

Control metal ions & hit your brightness target

Is poor metals management raising your bleaching costs?

Buckman can improve efficiency in your mechanical pulping system.

Buckman has formulated a new generation of multiple component products and bleaching stabilizers that provide superior results due to their synergistic effects. These products, coupled with Buckman application and process knowledge in metals management and mechanical pulp bleaching, can help mechanical pulp customers reduce costs, improve quality, and increase productivity.

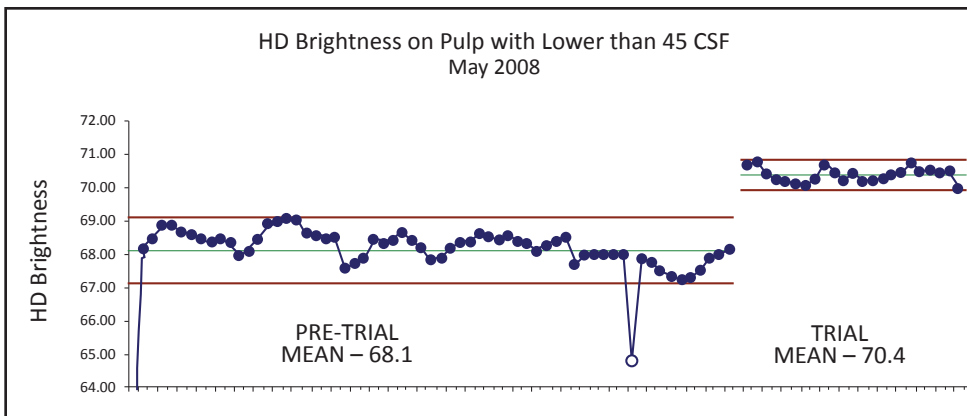


Figure 1: Brightness improvement with Buckman chelants.



Advantages

- Reduce bleach usage for lower overall bleaching costs.
- Reduce or eliminate dryer reversion of brightness
- Improve ability to manufacture higher brightness paper and allow for grade development
- Reduce Kraft or dry strength consumption by cutting fiber strength loss through bleaching process
- Prevent brightness loss from white water or filler contamination
- Reduced bleach carryover lowers soluble charge and minimizes interference with retention program, saving on retention aid expense
- Improve bleaching response time
- Reduce anionic trash from peroxide bleaching process by reducing silicate usage, thereby increasing retention efficiency
- Reduced filler usage
- Reduced use of coating brightness agents (TiO₂)

Cost benefits

- Improve bleaching efficiency and use less bleach
- Substitute lower quality wood and still maintain same target brightness
- Improve machine efficiency by preventing scale/deposits by reducing or eliminating silicate
- Increase brightness response from bleaching chemicals to achieve equivalent brightness at a lower cost

Peroxide bleaching

Controlling metal ions is imperative. In an alkaline environment, these metal ions and complexes decompose the peroxide before it has a chance to fully perform its function—by hydrolyzing and forming a highly colored insoluble precipitate that adsorbs onto the fiber, causing a loss in brightness.

Busperse® 2140, a proprietary blend of ingredients, reacts with metal ions to form a stable complex to prevent oxidation and formation of insoluble precipitates that result in brightness loss. Busperse 2140 is also a scale inhibitor and anti-precipitation agent for scale caused by polyvalent metal ions. Busperse 258, a unique new product, can help to increase brightness and reduce brightness reversion.

Buckman offers peroxide bleaching stabilizers Buckman® 445/ Buckman 449 in an easy-to-pump slurry that inhibits damaging metal ion activity while improving brightness and minimizing silicate scaling on equipment surfaces.

Sulfite bleaching

Hydrosulfite bleach is a reducing agent. The metal ions can be oxidized by entrained air or by oxidizing biocides to form highly colored insoluble precipitates that adsorb onto bleached fibers, causing discoloration and a loss of brightness. Busperse 2140 forms a stable complex with these metal ions and blocks their reactive sites avoiding brightness loss. Busperse 258 can be used to increase hydrosulfite brightening, reducing levels of hydrosulfite bleach and the potential for brightness reversion.

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