

Single Phase Cleaning - Enhance 567

Do you have concerns about cleaning time, acid usage, water usage, and energy consumption?

Did you know Hydrite has single phase cleaning products that can reduce or eliminate the need for acid cleaning and associated rinse steps?

Enhance No. 567 is a concentrated chelant additive that “enhances” the cleaning effectiveness of caustic solutions, especially in hard water. It also helps control excessive foam formation and aids in rinsing. *When used at elevated concentrations, in the range of 3400 to 6600 ppm chelation, it can dissolve mineral scale from equipment surfaces—reducing or eliminating the need for an acid wash and associated rinse.*

Product Features

- Non-phosphated to reduce effluent phosphorous levels.
- Contains powerful chelating agents that can dissolve and disperse calcium and magnesium deposits.
- Can be added to caustic cleaning solutions to boost detergency and aid in washing and rinsing in hard water.
- Can reduce and/or eliminate the need for acid washes when used at recommended concentrations.

Applications

- For evaporator, separator, and HTST cleaning, add 1.0 to 1.5 ounces of Enhance No. 567 per gallon of caustic cleaning solution.
- For moderately hot processing equipment, add 0.5 to 1.0 ounces of Enhance No. 567 per gallon of caustic cleaning solution.
- Enhance No. 567 should be added to cleaning solution prior to heating the water and BEFORE significant foam is present.
- This product can be used at higher usage levels than listed for heavy soil loads, burnt on soils, or other conditions where more chemical is required to remove the soil.
- Enhance No. 567 **should not** be used to clean heavy mineral deposits such as those found in a lactose permeate evaporator—CIP acid is better suited for this application.

Below are pictures of a skim milk evaporator tube chest after a single-phase wash was completed with Enhance 567 over a 7-day trial. CIP Time saved: 1 hour and 20 minutes. Water saved: 1 million gallons/year.



Top of skim milk evaporator tube chest



Bottom of skim milk evaporator tube chest

Also included is a titration procedure cheat sheet showing the 0.7 to 2.0 oz/gal range in ppm.

0.7 oz/gal = 3400 ppm 1.0 oz/gal = 4800 ppm 1.5 oz/gal = 5700 ppm 2.0 oz/gal = 6600 ppm

Enhance No. 567

1. Draw a sample for testing and place in a secondary container or vial.
2. Using a syringe, draw a 2.5 ml sample from the secondary container and transfer it to a clean titration vial.
3. Add 1 scoop of Methylthymol Blue Indicator (0036) and mix.
4. Add 6 drops of pH Buffer (0037) and mix. The sample should turn yellow.
5. Titrate with 0.04M Bismuth Nitrate (0038), counting the drops until the sample turns blue/purple.

Calculation: Each drop = 200 ppm total chelant

1 drop = 200 ppm
2 drops = 400 ppm
3 drops = 600 ppm
4 drops = 800 ppm
5 drops = 1000 ppm
6 drops = 1200 ppm
7 drops = 1400 ppm
8 drops = 1600 ppm
9 drops = 1800 ppm
10 drops = 2000 ppm
11 drops = 2200 ppm
12 drops = 2400 ppm

13 drops = 2600 ppm
14 drops = 2800 ppm
15 drops = 3000 ppm
16 drops = 3200 ppm
17 drops = 3400 ppm
18 drops = 3600 ppm
19 drops = 3800 ppm
20 drops = 4000 ppm
21 drops = 4200 ppm
22 drops = 4400 ppm
23 drops = 4600 ppm
24 drops = 4800 ppm

25 drops = 5000 ppm
26 drops = 5200 ppm
27 drops = 5400 ppm
28 drops = 5600 ppm
29 drops = 5800 ppm
30 drops = 6000 ppm
31 drops = 6200 ppm
32 drops = 6400 ppm
33 drops = 6600 ppm
34 drops = 6800 ppm
35 drops = 7000 ppm
36 drops = 7200 ppm