

# BIOMATE

## SUGAR PROCESSING CHEMICAL

**BIOMATE : SODIUM DIMETHYL DITHIO CARBAMATE BIOCIDES FOR SUGAR MILLS**

### ❖ PRODUCT DESCRIPTION

BIOMATE inhibits enzyme Inverters and is a broad spectrum microbicide against bacteria like *Leuconostoc* and fungi that cause sucrose losses, troublesome slime and bad odors during the manufacture of cane sugar.

### ❖ PURPOSE

Sugarcane contains an enzyme Invertase which is released and activated when cane is crushed and is one of the major factors responsible for sucrose loss. Sugarcane juice is a perfect medium for the growth of many bacteria and fungi. These micro-organisms proliferate in the crushers, piping and weigh tanks through which the juice passes and become another major source of sucrose loss. BIOMATE is recommended to minimize this loss.

### ❖ SPECIFICATIONS

Appearance	: Clear pale yellow to orange coloured liquid
Odour	: Characteristic
Wt./ml.	: $1.05 \pm 0.05$ gm.
pH ( 100 ppm in distilled water )	: 9 - 10
Solubility	: Dissolves in water

### ❖ APPLICATION

BIOMATE is highly effective against enzyme Inverters, troublesome bacteria like *Leuconostoc mesenteroides*, *Aerobacter* and yeasts like *Saccharomyces*, which are unavoidable in sugar mill system.

Inversion losses, hence, are reduced by the use of BIOMATE which results in reduction of invert/reducing sugar of mixed juice (and increase in sugar recovery)

BIOMATE can be added to the cane juice at a point / points. Where it will circulate to all parts of grinding equipments, troughs, screens and pipes with which the juice comes in contact.

Two point feeding is usually recommended for the application of BIOMATE approximately 35 per cent of the dosage should be added to the juice from the crusher (i.e. on 1st mill) and remaining quantity (approximately 65 % of the dosage) should be added to the juice from the next to last mill. BIOMATE should never be added to the maceration / imbibition water.

BIOMATE is more effective when added to the juice having pH value below 5.5 Higher juice temperatures upto 65 C also increase its efficiency.

#### ❖ **ADVANTAGES**

1. Prevents sugar loss by enzyme invertase
2. Acts against enzymes released by micro-organisms
3. Prevents bacterial & fungal inversion of sugar
4. Reduces invert sugars in mixed juice & clarified juice
5. Destroys bacteria and fungi.
6. Controls slime and odour.
7. Reduces corrosion of grinding equipment.
8. Improves clarification & pan boiling.
9. Reduces need for cleaning.
10. Converted to non toxic product & does not remain in sugar hence is safest for use in sugar mill.
11. Easy to does & handle as in liquid form.

#### ❖ **DOSAGE**

BIOMATE should be fed continuously at a total feed rate of 8-10 parts per million based on the weight of cane ground. In order words, 8 -10 kg. BIOMATE for each 1000 tons of cane crushed.

#### ❖ **FEEDING**

BIOMATE should be fed continuously at the desired dosage. It can be fed directly, as is or can be diluted with water & fed at the points mentioned. Since BIOMATE has a characteristic smell the feed tube should be immersed into juice. Dripin should be avoided.

#### ❖ **PACKING**

BIOMATE is available in 50 kgs. HDPE carbouys.

❖ **HANDLING**

Keep out of reach of children. Poison. Do not drink or ingest. Use hand gloves and follow appropriate standard precautions while handling. Avoid contact with skin and eyes. On contact, wash affected area with plenty of water.

Mfg. By :

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