

RECOMMENDATIONS

- Plating should be done in a clean, level area with low air movement to avoid contamination and interference in the results.
- Take plates and water samples out of refrigeration and allow them to reach room temperature before use.
- Place labeled water samples in order they will be plated out.
- One bacteria plate, one yeast/mold and one pipette will be used per each water sample. Always use same pipette to extract water from one sampling bag.
- Keep records of results obtained over time to monitor microbial load changes; or to test the efficacy of your water treatment technology.
- These bacteria and yeast/mold plates do not differentiate between pathogenic and non-pathogenic organisms.

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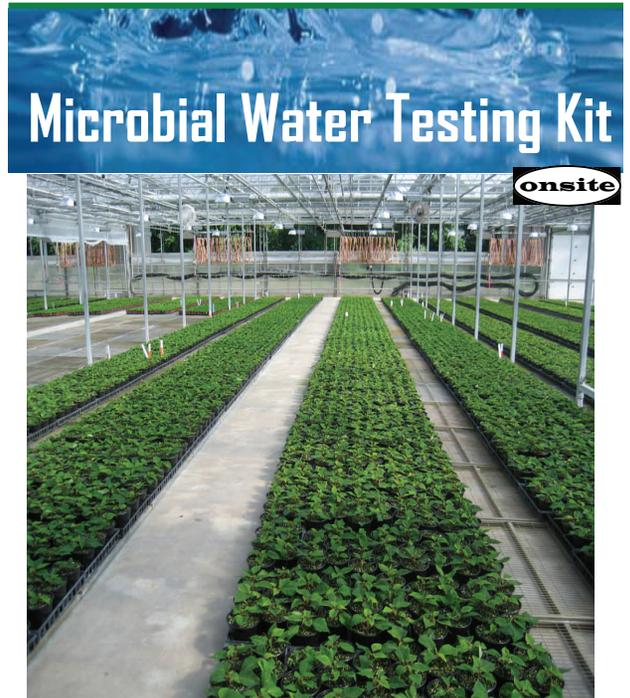
The Water Education Alliance for Horticulture is a partnership between universities and industry designed to help growers use water efficiently and sustainably. For more information visit www.watereducationalalliance.org

This testing kit instructions are based on a protocol developed by Dustin Meador and Paul Fisher at University of Florida.

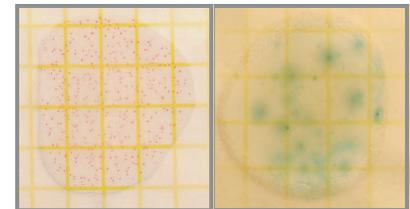


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GREENHOUSE & NURSERY



A convenient onsite water test, valuable as an indicator of potential disease problems lurking in various areas of a greenhouse irrigation system.



STEP 1. MATERIALS

Microbial water testing kit contains:



***NOTE: Keep the plates refrigerated when not in use**

Other items you will need:

1. Permanent (indelible) marker for labeling.
2. Clean, level surface with low air movement to conduct test on.
3. Dark incubation area with constant temperature around 72 F, such as an office drawer.

STEP 2. SAMPLING

- Label the sampling bags according to sample site.
- Open seal on sampling bag and collect water directly into the bag.
- Let the water flush for a few minutes before collecting the sample.
- For tank or pond samples: it is recommended to collect sample from 2-3 feet below water surface. Use another container to collect the water and pour into sampling bag.
- Close the bag by folding metal tabs over.



Samples will need to be refrigerated if not used within a few hours after sampling.

STEP 3. TESTING AND PLATING

1. Label each plate on one corner with sample number or site name previously assigned to corresponding water sampling bag.
2. Shake sampling bag several times before opening.
3. Open the bag and insert pipette to collect 1 ml of water.



4. Lift translucent top sheet and dispense 1 ml (25 drops from pipette) onto center of the grid of each plate



- A. Use one aerobic bacteria per water sample
- B. Use one yeast/mold plate per water sample

5. Allow the translucent top sheet to cover and spread the sample drop.
6. Press gently and never allow water to drip out of the plate.
7. Let plates sit for a few minutes before moving.

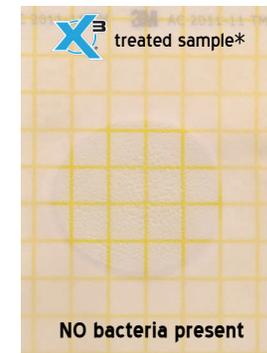


STEP 4. INCUBATION AND RESULTS

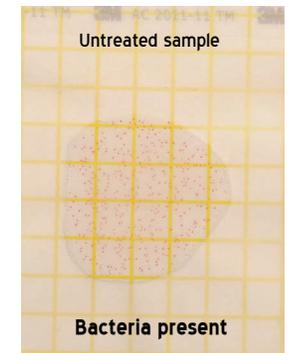
- Keep plates in the dark and maintain constant temperature, never exceeding 80°F.
- Read plates
 - ◆ Aerobic bacteria plate: read 3 days after plating.
 - ◆ Yeast/mold plate: read 4 days after plating.
 - ◆ If room is colder than 72°F add 1 day to reading time.

Results

- Bacterial plates



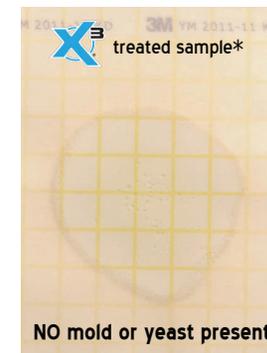
NO bacteria present



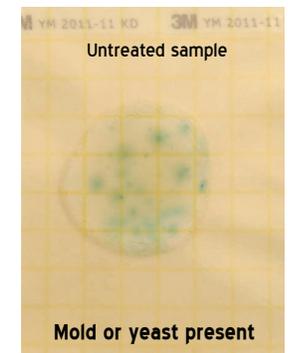
Untreated sample

Bacteria present

- Yeast and mold plates



NO mold or yeast present



Untreated sample

Mold or yeast present

*Note: these results are representative of water samples treated with X3 water treatment rates.