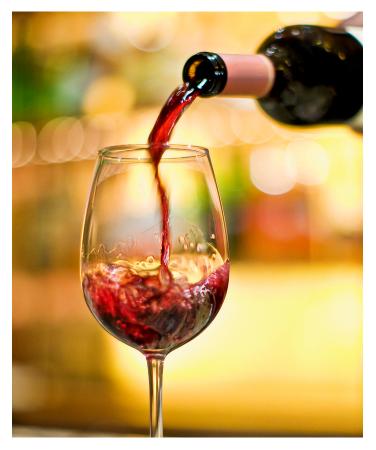
Wine Production Filtration

Enables more rigorous process control to improve wine quality

While the flavor of the wine is determined by the type of grape, soil, topography, and climate, process management plays a key role in wine quality. Contaminants such as crystals, treatment residues, organic aggregates, bacteria, and yeast can significantly impact a wine's quality.

Filtration should be implemented throughout the wine production process to remove contaminants. Making use of cold sterile filtration before filling contributes to biological stabilization and improves the quality of the wine. This process effectively removes the spoilage microorganisms without damaging the flavor of the wine, allowing the product to be processed safely while maintaining freshness. Applying Entegris technologies and filtration expertise to your wine process will remove risks and ensure peace of mind by enabling more rigorous process control, Figure 1.



Contaminants in the production process can significantly impact wine quality.

APPLICATION REQUIREMENTS

- Wine filters must provide consistent high flow rates to ensure filling accuracy and consistency.
- The cost of wine filters must be economical.
- Prefilters and final filters must withstand multiple cycles of hot water sanitization.
- Final filters must keep reliable retention of wine microorganisms and particles for a long time.

SEPARATION GOALS

- Clarification reduce dead yeast cells (lees), bacteria, grape skins, grape seeds, and tartaric acid crystals. Ensure stability during storage, prolong the life of oak barrels.
- Fine filtration reduce haze, precipitation, tartaric acid, and other fine particles generated during storage.
- Prefiltration reduce particles and microorganisms, prolong the life of final filters.
- Final filtration microbiological stability, organoleptic properties are completely preserved for years.



TYPICAL WINE PRODUCTION PROCESS

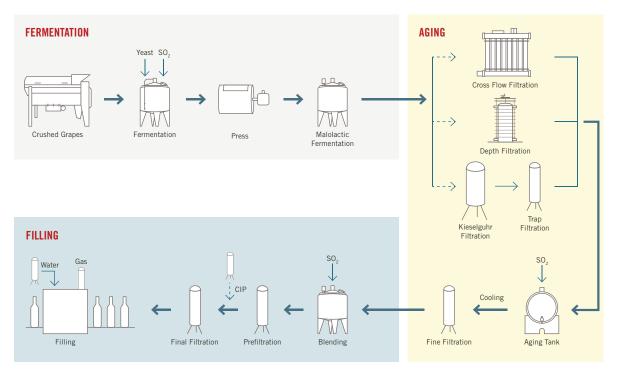


Figure 1. Filtration will remove risks and ensure peace of mind by enabling more rigorous process control.

WINE PRODUCTION FILTRATION RECOMMENDATIONS

Entegris has filtration expertise and solutions for every filtration step of wine production. Our portfolio will help improve wine quality and enhance your own making experience.

Filtration step	Recommendation
Fine filtration	Pharmsteri™ PP cartridge filters
Prefiltration	Pharmsteri™ PP cartridge filters Pharmsteri™ PES cartridge filters
Final filtration	Pharmsteri™ PES cartridge filters
CIP/rinse water	Pharmsteri™ PP cartridge filters
Gas filtration	Pharmsteri™ PTFE cartridge filters

For detailed product information contact Entegris.



Pharmsteri cartridge filters

All recommended products are manufactured in accordance with ISO 9001 and ISO 13485 certified quality management systems.

All components meet the FDA indirect food additive requirements cited in 21 CFR 177-182.

All recommended products meet (EU) No.1935/2004, (EU) No.10/2011.

APPLICATION SUCCESSES

Entegris has helped numerous customers throughout the world apply filtration to their wine making process, and enabled them to successfully remove contamination risks and maintain more rigorous process control. To gain peace of mind in your process, contact Entegris.



FOR MORE INFORMATION

Please call your Regional Customer Service Center today to learn what Entegris can do for you. Visit <u>entegris.com</u> and select the <u>Contact Us</u> link to find the customer service center nearest you.

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