II.3.1.1.4 Acidification by electromembrane treatment (bipolar membrane electrodialysis)

Definition:

Physical method for ionic extraction in wine under the action of an electric field using membranes permeable only to cations on the one hand, and bipolar membranes on the other hand, and enabling an increase of titratable acidity and actual acidity (decrease of the pH).

Objectives:

a) increase of titratable acidity and actual acidity (decrease of the pH).

b) Obtaining wines with balanced taste characteristics.

c) Promote a good biological evolution and proper storage of the 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 pertaining to separative techniques used in the treatment of wines and musts and the sheet pertaining to 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 such a way so as to be only adapted to the extraction of cations only and in particular cations: K^+.

d) Bipolar membranes are impermeable to anions and to wine cations.

e) The acidification by bipolar electrodialysis can only be carried out if initial must acidity has not been increased more than 54 meq/l

When must and wine are acidified, the total increased acidity must not exceed 54 meq/l.

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