

Oxywhite

Food Grade Whitener for Sugar Industry

Decoloration agent for Re-melt liquor (Carbonation Process)

Description

Oxywhite is a Food grade oxidant in aqueous phase, formulated for de-coloration of re-melt liquor, cane juice and syrups.

Where to Use

LOCATION: Apply at Re-melt vessels for de-coloration in Refined Sugar process. It is known that color removal during carbonation is dependent on the melt color, amount of lime added and the final pH.

Call our representative for use of Oxywhite at

- Re-melt liquor de-coloration in Refined Sugar process- Phosphatation.
- In Raw Sugar Mill, applied to raw syrup for de-coloration

Yield

Decoloration of Re-melt liquor with Oxywhite improves the color reduction across Carbonation step from conventional 50-55% to 60-65%.

Packaging

30 Kg and 240 Kg PE drums or 1 MT IBC. Bulk delivery by dedicated tank-trucks.



Features

- Replaces conventional bleaching agents
- An oxidative decolorant in clear aqueous solution
- Oxywhite is dosed to sugar syrup on a continuous basis.
- Syrup treated with Oxywhite enhance the performance of down stream process steps such as Activated Carbon or Ion Exchange
- Oxywhite is free of insolubles and particulates
- TPL offers customized dosing system to bulk customers. and safe handling system for Oxywhite.
- Oxywhite is approved by Thai FDA approval
- Environment friendly, Oxywhite adds no load to mill effluents.

Benefits

- Decoloration efficiency is better than conventional bleaching agent at less cost
- Better color removal, due to aqueous media hence quick mixing with syrup and destroys color compounds by attacking susceptible functional groups and not affecting sucrose molecule.
- Easy adaptability to existing equipment setup
- Increased throughput of syrup between regenerations of the bed. Saves regeneration chemicals and reduces sweet water generation.
- Less ash content and better clarity in treated sugar syrup.
- Ensures safe handling of Oxywhite till point of entry to the customer equipments.
- A GRAS category de-colorant (generally recognized as safe for food). Consistency of quality & compatibility.
- Adds no load to mill effluents.

Ingredients

Formulated mix of special stabilizers and high purity Hydrogen peroxide, compliant with US-FDA codex.

Specifications

H₂O₂ 35.1 – 35.8 %w/w
Stability >99.6% , 96+/-1degC, 3 hrs
pH 4.0 – 5.0

Storage

Store in vented container in cool, dry and well ventilated place. Keep away from children, pets, flame, heat, combustible material, acid, base, amine and reducing agent such as metals.

Shelf Life

Best before 1 year from date of production, when properly stored

How to Apply

Oxywhite dosing systems are designed & installed by TPL engineers and technicians who are well trained about safe handling and application of peroxygen compound.

Dosing system generally consists of a Bulk tank, Day tank , Metering pump and peroxide compatible Piping and Accessories.

TPL offers services for its product Dosing systems and Bulk Tank Installation suitable to individual customer's need.

Thai Peroxide Co., Ltd. (Aditya Birla Group)

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Tel : 66-2-704 2100 Fax : 66-2- 748 4970

Website and Contact

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Oxywhite

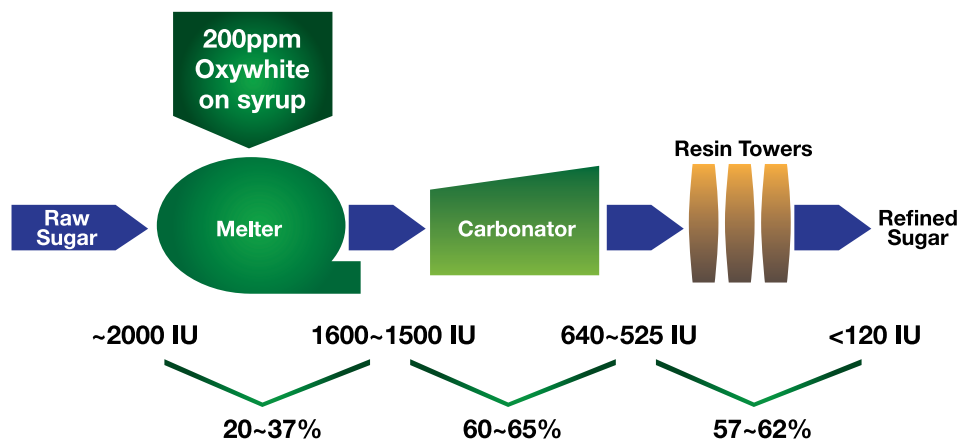
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Description Advantages of Oxywhite in Refinery process

- Data shown is based on commercial trial.
- Oxywhite de-coloration efficiency is indicated by increased reduction in color across Carbonation step, It is more than 60% compared to conventional 50-55%.
- Improved Refined Sugar quality can fetch more value than the cost of Oxywhite used per ton of sugar.

Oxywhite dosing to Re-Melt Tank in Refined Sugar Process with Carbonation



Process Condition at Melter

Dry Substance : 60-65 Brix
Temperature : 70-75C
Flow Rate : 40 M3/hr

Oxywhite 200ppm Dosing Condition

Oxywhite Conc. : 35% H2O2
Temperature : Room Temperature
Pump flow rate : 20 Lit/hr

Observation

- More air bubble formation in melter tank
- Lower color load to Resin remelt liquor color from 300 IU to <120 IU
- Lower resin regeneration time and sodium chloride

Estimated consumption of Oxywhite: 0.95 Kg/MT Refined Sugar at above conditions

Trial Data :Oxywhite Dosage Rates

Sugar Liquor flow rate M3/hr	100ppm dosage Oxywhite flow	200ppm dosage Oxywhite flow	300ppm dosage Oxywhite flow	400ppm dosage Oxywhite flow
10 M3/hr	2.5 lit./hr	5 lit./hr	7.5 lit./hr	10 lit./hr
30 M3/hr	7.5 lit./hr	15 lit./hr	22.5 lit./hr	30 lit./hr
40 M3/hr	10 lit./hr	20 lit./hr	30 lit./hr	40 lit./hr
60 M3/hr	15 lit./hr	30 lit./hr	45 lit./hr	60 lit./hr
80 M3/hr	20 lit./hr	40 lit./hr	60 lit./hr	80 lit./hr
100 M3/hr	25 lit./hr	50 lit./hr	75 lit./hr	100 lit./hr



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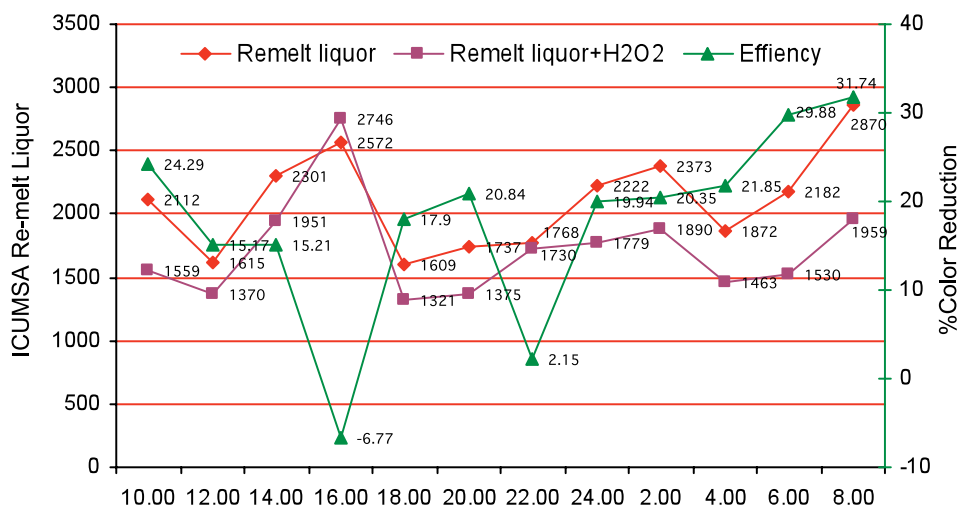
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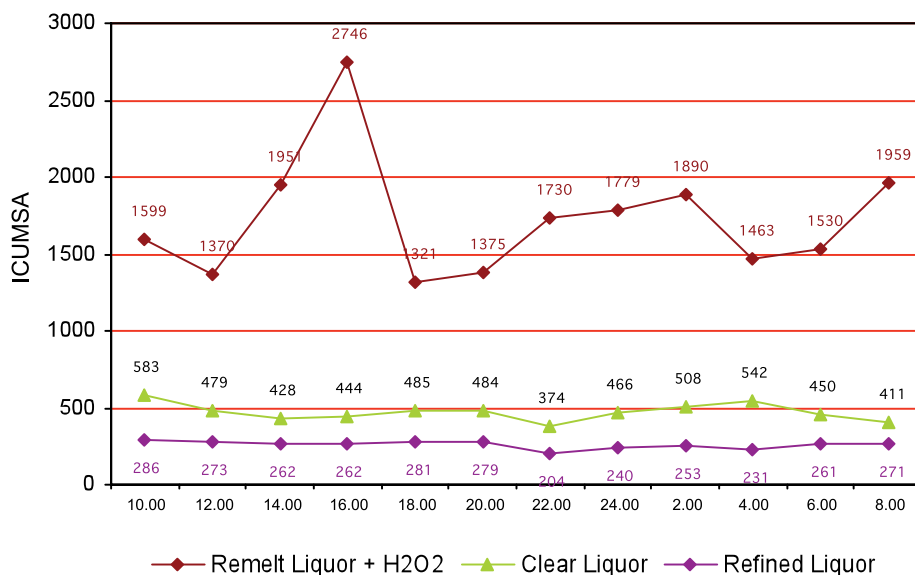
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Oxywhite 200ppm dosage at Re-melt tank



Oxywhite 200 ppm Efficiency



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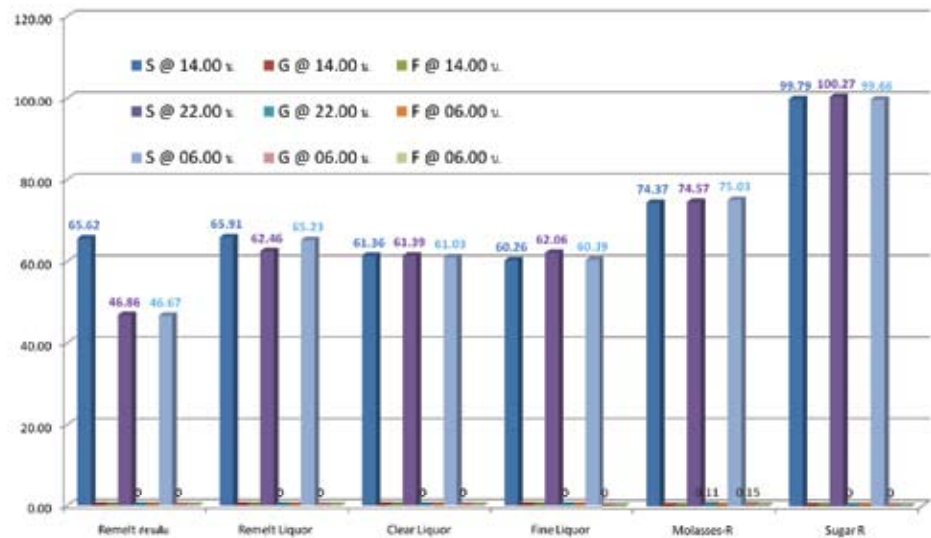
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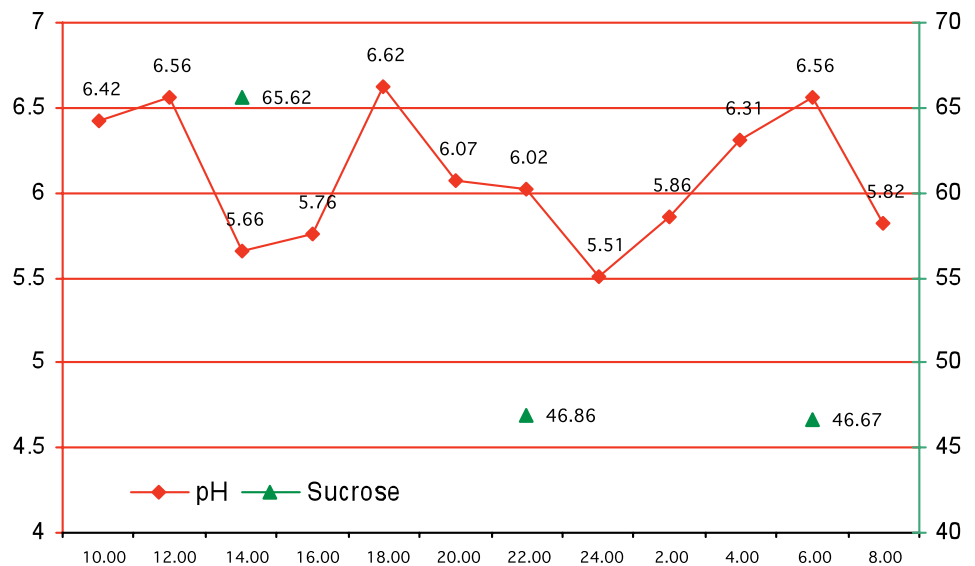
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Oxywhite 200 ppm No Side effect to Sucrose
High Performance Liquid Chromatography – HPLC result approving no sucrose conversion



Remelt Liquor pH and Sucrose Before Oxywhite 200ppm



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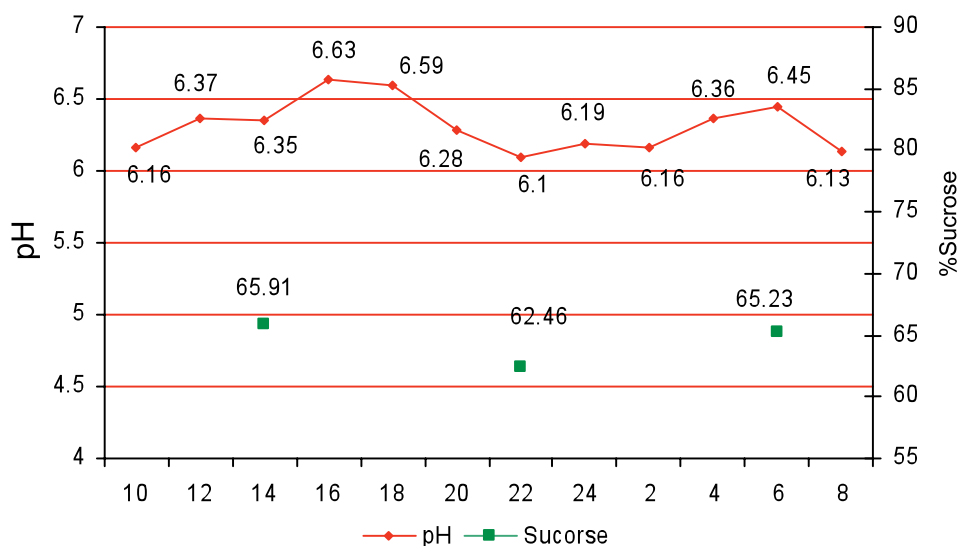
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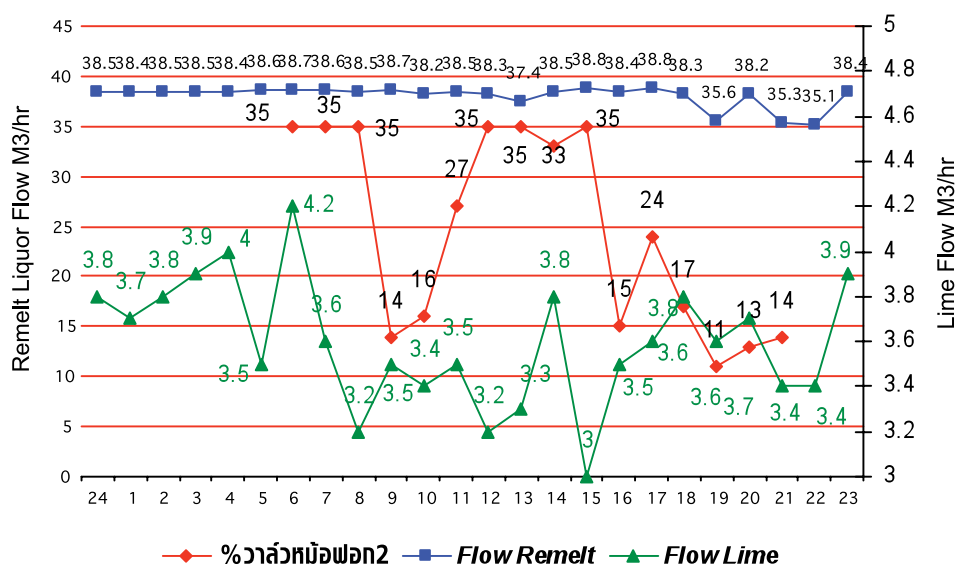
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Remelt Liquor pH and %Sucrose after Oxywhite @200ppm
Cause no effect to sugar pH and % production yield



Saving % CO2 Valve & Lime Flow Rate after Oxywhite @200ppm



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How to get started with Oxywhite at your Refined Sugar Process

- Call TPL sales office and they will arrange the technical support team to visit your works.
- Oxywhite reduces color significantly, but optimum dosage needs to be established for each mill through plant trials, using the available guidelines.
- Oxywhite Handling precautions are advised to all customers by our Safety expert.

Oxywhite Dosing Unit



Typical arrangement for Oxywhite

TPL offers Oxywhite in 1MT IBC tanks and advises customer in designing the suitable & safe dosing system.

Health Safety and Environment

Oxywhite being an oxidant, needs caution in handling and storage. It is highly recommended that users should read, understand and follow Material Safety Data Sheet available at our website and through customer service.

FMC



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