

Materials	Use	Reference or limitation
Copper sulfate .....	To eliminate hydrogen sulfide and mercaptans.	The finished brandy or wine spirits produced from distilling material to which copper sulfate has been added shall not contain more than 2 parts per million (2 mg/L) residual copper. GRAS per FDA advisory opinion of 7/23/69.
Hydrogen peroxide .....	To reduce the bisulfite aldehyde complex in distilling material.	The amount used shall not exceed 200 parts per million. 21 CFR 184.1366 (GRAS).
Potassium permanganate .....	Oxidizing agent .....	The finished brandy or wine spirits produced from distilling material to which potassium permanganate has been added must be free of chemical residue resulting from such treatment. (GRAS)
Sodium hydroxide .....	Acid neutralizing agent .....	The finished brandy or wine spirits produced from distilling material to which sodium hydroxide has been added must be free of chemical residue resulting from such treatment. 21 CFR 184.1763 (GRAS).
Sulfuric acid .....	To effect favorable yeast development in distilling material; to prevent fermentation of the sugar in wine being accumulated as distilling material; to lower pH to 2.5 in order to prevent putrefaction and/or ethyl acetate development.	27 CFR 24.216 (GRAS), 21 CFR 184.1095 (GRAS).

<sup>1</sup> GRAS—An acronym for "generally recognized as safe." The term means that the treating material has an FDA listing in title 21, Code of Federal Regulations, part 182 or part 184, or is considered to be generally recognized as safe by the U.S. Food and Drug Administration.

(Sec. 201, Pub. L. 85-859, 72 Stat. 1383, as amended (26 U.C.S. 5381, 5382, 5385, 5386, and 5387)).

[T.D. ATF-299, 55 FR 24989, June 19, 1990, as amended by T.D. ATF-409, 64 FR 13683, Mar. 22, 1999]

**§ 24.248 Processes authorized for the treatment of wine, juice, and distilling material.**

Any process which changes the character of the wine to the extent inconsistent with good commercial practice is not permitted on bonded wine premises. The processes listed in this section are approved as being consistent with good commercial practice for use by proprietors in the production, cellar treatment, or finishing of wine, juice,

and distilling material, within the general limitations of this section: *Provided*, That when the specified use or limitation of any process on this list is determined to be unacceptable for use in foods and beverages by the U.S. Food and Drug Administration, the appropriate TTB officer may cancel or amend the approval for use of the process in the production, cellar treatment, or finishing of wine, juice, and distilling material.

PROCESSES AUTHORIZED FOR THE TREATMENT OF WINE, JUICE, AND DISTILLING MATERIAL

Processes	Use	Reference or limitation
Electrodialysis .....	To aid in the removal of tartrates .....	This process must not alter the vinous character of the wine.
Elimination of sulfur dioxide by physical process.	To reduce the sulfur dioxide content of juice.	Use of a physical process to remove sulfur dioxide from juice must not alter the basic character of the juice so treated
Ion exchange .....	Various applications in the treatment of juice or wine:	Anion, cation, and non-ionic resins, except those anionic resins in the mineral acid state, may be used in batch or continuous column processes as total or partial treatment of wine, provided that with regard to juice or finished wine; <ol style="list-style-type: none"> <li>Such treatment does not alter the fruit character of the juice or wine.</li> <li>The treatment does not reduce the color of the juice or wine to less than that normally contained in such juice or wine.</li> <li>Treatment does not increase inorganic anions in the juice or wine by more than 10 mg/L.</li> <li>The treatment does not reduce the metallic cation concentration in the juice or wine to less than 300 mg/L.</li> </ol>

PROCESSES AUTHORIZED FOR THE TREATMENT OF WINE, JUICE, AND DISTILLING MATERIAL—  
Continued

Processes	Use	Reference or limitation
		5. The treatment does not reduce natural or fixed acid in grape wine below 4 g/L for red table wines, 3 g/L for white table wines, 2.5 g/L for all other grape wines, 4 g/L for wine other than grape wine. 6. Treatment does not reduce the pH of the juice or wine to less than pH 2.8 nor increase the pH to more than pH 4.5. 7. The resins used have not imparted to the juice or wine any material or characteristic (incidental to the resin treatment) which may be prohibited under any other section of the regulations in this part. The wine-maker may employ conditioning and/or regenerating agents consisting of water, fruit acids common to the wine or juice being treated, and inorganic acids, salts and/or bases provided the conditioned or regenerated resin is rinsed with water until the resin and container are essentially free from unreacted (excess) conditioning or regenerating agents prior to the introduction of the juice or wine. 21 CFR 173.25.
Metal reducing matrix sheet processing.	To reduce the level of metals such as copper and iron in wine.	(1) The active ingredient, polyvinylimidazol, must not constitute more than 40% by weight of the sheet. (2) Use of the sheet must not significantly alter the color of the wine.
Nanofiltration .....	To reduce the level of volatile acidity in wine (used with ion exchange).	This process must use permeable membranes which are selective for molecules not greater than 150 molecular weight with transmembrane pressures of 250 psi or less.
Osmotic transport <sup>1</sup> .....	For alcohol reduction .....	(1) Use must not alter the vinous character of the wine (2) None of the stripping solution may migrate into the wine.
Reverse osmosis <sup>1</sup> .....	To reduce the ethyl alcohol content of wine and to remove off flavors in wine.	Permeable membranes which are selective for molecules not greater than 500 molecular weight with transmembrane pressures of 200 psi and greater. The addition of water other than that originally present prior to processing will render standard wine "other than standard." Use shall not alter vinous character.
Spinning cone column <sup>1</sup> .....	To reduce the ethyl alcohol content of wine and to remove off flavors in wine.	Use shall not alter vinous character. For standard wine, the same amount of essence must be added back to any lot of wine as was originally removed.
Sulfide reducing matrix sheet processing.	To reduce the level of sulfides in wine	(1) The active ingredient, polyvinylimidazol, must not constitute more than 40% by weight of the sheet. (2) Use of the sheet must not significantly alter the color of the wine.
Thermal gradient processing	To separate wine into low alcohol and high alcohol wine fractions.	The fractions derived from such processing shall retain vinous character. Such treatment shall not increase the alcohol content of the high alcohol fraction to more than 24 percent by volume. The addition of water other than that originally present in the wine prior to processing will render standard wine "other than standard."
	To separate juice into low Brix and high Brix juice fractions.	The low Brix fraction derived from such processing may be used in wine production. The high Brix fraction derived from such processing shall not be diluted with water for use in wine production.
Thin-film evaporation under reduced pressure <sup>1</sup> .	To separate wine into a low alcohol wine fraction and into a higher alcohol distillate.	Use shall not alter vinous character. Water separated with alcohol during processing may be recovered by refluxing in a closed continuous system and returned to the wine. The addition of water other than that originally present in the wine prior to processing, will render standard wine "other than standard."

PROCESSES AUTHORIZED FOR THE TREATMENT OF WINE, JUICE, AND DISTILLING MATERIAL—  
Continued

Processes	Use	Reference or limitation
Ultrafiltration .....	To remove proteinaceous material from wine; to reduce harsh tannic material from white wine produced from white skinned grapes; to remove pink color from blanc de noir wine; to separate red wine into low color and high color wine fractions for blending purposes.	Permeable membranes which are selective for molecules greater than 500 and less than 25,000 molecular weight with transmembrane pressures less than 200 psi. Use shall not alter vinous character. 21 CFR 175.300, 177.1520, 177.1550, 177.1630, 177.2440, 177.2600, and 177.2910.

<sup>1</sup> This process must be done on distilled spirits plant premises. However, reverse osmosis, under certain limited conditions, may be used on bonded winery premises if ethyl alcohol is only temporarily created within a closed system.

(Sec. 201, Pub. L. 85-859, 72 Stat. 1383, as amended (26 U.S.C. 5381, 5382, 5385, 5386, and 5387)).  
[T.D. ATF-299, 55 FR 24989, June 19, 1990, as amended by T.D. ATF-312, 56 FR 31081, July 9, 1991; T.D. ATF-350, 58 FR 52232, Oct. 7, 1993; T.D. ATF-371, 61 FR 21079, May 9, 1996; T.D. ATF-409, 64 FR 13683, Mar. 22, 1999; T.D. TTB-17, 69 FR 67644, Nov. 19, 2004]

**§ 24.249 Experimentation with new treating material or process.**

(a) *General.* The proprietor may, under the provisions of this section, conduct on bonded wine premises such experimentation with a treating material or process as the appropriate TTB officer finds may be conducted in a manner that will not jeopardize the revenue, conflict with wine operations, or be contrary to law.

(b) *Application.* The proprietor who wants to conduct experimentation must file an application with the appropriate TTB officer setting forth in detail the experimentation to be conducted and the facilities and equipment to be used. The proposed experimentation must not be conducted until the appropriate TTB officer has determined that the conduct of such experimentation must not jeopardize the revenue, conflict with wine operations, or be contrary to law, and has approved the application.

(c) *Segregation of operations.* Experimentation authorized under this section will be conducted with the degree of segregation from wine operations as may be required by the appropriate TTB officer under the provisions of § 24.27.

(d) *Records.* The proprietor shall, with respect to each experiment authorized by this section, keep records of the kind and quantity of materials received and used and the volume of wine treated and the manner by which disposed.

(e) *Disposition of the wine.* The disposition of the wine subjected to experimental treatment will conform to the conditions stated in the authorization to conduct the experimentation.

(Sec. 201, Pub. L. 85-859 (72 Stat. 1383, as amended (26 U.S.C. 5361, 5382))

(Approved by the Office of Management and Budget under control numbers 1512-0292 and 1512-0298)

[T.D. ATF-299, 55 FR 24989, June 19, 1990, as amended by T.D. ATF-409, 64 FR 13683, 13685, Mar. 22, 1999]

**§ 24.250 Application for use of new treating material or process.**

(a) *General.* If the proprietor desires to use a material or process which is not specifically authorized in §§ 24.246, 24.247, 24.248, or elsewhere in this part, an application shall be filed with the appropriate TTB officer to show that the proposed material or process is a cellar treatment consistent with good commercial practice.

(b) *Data required.* The application will include the following:

- (1) The name and description of the material or process;
- (2) The purpose, the manner, and the extent to which the material or process is to be used together with any technical bulletin or other pertinent information relative to the material or process;
- (3) A sample, if a proposed material;
- (4) Documentary evidence of the U.S. Food and Drug Administration's approval of the material for its intended