II.2.1.1 Oxygenation

Classification:

Oxygen: processing aid

Definition:

Addition of oxygen or air to must

Objectives:

a) To accelerate the oxidation process in musts in white or rosé winemaking with the aim of provoking browning reactions in phenolic compounds, which are formed by polymerisation, then precipitate and are removed during clarification of musts, to improve the stability of wines in relation to oxidation. This practice, which provides for the addition of high levels of oxygen to musts, equivalent to several saturations, is called “hyperoxygenation”;

b) to contribute to the reduction of aromas compounds related to vegetal sensory character and the disappearance of reductive aromas;

c) to ensure alcoholic fermentation occurs smoothly and to avoid stuck fermentations.

Prescriptions:

a) In the case of reduction of the level of phenolic compounds involved in browning phenomena, oxygen should be added before clarification of must;

b) in the case of management of fermentation kinetics, the addition of oxygen at the recommended dose of 5-10 $mg \cdot L^{-1}$ is sufficient provided that this is carried out at the end of the yeast growth phase, namely after the reduction of the sugar concentration of the must by around 50 $g \cdot L^{-1}$;

c) the aim of oxygenation should not be a reduction in sulphite of musts containing excess sulphur dioxide.

Recommendation of OIV:

Admitted