

# Waste Beer

## DESCRIPTION

The major organic component of brewery wastewater is beer itself. Beer can be lost at many points in the brewing and bottling process, though many of these losses are unplanned (e.g., spills during maintenance). One “planned” cause of beer loss in larger breweries is spillover, in which beer cans are overfilled before being sealed to keep air out.<sup>1</sup>

## CLASSIFICATION

Starch and sugars

## SOURCE INDUSTRY

[Breweries](#)

## ANNUAL VOLUME GENERATED IN WISCONSIN

Unknown. The Coors facility in Golden, Colo., is estimated to lose 22 million gallons a year to spillover.<sup>1</sup>

## CURRENT APPLICATIONS

None

## COST

Variable; can be disposed of through municipal sewer systems

## APPLICABLE BIOREFINING PROCESSES

[Anaerobic digestion](#), [aqueous-phase reforming](#)<sup>2</sup>, [fermentation of 6-carbon sugars and starches](#)<sup>1</sup>

## REFERENCES

<sup>1</sup> Biofuels Update. 1996. “Beer Spillover Used to Produce Clean Fuel.” US Department of Energy. [www.ott.doe.gov/biofuels/pdfs/bu\\_v4-3.pdf](http://www.ott.doe.gov/biofuels/pdfs/bu_v4-3.pdf) (16 April 2004).

<sup>2</sup> Wisconsin Renewable Quarterly. 2003. “Virent Energy: Tapping Into the Power of Sugar Water.” RENEW Wisconsin. Spring 2003. [www.renewwisconsin.org/newslet/ReQSp03\\_v8\\_2.pdf](http://www.renewwisconsin.org/newslet/ReQSp03_v8_2.pdf) (16 April 2004).