# II.1.13 Use of enzymes to improve the grape maceration process, the extraction of juice and other grape compounds

**Definition:**

Addition to grapes of enzymatic preparations containing activities catalysing the degradation of structural macromolecules of the cell wall of the grape, such as cellulose, pectins with their side chains, hemicellulose, glycoproteins, and various protein fractions.

Enzyme activities involved in the maceration of grapes notably include polygalacturonases, pectin lyases, pectinmethylesterases, arabinanases, rhamnogalacturonases, cellulases and hemicellulases.

**Objectives:**

a) To facilitate operations for obtaining musts such as draining and pressing.

b) To facilitate racking operations.

c) To facilitate the extraction of colouring matter and polyphenols.

d) To facilitate the extraction of aromas and aromatic precursors from grape berry skin.

**Prescription:**

The enzymes must comply with the prescriptions of the International Oenological Codex.

**Recommendation of OIV:**

Admitted