

PolySeed®

Technical Report

10 Tips for BOD Success!

1. **Make sure your dilution water is fully saturated before use** - According to Standard methods you should check to ensure the DO concentration is at least 7.5 mg/L. If the dilution water is not fully saturated, add DO by shaking the bottle or aerating with organic-free air.
2. **Check the pH** – the pH of your dilution water should be between 6.8 - 7.2; samples should have a pH between 6.0 – 8.0.
3. **Check the temperature** – the temperature of the dilution water and samples should be $20^{\circ} \pm 3^{\circ}\text{C}$.
4. **Start from scratch with each new lot / bottle of seed** – When troubleshooting, you may have had to make changes in the volume of water used to rehydrate the seed or in the volume of seed used in the GGA/Samples. If so, never assume every bottle/lot will require those same adjustments. When obtaining a new lot/bottle of seed it is best to go back to the recommended instructions.
5. **Keep a good record of your results** – it is important to keep a good record of your results so that you can monitor trends. Sometimes seed variability changes with seasons, so you can refer to your records to see what adjustments were made if a problem should arise.
6. **Do not pipette seed into a dry BOD bottle** – always have some dilution water in the BOD bottle before adding any seed or GGA standard.
7. **Set up at least 3 different seed dilutions** – Standard Methods suggests using at least 3 different dilutions of seed, all bottles giving a minimum DO depletion of 2.0 mg/L and a residual DO of at least 1.0 mg/L after the 5-day incubation.
8. **Check all reagents** – ensure all the reagents are of good quality. If commercial buffer pillows are used make sure they have not exceeded their expiration date.
9. **Make sure you are using enough seed** – under seeding is a common reason for low GGA results. You can determine how much seed to add by setting up a series of dilutions and choosing the volume that yields acceptable GGA results.
10. **Check the barometric pressure** – air pressure changes daily and sometimes hourly. Most likely the air pressure will not be the same 5 days later when you read your results. This is important when measuring the blanks, since they should not exceed 0.2 mg/L.