



Catalysts

*making things happen...*

# BactoShield

USFDA Approved QAC based  
Sugar Mill Sanitization Solution



Mill sanitation is an important step in the sugar manufacturing process. Certain bacteria like *Leuconostoc* can lead to sucrose loss in the juice by inversion, slime formation and bad odour. Besides, *Leuconostoc* contamination, other bacterial and fungal contamination within the sugar mills deteriorates the quality of sugar thus leading to deficient recovery. To control these micro-organisms and prevent sucrose losses, **Catalysts Group** introduced a specific antimicrobial combination, formulated as **BactoShield**.

**BactoShield**; a liquid disinfectant, non-toxic & environment friendly product, specially designed for sugar industry. It has an advanced next generation quaternary ammonium compound based antimicrobial formulation, which makes it highly effective to control microbial flora within the sugar manufacturing process. Its lowest toxicity level is also a unique property over the biocides toxicants in the system and effect sugar recovery.

## Features

Easy to use  
liquid format

Effective on low  
dosage of 5 ppm

More effective  
over conventional  
biocides

More powerful  
due to synergistic  
effect of blended  
compounds

Effective on a  
variety of feedstocks  
like juice, syrup,  
molasses

Prevent quality  
deterioration of  
cane juice

Stable product  
with up to one  
year shelf life

Suitable to use in  
both sulphitation  
& defecation  
process

## Mode of Action

**BactoShield** impairs permeability in microbial cells by irreversibly binding to the proteins & phospholipids of the cell membrane resulting in making the cells more permeable. Usually, it becomes bound to the wall protein and is thus able to enter & destroy the microbial cells membrane resulting in loss of viability. Simultaneously, it acts on cytoplasmic membrane to make that permeable due to electrostatic interaction with acid phospholipids of cytoplasmic membrane leading to destructive effect of microbial cell. Bactericidal effect of **BactoShield** is very rapid at high concentration due to cytoplasm coagulation.

## Application & Dosage

**BactoShield** is recommended to dose in split manner at 5 ppm dosage rate on cane crushed quantity. Dosage may extend to 10 ppm depending on the level of bacterial contamination. Depending on the origin of bacterial contamination, dosage points can be identified while standard dosing point at the sugar process are milling station, mix juice, filter juice and syrup tank.

## Advantage

- Prevent juice deterioration occurs through undesired bacterial contamination
- Reduce sucrose inversion
- Maintain maximum sugar yield
- Reduce contamination & scum formation
- Improves filtration efficiency & proper crystallization
- Reduce VA level in process

## Benefits

- Systematic Scientific Approach - a proper approach to convert valuable sugar by combining a process optimisation with suitable product incorporation to obtain a systematic dosage cum rehydration pattern for optimum product performance.
- Technical Support Team - Dedicated technically strong team works onsite to establish a systematic scientific approach and proper data mining cum observations
- On-site in-depth analysis - Timely gap analysis to ensure product & optimised process performance
- State-of-the-art Laboratory Support - Time-course analysis of samples via advanced scientific instruments and in-depth parameters analysis like HPLC (High Performance Liquid Chromatography) for accurate analysis and complete profiling of different sugars and volatile acid

