OENODIA

INRA

STARS® LINE

The OENODIA' Wine crossflow filtration

Paired with

Advantages of STARS® XF

PRESERVATION OF WINE QUALITY

- No oxygen consumption,
- Low temperature variations (< 2°C)
- Gentle treatment

PP MEMBRANE

The best filtration performance to preserve wine quality

- Membrane material : Polypropylene
- Pore size : 0.2 µm
- Low affinity with wine compounds
- 0.2 µm absolute rating, low internal fouling
- No fragile additional layer: the material is both the filtration layer and the support.

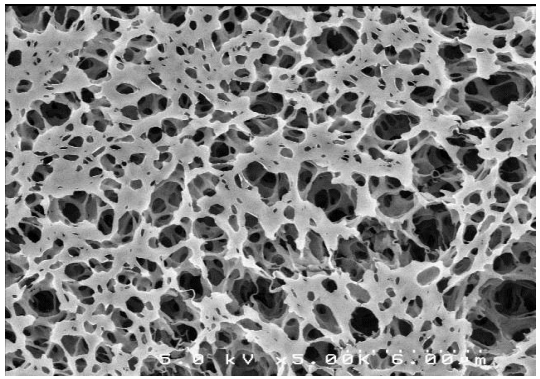
STARS® XF PERFORMANCES

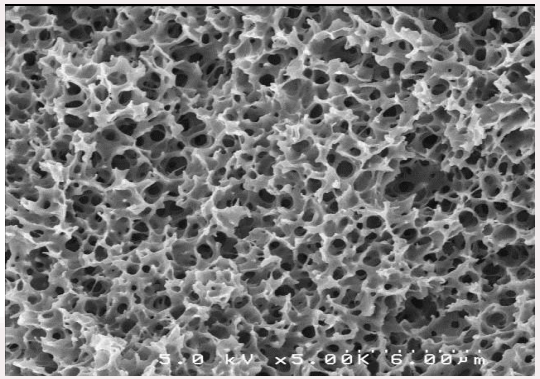
- The results will be:
  - Filtrated wine < 1 NTU
  - Constant flow rates
- Programmable back-flushes
- No oxygen pick-up
- Minimal wine loss < 0.3%
- Possibility: Crossflow + ED treatment ($STARS_{LINE}$) in one pass
- From 15 to 240 hl/h

Polypropylene : a specific material for wine treatment

PP membrane:

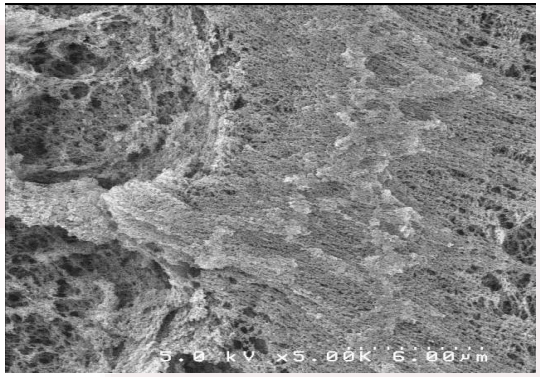
- Polypropylene
- Hydrophobic
- Homogeneous
- No specific filtration layer

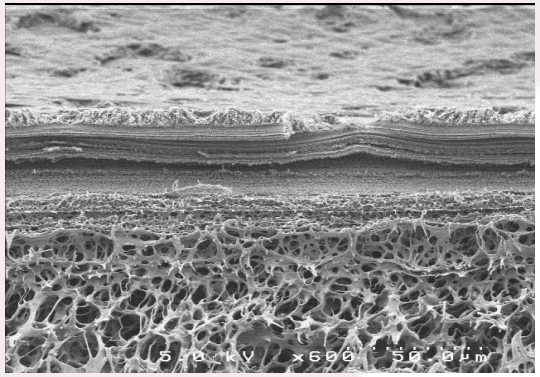




PES-PVP membrane:

- Polyethersulfone
  Polyvinylpyrrolidone
- Hydrophilic
- Heterogeneous
- Specific filtration layer



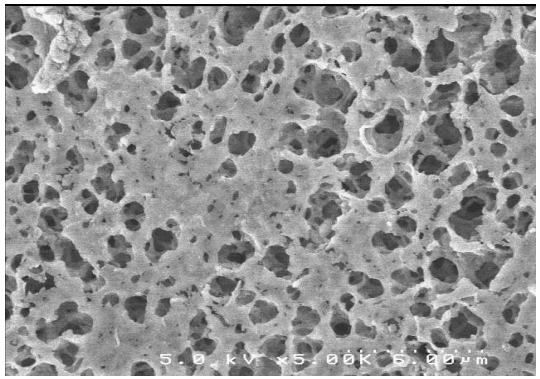


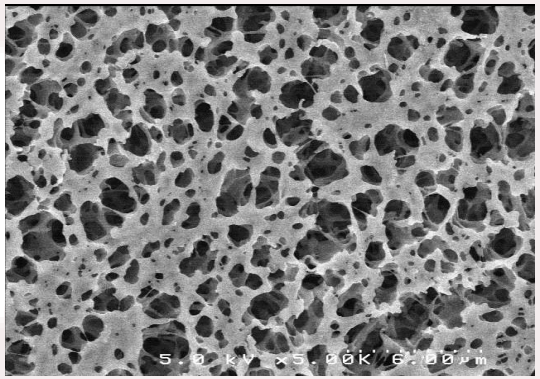
Polypropylene: a low affinity for wine compounds.

(Polysaccharides, polyphenols and proteins)

PP Membranes:

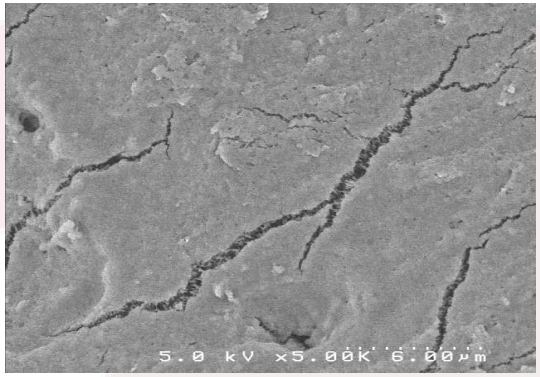
- No polarization layer
- No affinity for wine compounds
- No production capacity loss

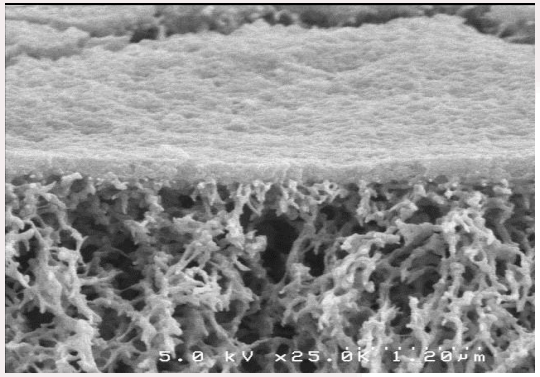




PES-PVP Membranes:

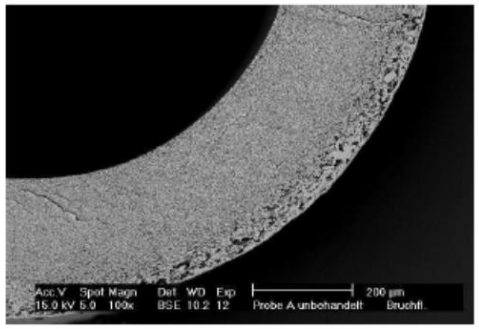
- Significant polarization layer
- Affinity for wine compounds
- Production capacity loss

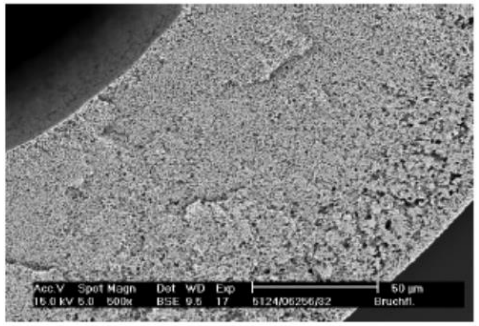




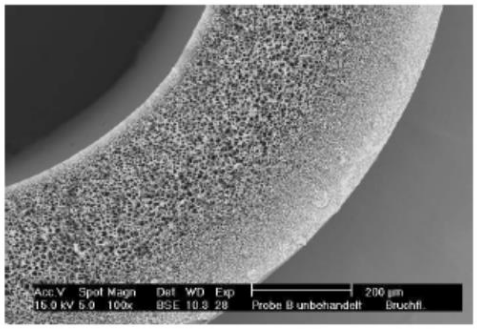
Wine Filtration - Membrane Pore Structure

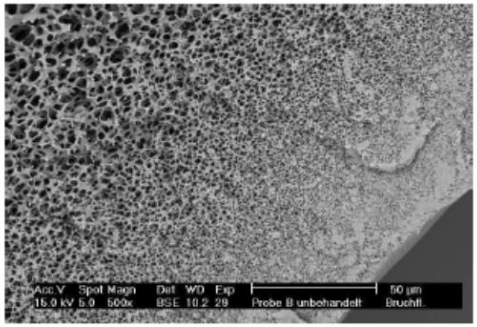
PP membrane





PES/PVP membrane





- Total pore surface area of PP membrane 3 to 4 times higher than competitor product (13,4 vs. 3,6 m^2/g)
- Resulting pore volume of PP membrane 2 times higher than for competitor product (0,027 vs. 0,015 mL/g) measured with nitrogen

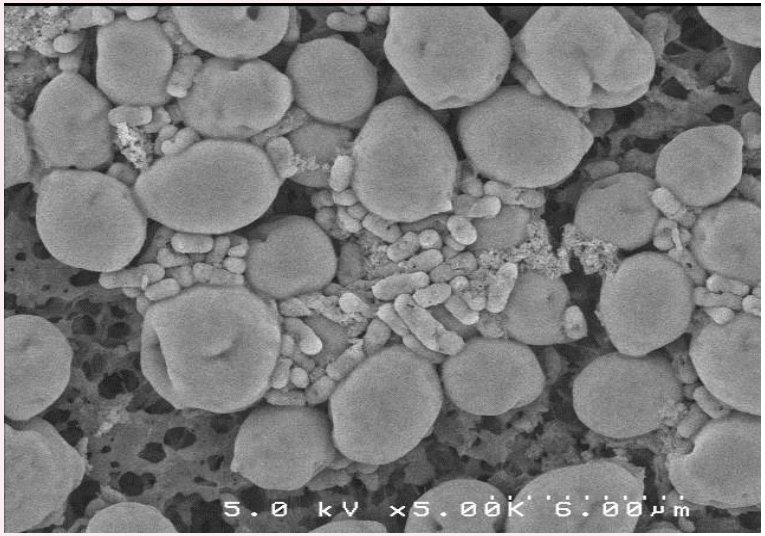
SPECIAL CLEANING PROCEDURE

- **Only one chemical cleaning per week**
- One flush with hot water for every 10/12 hours of filtration
  - Flush with hot water up to 70°C/158°F
  - Chemical cleaning: NaOH 4% and Citric Acid 1%,
- **Water saving (low water consumption)**

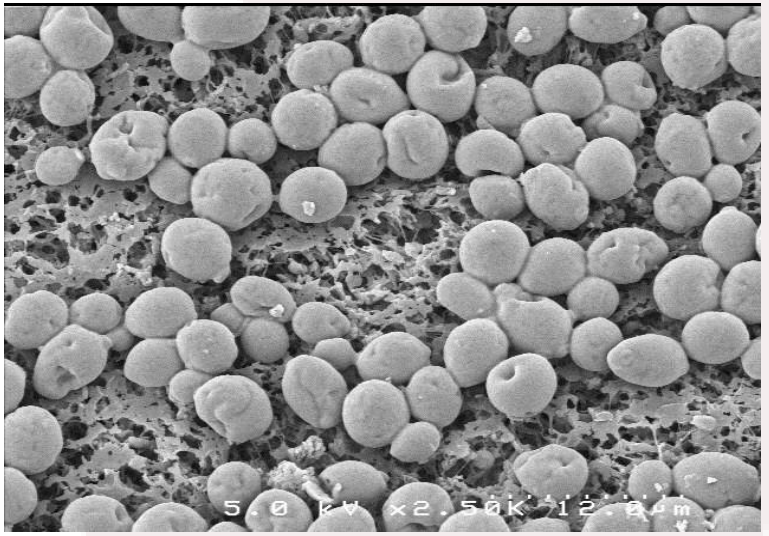
PP has a low affinity for wine particles

After 4 hours of filtration and a flush with cold water.

Red Wine



White wine



Yeast, bacteria and colloidal aggregates don’t stick to the membrane.

We can recover the membrane capacity with a simple water flush.

Environmentally friendly DESIGN

- Low power consumption (< 0.25 kWh/hl) thanks to low tangential velocity
- Low water consumption: 1 flush per day
- Low chemicals consumption: 1 cleaning per week
- No addition of filtering aids (such as Diatomaceous Earth or Kieselguhr),

STARS® LINE the wine just-in-time

- In-line operation of wine filtration followed by tartrate stabilization

- No oxygen pick-up
- No intermediate tank required
- Very low wine loss (< 0.3%)

The wine just-in-time

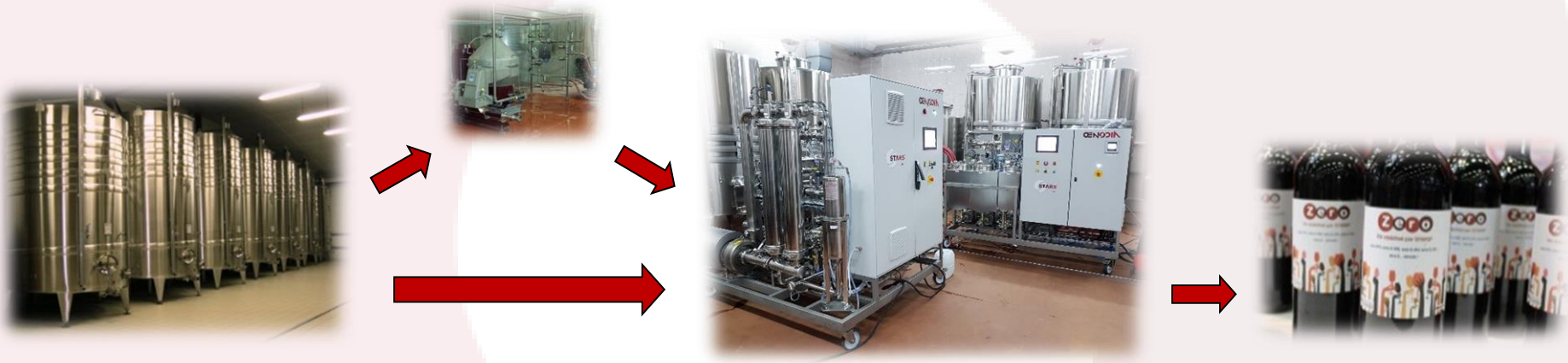
WINE CLARIFICATION

MICROBIOLOGICAL STABILITY

TARTRATE STABILIZATION

The additive free solution

STARS® LINE



Continuous process / the wine just in time

KEEP IT NATURAL !
your wines ready for bottling without chemical additives with

ADDITIVE FREE SOLUTIONS

OENODIA
ZAC ST MARTIN
IMPASSE ST MARTIN
84120 - PERTUIS - FRANCE
TEL : +33 (0)4 90 08 75 00

commercial@oenodia.com

www.oenodia.com