

BIOCIDES FOR SLIME CONTROL

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An Unbiased Review of Oxidizing and Non-Oxidizing Biocides used in White Water Systems

Biocides are commonly used to control the growth of micro-organisms in mill white water systems. Competing suppliers provide a wide range of trade-name products that vary significantly in cost and claimed performance.

This course provides an unbiased look at the chemicals available for slime control in white water systems. Specific characteristics and pros/cons of each biocide option are discussed.

This course is based on a successful mill project (Taylor et al., 2008) along with a review of the technical literature.

The following items are covered:

- What is slime?
 - Structure and composition
 - Corrosion from slime
 - Off-grade from dirt specks
- Oxidizing biocides.
 - Chlorine dioxide
 - Hypochlorous acid
 - Hypobromous acid
 - Hydrogen peroxide
 - Buffering agents for oxidizing biocides
 - Effect of oxidizing biocides on machine fabric
- Non-oxidizing biocides
 - Quaternary ammonium salts
 - Copper salts
 - DBNPA
 - Isothiazolinones
 - Aldehydes
 - Carbamates
 - Selection procedure
- Monitoring methods.

Reference:

TAYLOR, K., TONG, E., LUNN, R., "Detailed Chemical Analysis of Dirt Specks in Celgar Off-Grade Pulp", Best Mill Paper, PAPTAC Pacific Coast Branch Conference, April 20-21, 2007. Presented at PACWEST, May 9-11, 2007. Pulp & Paper Canada, 109(5), 34-38 (May, 2008).