

## Chapter NR 295

## SUGAR PROCESSING

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**NR 295.01 Purpose.** The purpose of this chapter is to establish effluent limitations, standards of performance, and pretreatment standards for discharges of process wastes from the sugar processing category of point sources and subcategories thereof.

**Note:** The authority for promulgation of this chapter is set forth in ch. NR 205.

**History:** Cr. Register, June, 1976, No. 246, eff. 7-1-76.

**NR 295.02 Applicability.** The effluent limitations, standards of performance, pretreatment standards, and other provisions in this chapter are applicable to pollutants or pollutant properties in discharges of process waste resulting from operations in any of the following subcategories.

(1) **BEET SUGAR.** This subcategory covers the processing of sugar beets to produce sugar.

(2) **CRYSTALLINE CANE SUGAR.** This subcategory covers the processing of raw cane sugar into crystalline refined sugar.

(3) **LIQUID CANE SUGAR REFINING.** This subcategory covers the processing of raw cane sugar into liquid refined sugar.

**History:** Cr. Register, June, 1976, No. 246, eff. 7-1-76.

**NR 295.03 Definitions.** The following definitions are applicable to terms used in this chapter. Definitions of other terms and meanings of abbreviations are set forth in ch. NR 205.

(1) "Barometric condensing operations" means those operations or processes directly associated with or related to the concentration and crystallization of sugar solutions.

(2) "Melt" means the amount of raw sugar in the aqueous solution at the beginning of the process of producing refined cane sugar.

(3) "Net basis" means the amount of process pollutants added above those amounts present in the process water used.

(4) "Product" means crystallized refined beet sugar.

**History:** Cr. Register, June, 1976, No. 246, eff. 7-1-76.

**NR 295.04 Compliance with effluent limitations and standards.** Discharge of pollutants from facilities subject to the provisions of this chapter may not exceed, as appropriate:

(1) By July 1, 1977 effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available;

(2) By July 1, 1983 effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable;

(3) Pretreatment standards for discharges to publicly owned treatment works;

(4) Standards of performance for new sources.

**History:** Cr. Register, June, 1976, No. 246, eff. 7-1-76; r. and recr. Register, August, 1983, No. 332, eff. 9-1-83.

**NR 295.06 Application of effluent limitations and standards.** (1) The effluent limitations and standards set forth in this chapter shall be used in accordance with this section to establish the quantity or quality of pollutants or pollutant properties which may be discharged by a point source subject to the provisions of this chapter, except as;

(a) They may be modified in accordance with subch. IV of ch. NR 220,

(b) They may be superseded by more stringent limitations and standards necessary to achieve water quality standards or meet other legal requirements, or

(c) They may be supplemented or superseded by standards or prohibitions for toxic pollutants or by additional limitations for other pollutants required to achieve water quality.

(2) The production basis for application of the limitations and standards set forth in this chapter shall be the daily average of a maximum month in each subcategory subject to the provisions of this chapter.

**History:** Cr. Register, June, 1976, No. 246, eff. 7-1-76; correction in (1) (a) made under s. 13.92 (4) (b) 7, Stats., Register April 2018 No. 748.

**NR 295.10 Effluent limitations, best practicable treatment.** The following effluent limitations for all or specific subcategories establish, except as provided in subch. IV of ch. NR 220, the quantity or quality of pollutants or pollutant properties which may be discharged by a facility subject to the provisions of this chapter after application to process wastes of the best practicable control technology currently available.

(1) The pH limitations and the 30-day average and daily maximum limitations for BOD<sub>5</sub> and suspended solids are set forth in table 1 for 2 types of discharges from each subcategory;

(a) Discharges from barometric condensing operations only, and

(b) Discharges from barometric condensing operations combined with discharges of other process wastes.

(2) The limitations for BOD<sub>5</sub> and suspended solids in table 1 are in lbs/1000 lbs. or kg/1000 kg. of product for the beet sugar subcategory and of melt for both cane sugar subcategories, and shall be on the net basis for either of the cane sugar subcategories where the type of discharges described in sub. (1) (b) are mixed and cannot be separated for measurement.

(3) In addition to the limitations of sub. (2), discharges from the beet sugar subcategory shall also be limited;

(a) For discharges described in sub. (1) (a) to the temperature acceptable for recirculation to the heat source or in any event not to exceed 90°F (32°C), and

(b) For discharges described in sub. (1) (b) to a temperature of 90°F (32°C) and a fecal coliform MPN of 400/100 ml.

TABLE 1  
BPT EFFLUENT LIMITATIONS

Subcategory*	Type of Discharge	Suspended Solids		BOD <sub>5</sub>		pH Range
		Average	Maximum	Average	Maximum	
(1)	(a)			2.2	3.3	6.0-9.0
	(b)	2.2	3.3	2.2	3.3	6.0-9.0

(2)	(a)			.34	1.02	
	(b)	.09	.27	.43	1.19	6.0-9.0
(3)	(a)			.15	.45	
	(b)	.17	.50	.32	.78	6.0-9.0

\*Subcategory as identified in s. NR 295.02

**History:** Cr. Register, June, 1976, No. 246, eff. 7-1-76; correction in (intro.) made under s. 13.92 (4) (b) 7, Stats., Register April 2018 No. 748.

**NR 295.11 Effluent limitations, best available treatment.** The following effluent limitations for all or specific subcategories establish the quantity or quality of pollutants or pollutant properties which may be discharged by a facility subject to the provisions of this chapter after application to process wastes of the best available technology economically achievable.

(1) For facilities in the beet sugar subcategory processing more than 2,300 tons (2,090 kkg) daily of sliced beets and located where the soil filtration rate, naturally or by deliberate design within the boundaries of waste water treatment or retention facilities, in available areas is more than 1/16-inch (0.159 cm) per day there shall be no discharge of process wastes to surface waters.

(2) For facilities in the sugar beet subcategory processing a

smaller quantity of sliced beets than is set forth in sub. (1), and/or located where the soil filtration rate is less than set forth therein, the discharges shall be limited as set forth in subs. (3) and (4).

(3) For facilities subject to the provisions of this chapter other than sub. (1) the pH limitations and the 30-day average and daily maximum limitations for BOD<sub>5</sub> and suspended solids are set forth in table 2. Limitations are set forth for 2 types of discharges from facilities described in sub. (2);

(a) Discharges from barometric condensing operations only, and

(b) Discharges from barometric condensing operations combined with discharges of other process wastes.

(4) In addition to the limitations of sub. (3) discharges from facilities described in sub. (2) shall be limited as set forth in s. NR 295.10 (3) (a) and (b).

TABLE 2  
BAT EFFLUENT LIMITATIONS

Subcategory*	Type of Discharge	Suspended Solids		BOD <sub>5</sub>		pH Range
		Average	Maximum	Average	Maximum	
(1)	(a)			1.3	2.0	6.0-9.0
	(b)	1.3	2.0	1.3	2.0	6.0-9.0
(2)		.035	.11	.09	.18	6.0-9.0
(3)		.03	.09	.15	.30	6.0-9.0

\*Subcategory as identified in s. NR 295.02

**History:** Cr. Register, June, 1976, No. 246, eff. 7-1-76.

**NR 295.12 Standards of performance.** The following effluent limitations for all or specific subcategories establish the quantity or quality of pollutants or pollutant properties which may be discharged by a facility which is a new source subject to the provisions of this chapter.

(1) For the beet sugar subcategory there shall be no discharge of process wastes to surface waters.

(2) For both cane sugar subcategories the pH limitations and

the 30-day average and maximum daily limitations for BOD<sub>5</sub> and suspended solids are set forth in table 2.

**History:** Cr. Register, June, 1976, No. 246, eff. 7-1-76.

**NR 295.13 Pretreatment standards.** The pretreatment standards for discharges to publicly owned treatment works from sources subject to the provisions of this chapter shall be as set forth in ch. NR 211.

**History:** Cr. Register, June, 1976, No. 246, eff. 7-1-76; r. and recr. Register, August, 1983, No. 332, eff. 9-1-83.