

HaloKlear[®]
NATURAL FLOCCULANTS

JAR TEST INSTRUCTIONS

Reliable and effective TSS and turbidity control for
Stormwater and Construction Applications



PURPOSE OF THE JAR TEST IS TO DETERMINE:

1. The proper dose rate for HaloKlear natural flocculants
2. Which products and in what combination will provide best results
3. The proper injection rate when using liquid flocculants



HALOKLEAR FLOCCULANT FIELD TEST INSTRUCTIONS:

Materials Needed:

- Jar Test Materials
- Several 500 mL clear jars for testing
- 1 mL pipette
- HaloKlear LiquiFloc 1%, LiquiFloc 2%, LBP-2101, and BHR-P50 (supplied)
- 1 gallon of representative turbid water sample to be treated

JAR TEST METHOD FOR SINGLE FLOCCULANT (LIQUIFLOC 1% OR LIQUIFLOC 2%) TEST INSTRUCTIONS:

STEP 1: Obtain 1 liter of source sample water for testing.

STEP 2: Add 1 drop of HaloKlear LiquiFloc 1%.*

STEP 3: Shake sample, then let stand for several minutes.

STEP 4: Repeat steps 2 through 4 as needed until flocculation occurs and desired results are reached. Count the number of drops used.

* Same steps apply to LiquiFloc 2% if using in field test instead of LiquiFloc 1%.

JAR TEST METHOD FOR DUAL PRODUCT SYSTEM INSTRUCTIONS:

PART 1:

STEP 1: Obtain 500 mL of source sample water for testing.

STEP 2: Add 1 drop of HaloKlear LBP-2101.

STEP 3: Shake sample vigorously.

STEP 4: Add 1 drop of HaloKlear LiquiFloc 1%.*

STEP 5: Shake sample vigorously, then let stand for several minutes.

STEP 6: Repeat steps 2 through 5 as needed until flocculation occurs and desired results are reached. Count the number of drops used and continue on to Part 2.

PART 2:

STEP 1: Obtain 500 mL of source sample water for testing.

STEP 2: Once Part 1, above, has been concluded, add the total number of drops of LBP-2101 all at once and shake well.

STEP 3: Add 1 drop of HaloKlear LiquiFloc 1%.*

STEP 4: Shake sample vigorously and let stand for several minutes.

STEP 5: Repeat steps 3-4 as needed until flocculation occurs and desired results are reached.

* Same steps apply to LiquiFloc 2% if using in field test instead of LiquiFloc 1%.

JAR TEST METHOD FOR BHR-P50 TEST INSTRUCTIONS:

STEP 1: Obtain 1 liter of source sample water for testing.

STEP 2: Add in 1 drop from a 1mL pipette of BHR-P50.

STEP 3: Shake sample, then let stand for several minutes.

STEP 4: Repeat steps 2 through 4 as needed until flocculation occurs and desired results are reached. Count the number of drops used.



INJECTION RATE TABLE DIRECTIONS:

- STEP 1:** Determine the water flow rate (left hand column).
- STEP 2:** Locate the dose (top row) that was determined from the Jar Test Method for Single Flocculant and the Jar Test Method for Dual Flocculant tests above.
- STEP 3:** The Injection Rate Table is designed for HaloKlear LBP-2101 and HaloKlear LiquiFloc 1%. Determine the rate in gallons per hour (gph).
- STEP 4:** If using LiquiFloc 2% instead of 1%, divide the value from Step 3 by Step 2.

FLOCCULANT INJECTION RATE

Water Flow Rate	Active Flocculant Dose			
	100 ppm	200 ppm	300 ppm	400 ppm
100 gpm	0.6 gph	1.2 gph	1.8 gph	2.4 gph
200 gpm	1.2 gph	2.4 gph	3.6 gph	4.8 gph
300 gpm	1.8 gph	3.6 gph	5.4 gph	7.2 gph
400 gpm	2.4 gph	4.8 gph	7.2 gph	9.6 gph
500 gpm	3.0 gph	6.0 gph	9.0 gph	12.0 gph
600 gpm	3.6 gph	7.2 gph	10.8 gph	14.4 gph
700 gpm	4.2 gph	8.4 gph	12.6 gph	16.8 gph
800 gpm	4.8 gph	9.6 gph	14.4 gph	19.2 gph
900 gpm	5.4 gph	10.8 gph	16.2 gph	21.6 gph
1000 gpm	6.0 gph	12.0 gph	18.0 gph	24.0 gph

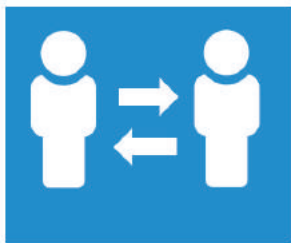
NOTE: In 500 mL, each drop of HaloKlear LBP-2101 is equal to 100 ppm of product. Each drop of HaloKlear LiquiFloc 1% is equal to 1.0 ppm active.

For laboratory method using a dilution series for obtaining results, please contact HaloKlear at info@dober.com. If you have any questions, please contact HaloKlear at (800) 323-4983.

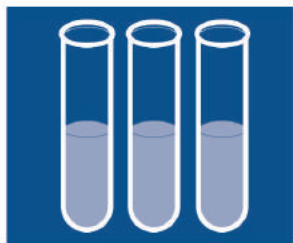


CAN'T FIND THE RIGHT DOSAGE? CONTACT US!

OUR PROCESS



Tell us about your treatment needs



Send us your water and we'll provide you with a solution to your problem or we can send product samples to you for testing.



Add our solution to your treatment process, problem solved.



Use our residual test kit to prove the results.

VALIDATE RESULTS ON THE SPOT!

With HaloKlear's Residual Test Kit, you can prove, onsite, that no residual chemistry is being released back into the environment. View results in 10 minutes or less, at a cost of only a few dollars per test!



HaloKlear®

NATURAL FLOCCULANTS

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For additional information contact us at: 800.323.4983
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HaloKlear's portfolio consists of 100% biodegradable chitosan-based, natural flocculants as well as iron-and sulfate-free hybrid flocculants. HaloKlear technologies address a wide variety of pollutants and contaminant types, including total suspended solids, algae, hydrocarbons, heavy metals, oils and organic compounds.

DOBER

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