
SOP for BULK GenTegra DNA Use in PLATES for Collaborators

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Purpose:

GenTegra DNA BULK product use is for stabilizing your DNA samples and protecting them for dry shipment without dry ice. GenTegra DNA BULK offers you both the flexibility to add the stabilizing reagent directly to your DNA samples and the opportunity to use plate format. Your samples will be reconstituted at the JGI. Use of GenTegra DNA BULK is only when you can't ship your DNA samples in liquid format or are restricted from shipping on dry ice. You must have prior approval to ship your samples treated with GenTegra DNA BULK. You must ship your samples treated and DRIED using the plate provided and GenTegra DNA BULK. A minimum of 22 samples are required per plate.

Important notes prior to using DNA GenTegra:

- 1.) *Before you use GenTegra DNA BULK, make sure that you have received approval from the JGI Project Management Office. Once your samples are approved by the JGI, you will receive a 96 well plate and label for your GenTegra DNA BULK treated samples.*
- 2.) *The JGI does NOT support GenTegra treated DNA in the LIQUID format. Your sample must be sent dry.*
- 3.) *PLATE format requires you to leave the 4 corners empty. Please do not add your samples to the 4 corners of the plate. A1, H1, A12, and H12 must all be empty upon arrival to the JGI.*
- 4.) *Please ensure that you only add one sample ID per corresponding well.*
- 5.) *You will need to contact GenTegra to order GenTegra DNA BULK and testing GenTegra DNA BULK on your samples is recommended. We tested the GenTegra DNA 5X Protocol at the JGI and recommend following that protocol in the GenTegra User manual.*

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GenTegra company information and supplier:

For ordering **GenTegra DNA BULK (GTD100-B)** contact either orders@gentegra.com or sales@gentegra.com

For GenTegra DNA product information and user guide:

<https://gentegra.com/wp-content/uploads/2022/11/GenTegra-DNA-Bulk-User-Guide-Nov-2022-vD.pdf>

Protocol: Sample Drying and Storage:

1. Purchase **GenTegra DNA BULK** directly from GenTegra by contacting either orders@gentegra.com or sales@gentegra.com
2. **The JGI recommends that you test your sample first using GenTegra DNA BULK on a small aliquot of your sample**
3. Please use both the plate and the label provided by the JGI to add your DNA samples to.
4. Determine the concentration of purified DNA in the sample and calculate the amount to be added into JGI plate (taking into account that when your sample arrives at the JGI, it will be rehydrated in **45 μ L of 1X Low EDTA-TE Buffer, pH 8.0 (VWR: 10128-588)**.
Note: DNA should be resuspended in 1X Low EDTA-TE Buffer, pH 8.0 prior to treating your sample with GenTegra DNA BULK. Your DNA sample volume should not be less than 45 μ L.
5. Plan to apply between **0.05-25 μ g** of DNA in 45 μ L of 1X Low EDTA-TE Buffer, pH 8.0 into the corresponding wells on the JGI provided plates. **GenTegra recommends \leq 250 ng/ μ L for the gDNA sample concentration**.
Note: Take into consideration your sample concentration when reconstituted into 45 μ L of Low EDTA-TE buffer to ensure you have enough material.
6. Use GenTera DNA **5X Protocol** for adding to your samples. Please follow the GenTegra manual: <https://gentegra.com/wp-content/uploads/2022/11/GenTegra-DNA-Bulk-User-Guide-Nov-2022-vD.pdf>
7. Add **0.55 ml of water** to the GenTegra-DNA Dry Bulk tube and dissolve using gentle mixing for 5-10 minutes.
8. Add **5 μ l of GenTegra-DNA 5x solution** to each 45 μ L DNA sample between 0.05-25 μ g. Please add enough material for your planned work at the JGI. **Please ensure that you only add one sample ID per well.**

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9. Mix thoroughly and gently to disperse the GenTegra Matrix and avoid foaming. If any foaming or bubbles occur during mixing, briefly centrifuge the plate to remove bubbles and place solution at the bottom of the plate well.

10. Quickly centrifuge to bring the matrix and sample to the well bottom and remove any foaming or bubbles.

11. Dry your samples in the plate. Drying should occur at room temperature with no added heat. Ensure that your DNA sample is completely dry. (In our test samples at the JGI a SpeedVac at ambient temperature or 30°C was used until sample wells were completely dry. **Please note that the drying times will vary based on your drying method. Please check your sample frequently.**

13. Once each of the samples on your plate are dry, seal your plate with the JGI provided seal. Ensure you have also applied the JGI provided plate label. Store and/or ship at room temperature.

Shipping Instructions:

1. Confirm approval from the JGI Project Management Office to ship treated **GenTegra DNA BULK** plate samples.
2. Before using **GenTegra DNA BULK**, wait for both your JGI shipping approval e-mail and your set of labels to be sent to your lab.
3. Ensure you have added your samples to the plate supplied by the JGI.
4. Label your **GenTegra DNA BULK** plate with the JGI label you received from the JGI.
5. Ensure that your sample plate is completely dry prior to shipping and contains no liquid.
6. Ship your dried **GenTegra DNA BULK** plate in SECONDARY containment for protection.
7. Ensure that the box for **GenTegra DNA BULK** plate is checked on the JGI shipping checklist, with the number of treated plates you are sending.

_____ # of plates of GenTegra Bulk DNA treated

8. Ship sample/s with a copy of both the JGI shipping email and shipping checklist.

Additional Information

For a summary of the in-house testing and results performed at the JGI please contact your Project Manager.

GenTegra DNA treated samples offers a way to store DNA samples for long term, without degradation, and ship dried DNA samples at ambient temperature. Our procedure is directly from GenTegra online procedure and referenced here. An online handbook is available at: <https://gentegra.com/wp-content/uploads/2022/11/GenTegra-DNA-Bulk-User-Guide-Nov-2022-vD.pdf>

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GenTegra DNA preserves DNA samples at room temperature. For optimal recovery do not exceed 25 µg in a well or use less than 45 µL.

GenTegra DNA is a dissolvable stabilizer, that forms a protective coating around the DNA. The sample must then be completely dried for maximum protection and stability for storage at ambient temperatures prior to shipping the sample.

Supplies:

1. **GenTegra DNA BULK (GTD100-B)** can be purchased from GenTegra directly by contacting either orders@gentegra.com or sales@gentegra.com
2. 1X Low EDTA-TE Buffer, pH 8.0 (**VWR: 10128-588**)

Change History:

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