



TYPICAL DAIRY PLANT DATA: DAIRY PROCESSING PLANT COULD REDUCE 16% TO 32% OF PHOSPHORUS IN EFFLUENT

Switching to Envirocid™ Plus CIP acid can help to meet internal and external limits on phosphorus.

CHALLENGE

A typical dairy plant is facing increasing local and internal targets for phosphorus reduction in effluent. There are two large contributors to phosphorous in dairy plant effluent -- the milk itself, and acid cleaning products. Significantly reducing the amount of phosphorous going to effluent is critical for both sustainability and compliance goals.

SOLUTION

If a plant receives 1,000,000 lbs of milk per day, on average there is about 1000 mg/L of phosphorus in milk. Assuming the milk loss for this plant is about 2%, this would result in a loss of 20,000 pounds of milk per day, which results in 20 pounds of phosphorus lost to the drain per day. On a yearly basis, the milk loss would result in about 7300 pounds of phosphorus lost per day, assuming a seven day production schedule.

If the plant uses an acid cleaning product that contains as low as 2-5% phosphoric acid and uses approximately 75 gallons per day, this would result in about 4-10 pounds of phosphorus lost to the drain per day, or about 1400 - 3500 pounds of phosphorus lost to the drain per year. This indicates that phosphorus loss from the acid cleaning product represents about 16-32% that of the phosphorus loss from milk.

RESULTS

Using the non-phosphorus CIP acid, Envirocid Plus, would result in a 16-32% decrease in phosphorus loss for a typical plant.

SUSTAINABILITY

Ecolab solutions are designed with a comprehensive approach that can help you conserve resources, improve safety and reduce waste - helping to create a cleaner, healthier, safer environment.

Envirocid Plus can help meet your sustainability goals with a reduction in phosphorous discharge.

