Adapting winemaking procedures in function of berry sensory profiles

Vineyard and winery sensory routine analysis
The most successful wines respect 3 universal axis
Clean and sound
Conforming longevity
Without excessive aggressivity
Conforming wines
Wines limit to the target
Non conforming wines
"Unauthorized copying or posting. Use for LalVigne Academy"
How to evaluate the sensory profile of the grapes?

General considerations and trends
Aspect of the berry and tasting the pulp (descriptors 1 to 9)

- **Color**: Control (High), Mature (Medium)
- **Fragility**: Control (Low), Mature (High)
- **Destemming**: Control (High), Mature (Medium)
- **Drop of juice**: Control (Low), Mature (High)
- **Separation**: Control (High), Mature (Medium)
- **Sweetness**: Control (Low), Mature (High)
- **Acidity**: Control (Low), Mature (High)
- **Herbaceous**: Control (Low), Mature (High)
- **Fruity**: Control (Low), Mature (High)

Graph showing the comparison between Control and Mature in terms of aspect and tasting.
Tasting the skin (descriptors 10 to 20)

- Crushing
- Acidity
- Herbaceous
- Fruity
- Acidity
- Herbaceous
- Fruity
- Tannic Intensity
- Astringency
- Dryness
- Aspect of mixture

Chart showing the comparison between Control and LalVigne Mature for different descriptors.

5th bite
10th bite
After chewing
Tasting the seeds (descriptors 21 to 25)

<table>
<thead>
<tr>
<th>Trait</th>
<th>Control</th>
<th>LalVigne Mature</th>
</tr>
</thead>
<tbody>
<tr>
<td>Color</td>
<td>High</td>
<td>Medium</td>
</tr>
<tr>
<td>Resistance</td>
<td>Medium</td>
<td>Low</td>
</tr>
<tr>
<td>Ripe flavors</td>
<td>Medium</td>
<td>Low</td>
</tr>
<tr>
<td>Tannic intensity</td>
<td>Low</td>
<td>Low</td>
</tr>
<tr>
<td>Astringency</td>
<td>Low</td>
<td>Low</td>
</tr>
</tbody>
</table>
How to adapt the winemaking according to the sensory profile of the grapes?

General considerations and trends
Aspect of the berry and tasting the pulp (descriptors 1 to 9)

- **Control**
- **LalVigne MATURE**

<table>
<thead>
<tr>
<th>Aspect</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>3</td>
</tr>
<tr>
<td>Medium</td>
<td>2</td>
</tr>
<tr>
<td>Low</td>
<td>1</td>
</tr>
</tbody>
</table>

- **Color**
- **Fragility**
- **Destemming**
- **Drop of juice**
- **Separation**
- **Sweetness**
- **Acidity**
- **Herbaceous**
- **Fruity**

**Acting**:
- More Maceration Enzymes and Oak Fragments
- More OptiRed. Early Noblesse
- Round Mouthfeel Yeast strains
- Soft Extraction
- Co-inoculation, Round Mouthfeel Bacteria

**Tasting**:
- Lower pH
Tasting the skin (descriptors 10 to 20)

- Control
- LalVigne MATURE

**High**
- 3
  - More Oak Fragments

**Medium**
- 2
  - Enzymes
  - OptiRed
  - Shorter maceration

**Low**
- 1
  - OptiRed
  - Round Mouthfeel Yeast
  - Soft Extraction

**5th bite**
- Crushing
  - Acidity
  - Herbaceous
  - Fruity

**10th bite**
- Acidity
  - Herbaceous
  - Fuity

**After chewing**
- Tannic Intensity
  - Astringency
  - Dryness
  - Aspect of mixture

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Tasting the seeds (descriptors 21 to 25)

Avoid breaking the seeds during maceration and pressing

Control

LalVigne MATURE

High

Medium

Low

0

1

2

3

Color

Resistance

Ripe flavors

Tannic intensity

Astringency

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How to adapt the winemaking?

A precise example for a Syrah at >10 € F.O.B. / bottle

The goal is to be able to blend both lots during aging and get a conforming wine for the segment.
Red winemaking: Universal technical strategy to reach the 3 universal sensory and commercial axis
Winemaking goals and main risks management to reach the main market goals: A, B and C (1)

- Early and intense diffusion of fruit aromas from pulp and skin, pigments, polysaccharides from pulp and skin, hydrosoluble tannins from the skin. Of course, without aggressive mechanical actions.

- Stabilizing those elements that are key points of the colloidal matrix, starting at the very beginning of maceration-fermentation.

- Not extracting herbaceous aromas and aggressive tannins in the inner layers of the skin.

- Extracting as few as possible ethanol soluble tannins.
Winemaking goals and main risks management to reach the main market goals: A, B and C (2)

Avoiding sulfur like off odors: they amplify herbaceous and aggressive sensations on the nose and in mouth (metallic taste and bitterness).

- The lowest efficient level of SO2 before fermentation
- The right yeast strain, the right protection and nutrition during fermentation
- The right oxygenation program during maceration
- The right bacteria strain and right timing of inoculation
- The right program of racking, agitation during aging
Control

- <3.35 Adjust pH
- 3 g/hl SO2
- Destem
- Crush
- <14.0%vol
- Lallzyme EX-V 3 g/hl

LalVigne Mature

- <3.4
- 3 g/hl SO2
- Destem
- Crush
- <14.5%vol
- Lallzyme EX-V 2 g/hl

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Yeast strain. Direct inoculation after rehydration with protection.

Blocks Fr-Ambrosia Complex 400 g/hl

ICV-D21 30 g/hl

GoFerm Protect 30 g/hl

OptiRed 30 g/hl

Fermaid 0 20 g/hl

Yeast strain. Direct inoculation after rehydration with protection.

Oak fragments

Inactivated yeast for maceration

Yeast protection

Inactivated yeast for maceration

Pure organic initial nutrition

Coinoculate yeast - bacteria

Lactic bacteria strain

ICV-D80 30 g/hl

OptiRed 20 g/hl

Fermaid 0 20 g/hl

VP41

VP41
Demonstration that the yeast strain may have an impact on longevity

Grenache Noir, vintage: 1997
Picture: 2004

De: ICV Internet site
www.icv.fr

Photo ICV
ICV-D254
Low price yeast strain
19

Fermaid K 30 g/hl

Type of pumping over

Temperature program

Complex nutrition
at 1/3 of AF

Tank shape

Drain

100 hl

>80 hl

18°

22°

Délestage 2 times per day

Fermaid K 30 g/hl

100 hl

>80 hl

22°

10-12°

Délestage 2 times per day

Fermaid K 30 g/hl

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**Macro-oxygenation**

- **Duration of maceration**: 10-15 days
- **Continuous oxygenation**: 1-2 mg/day
- **2-3 times a day**: 3-5 mg/L

**Agitations with a mixer**

- **2-3 per day**

**Color**

- Drop of juice
- Acidity

**Drain**

- **2-3 times a day**

**Continuous oxygenation 1-2 mg/day**

- **15-20 days**

**Stop oxygenation**

- **4-6 mg/L**

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Pneumatic press

Type of pressing

Addition of press wines

<0,4 bar + 1 g/l Reduless
Rack after 24 hours + 1 g/l Reduless
Rack after 24 hours + 1 g/l Reduless
Rack after 24 hours + 1 g/l Reduless
Blend with racked drained wine

<0,4 bar + 1 g/l Reduless
Rack after 24 hours + 1 g/l Reduless
Rack after 24 hours + 1 g/l Reduless
Rack after 24 hours + 1 g/l Reduless
Blend with racked drained wine
Inactivated yeast

Rhythm of first rackings: segment the lees

Keep pH <3.45
1. Draining: add 1 g/hl Reduless
   Rack after 24 hours
2. Dryness: add 1 g/hl Reduless
   Rack after 24 hours
3. One week later: add 1 g/hl Reduless
   Rack after 24 hours

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   Rack after 24 hours
During all malo, slightly smoky plum aroma must be present to build the top quality mineral/fruity red Shiraz style in the bottle. If it disappears, add an extra 50 g/hl staves. In other words, here you must smell more ripe smoky characters than your goal in the bottle on the market.

Add staves 260 g/hl: French oak, Ambrosia Complex
Add 10 g/hl Noblesse. 18°C
Stir 2 times a week
If malolactic is not active after 2 weeks in this tank: stir and rack after 2 days. Clean the staves. They follow the wine.

Add staves 150 g/hl: French oak, Ambrosia Complex
Add 10 g/hl Noblesse. 18°C
Stir 2 times a week
If malolactic is not active after 2 weeks in this tank: stir and rack after 2 days. Clean the staves. They follow the wine.
**Preparation for barrel aging**

**End of MLF:**
1. Add 1 g/hl Reduless + Tartaric acid to lower pH to 3.40 + 3 g/hl SO2.
2. Rack after 24 hours. Clean the staves with water. They follow the wine.
3. Add 20 g/hl Noblesse. 12°C. Wait 1 week or 2
4. Add 1 g/hl Reduless. Wait 2-3 days.
5. Rack
6. Add 10 g/hl Noblesse and go to barrels

**End of MLF:**
1. Add 1 g/hl Reduless + Tartaric acid to lower pH to 3.40 + 3 g/hl SO2.
2. Rack after 24 hours. Clean the staves with water. They follow the wine.
3. Add 10 g/hl Noblesse. 12°C. Wait 1 week or 2
4. Add 1 g/hl Reduless. Wait 2-3 days.
5. Rack
6. Add 10 g/hl Noblesse and go to barrels

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In early spring

Fill again the barrel while stirring

20 g/hl Noblesse
Adjust molecular SO₂ to 0.8 mg/L

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Thank you for your attention