II.2.1.3.1.3 Acidification by electromembrane treatment (bipolar membrane electrodialyse)

Definition:

Physical ionic must extraction method under action of electric field using permeable cation membranes and bipolar membrane giving rise to increased titratable acidity and actual acidity (decrease in pH).

Objectives:

a) Increase titration acidity and actual acidity (decrease in pH).

b) Promote good biological characteristics and favour good vinification.

c) Favour good maturation of wine.

d) Remedy insufficient natural acidity caused by:

- climatic conditions in the viticulture region, or
- oenological practices which lead to a decrease in natural acidity.

Prescriptions:

a) See the general sheet on separative techniques used in the treatment of musts and wines and the sheet concerning the use of membrane techniques applied to musts.

b) Acidification by electro-membrane treatment should not be done to conceal fraud.

c) Cationic membranes shall be made in a way so as to only enable them to be adapted to the extraction of cations only and in particular cations: K^+.

d) Bipolar membranes are impermeable to anions and cations of musts.

e) Acidification by bipolar electrodialysis must only be carried out provided that initial must acidity is not increased more than 54 meq/l (that being 4 g/l expressed in tartaric acid).When musts and wine are acidified, the net accumulated increase must not be over 54 meq/l (that being 4 g/l expressed in tartaric acid).

f) The implementation of the process will be under the responsibility of an oenologist or a qualified technician.

g) The membranes shall comply with the prescriptions of the International Oenological Codex.

Recommendation of the OIV:

Admitted