MODERN MEMBRANE TECHNOLOGIES IN VINICULTURE

Company MemBrain s.r.o. introduces to the market a ***new type of equipment/units for wine production***.

1. **Cross-flow filtration for ensuring of microbiological stability**
2. **Electrodialysis for ensuring of tartrate stability**
3. **Electrodialysis for pH adjustment**

1. ENSURING OF MICROBIOLOGICAL STABILITY

Microbiological stability of wine is ensured by a process of „**Cross-flow filtration**“ that is known as an alternative to traditional diatomaceous and plate filtration. It is used in wine production mainly as a ***end filtration before wine bottling, or possibly, for wine clarification in order to stop fermentation*** while the organoleptic characteristics are preserved.

ADVANTAGES OF CROSS-FLOW MICROFILTRATION

- 100 % guarantee of microbiological stability of wine – elimination of yeast and bacteria
- Elimination of turbidity and solid particles
- Simplification and acceleration of the filtration process, time and energy saving and reduction of operating costs
- Process automation including backwash, simple control system
- Possibility of sanitation by warm water and possibility of chemical cleaning

2. ENSURING OF TARTRATE STABILITY

Electrodialysis (ED) is the membrane separation process that is used to provide a tartrate stability and is an alternative to the cold stabilisation of wine (removal of cream of tartar). ED is a fast process that does not require cooling or heating of the treated wine.

3. ENSURING OF PH ADJUSTMENT

Electrodialysis process can be also used for pH adjustment without addition of chemicals. Using this process can be achieved better organoleptic properties, such as the ratio of sweetness and acidity of the drink. Other organoleptic properties are maintained and the product can still be considered 100% natural with no added sugars, preservatives and dyes. PH adjustment can be made in both directions.

ADVANTAGES OF ELECTRODIALYSIS

- Eliminating the use of chemicals in the production process
- Improvement of organoleptic properties
- Process automation, simple control system
- Possibility of chemical cleaning

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