

Chapter NR 223

**INTERIM EFFLUENT LIMITATIONS FOR THE
BEVERAGE INDUSTRY, WINES, BRANDY,
BRANDY SPIRITS
WISCONSIN POLLUTANT DISCHARGE
ELIMINATION SYSTEM**

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Note: Pursuant to Chapter 74, Laws of 1973, in sections 147.04 (3) and (5) and under the procedure of section 227.027, Wis. Stats., the department of natural resources has promulgated interim effluent limitations which become effective February 1, 1974 and will remain in effect for a period of one year. These interim effluent limitations will be periodically replaced by permanent effluent limitations.

NR 223.01 Purpose. The purpose of this chapter is to establish interim effluent limitations for discharges from industrial point sources identified herein as authorized by section 147.04 (5), Wis. Stats.

History: Emerg. cr. eff. 2-1-74.

223.02 Applicability. These limitations apply to Standard Industrial Classification Codes 2084 and 2085, in the following subcategories;

- (1) Distilled spirits
- (2) Table wines
 - (a) In press season
 - (b) In process season
- (3) Distilled wines and brandies

History: Emerg. cr. eff. 2-1-74.

223.03 Operations excluded. (1) Rum distilleries are not covered by these limitations.

(2) Other interim effluent limitations in chapter NR 217, Wis. Adm. Code, are applicable to discharges from facilities which belong in the classifications of this section but are excluded from, or not specifically included in, its provisions.

History: Emerg. cr. eff. 2-1-74.

223.04 Application of interim limitations. (1) The limitations are restricted to use for whiskey distilleries and wineries.

(2) Non-contact cooling water and boiler blowdown are not included.

(3) Wineries making table wines have 2 phases of operation;

(a) The pressing of grapes into juice, and (b) the processing of juice into wine. During the pressing season, the tonnage of grapes processed is a significant production unit but during process season this unit is not valid. Many wineries produce products blended with purchased wine, so that wine production is the significant production unit during the non-pressing season.

History: Emerg. cr. eff. 2-1-74.

223.05 Description of abatement models. The following paragraphs describe in general terms the type of treatment facilities considered to be best practicable treatment technology for the purpose of establishing the interim effluent limitations of this chapter. This description is included to illustrate the type of treatment required. Other treatment technology may be acceptable.

(1) Distilled Spirits (Distilleries)—The following process considerations and treatment facilities can be used to achieve the “best practicable pollution control technology currently available”:

- (a) Recycle of cooling water;
- (b) Maximum by-product recovery from stillage;
- (c) Improved evaporator entrainment for better separation of organics contained in released water vapors in the feed recovery operation;
- (d) Elimination of frequent and unnecessary spillage, overflows, dumps, and excess running water;
- (e) Biological oxidation by trickling filters and/or activated sludge;
- (f) The effluent limits are based on an effluent BOD₅ and suspended solids concentration of 30 milligrams per liter. The process wastewaters from this industry are readily amenable to biological treatment.

(2) Wineries—The following elements were used to develop the best “practicable pollution control technology currently available” for “wineries”:

- (a) Wine recovery from “lees” and dry handling of the resulting waste solids;
- (b) Elimination of frequent and unnecessary spillage, overflows, dumps, and excess running water;
- (c) Elimination of cloth filters;
- (d) Use of low-volume, high-pressure methods of cleaning process tanks;
- (e) Maximum possible recirculation and reuse of cooling, washup and process water;
- (f) Biological oxidation by activated sludge or equivalent process.
- (g) Disinfection, if necessary.

The effluent limits are based on BOD₅ and suspended solids levels of 30 and 40 mg/l respectively.

History: Emerg. cr. eff. 2-1-74.

223.06 Table of interim effluent limitations in pounds per unit production.^{1, 2}

<i>Industry Class</i>	<i>Unit Production³</i>	<i>BOD₅</i>	<i>Suspended Solids</i>	<i>Settleable Solids Not to Exceed</i>
(1) Distilled Spirits (Distilleries)	1000 Bushels of Grains Processed	11.5	11.5	0.1 ml/l ⁴
(2) Wineries, Table Wines				
(a) Press Season	Tons of Grapes	0.15	0.20	0.1 ml/l
(b) Process Season	1000 Gallons of Wine	5.8	7.8	0.1 ml/l
(3) Wineries, Distilled Wines and Brandies	Tons of Grapes	0.23	0.23	1/1 ml/l

NOTES:¹ Daily average for a period of 30 consecutive days.² For kilograms/unit divide by 2.2.³ Based on daily raw material use or production, as indicated for average of highest 7 consecutive production days.⁴ ml/l means milliliters per liter.**History:** Emerg. cr. eff. 2-1-74.