

PolySeed[®]

Technical Report

Rehydrating PolySeed

Question:

What type of water should be used to rehydrate PolySeed?

Answer:

PolySeed should be rehydrated in Dilution Water ONLY. Dilution water (also referred to as “BOD water” or “nutrient buffer water”) is used for ionic balance. The chemical balance inside each microbial cell in the PolySeed must be equal to the chemical balance in the water surrounding the cell. If the microbes in PolySeed were rehydrated in unbuffered DI or distilled water, the differential pressure between the water phase outside and inside the cells would cause the cells to lyse (explode/tear) within a few minutes of hydration. Dilution water should be prepared according to the guidelines listed below and used within 24 hours of preparation.

Dilution Water Preparation

- Use deionized or distilled water when preparing dilution water.
- Saturate the water with dissolved oxygen by shaking vigorously or aerating with organic-free filtered air
- Dilution water should be $20^{\circ}\pm 3^{\circ}\text{C}$ before use. You may store the source water (i.e. DI/Distilled water) overnight to stabilize the temperature.

NOTE: *if you store the dilution water overnight, make sure the cap is loose to allow for air export.*

- Add the nutrients the morning of the test. Once the nutrients have been added, allow the prepared dilution water to stabilize at least 30 minutes prior to use.

NOTE: *If commercial nutrients are used, make sure they are not expired. If nutrients are prepared in house, make sure they are prepared in accordance with Standard Methods.*

- The pH of the dilution water should be between 6.8 and 7.2
- DO should be at least 7.5mg/L prior to use.