**INSTRUCTIONS FOR USE****For inoculation of still wines**

- ◆ Rehydrate the selected yeast in 10 times its volume in water at 35°C-37°C.
- ◆ Mix then leave to rehydrate for 15 to 20 minutes.
- ◆ To avoid temperature shock, gradually add must to the tank: the temperature difference between the yeast and the must should not exceed 10°C during yeasting.
- ◆ Incorporate the yeast into the must during a pump over for even distribution.
- ◆ The total time for rehydration should not exceed 45 minutes.

**For inoculation of base wines, wines with low temperatures or high SO<sub>2</sub> content**

- ◆ Rehydrate the selected yeast in 10 times its volume in water at 35-37°C.
- ◆ Mix, then leave to rehydrate for 15 to 20 minutes.
- ◆ Incorporate the rehydrated yeast in 10 to 20 times its volume in must, leave to ferment for 6 to 12 hours.
- ◆ Put the reactivation mixture at the top of the tank

For foam formation (Traditional and « Charmat » method):

It's essential to acclimatise the yeast to alcohol and to the conditions of the wine (pH, SO<sub>2</sub>, temperature...). Carry out a starter culture over 2 to 5 days, following your oenologist advice.

**PACKAGING**

- ◆ 0.5 kg sachet.

**QUALITY – SECURITY – ENVIRONMENT**

- ◆ Traceability : the batch number, present on all packaging, makes it possible to trace back to the traceability plan in both directions (product origin through to user).
- ◆ Security – environment : this yeast is not toxic to the user.

**STORAGE**

- ◆ 3 months at room temperature (cool and dry place).
- ◆ More than 3 months : from 2°C to 8°C.
- ◆ Once opened, use rapidly.

**BIBLIOGRAPHY**

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- 2 - E. HIRTH & F, POTOSCHNIGG : Trockenhefen aus der Produktion 1982 und 1983 im Vergleich. Der deutsche Weinbau, 28/1983
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