



An ethanol clean-in-place (CIP) replacement chemistry

ChemTreat's FlexClean treats fermenters, mash trains, yeast propagation, evaporators, beer columns, reboilers, evaporators, and corn oil separations systems.

History

The primary cleaning aid for this industry is a 2–5 percent caustic solution.

Caustic is a moderately effective cleaner with various disadvantages:

- Caustic foam bubbles do not provide scrubbing action needed to clean surfaces
- High concentration of OH is needed to be effective on organics
- Ineffective on mineral scale and can make scale harder
- Multi-month bulk deliveries are necessary and expensive
- Large quantities of flush water are needed to remove sodium
 - Sodium is a stressor for yeast
 - Moves plants towards being water positive

ChemTreat's Solution

A broad-spectrum cleaning product that is effective on scale and organics.

This product works on various cleaning opportunities in an ethanol plant.

Advantages of FlexClean:

- Effective at removing mineral scale and organics
- Lower yeast stress improves fermentation
- Low sodium treatment
- Minor modification to the CIP procedure
 - Still uses CIP tank
 - FlexClean will replace caustic in the bulk caustic tank
- Reduction in CIP cost with strong performance



ChemTreat cannot guarantee results.

Technical Benefits

FERMENTATION

Clean fermenters equate to lower yeast stress, less glycerol, and more ethanol

MASH TRAINS

Increases run times and heat transfer

YEAST PROPAGATION

Cleaning reduces risk of contamination and fermentation infections

BEER COLUMNS

Increases heat transfer and distillation, and reduces steam demand

REBOILERS

Reduces downtime and increases run times between CIP

EVAPORATORS

Longer run times, less downtime, and lower pressures, which reduces the amount of steam needed

CORN OIL SEPARATION

Reduces vibrations and extends time between costly rebuilds

In most cases, optimization of FlexClean significantly reduces program costs and improves cleanliness

ChemTreat cannot guarantee results.

 FlexClean



Water and
Energy Savings



Expert
Staff



Smart
Technology

