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## User Guide for BULK GenTegra-DNA

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### **Purpose:**

BULK GenTegra-DNA product is for stabilizing and protecting the DNA samples during non-dry ice, ambient temperature shipment. BULK GenTegra-DNA offers you both the flexibility to add the stabilizing reagent directly to your DNA samples and the opportunity to use JGI-supplied prelabeled matrix tube or 96-well plate containers. Your samples must be dried properly before shipment and will be rehydrated after arrival to the JGI. Please note that use of BULK GenTegra-DNA is only allowed when they are restricted from shipping with dry ice and you must have prior approval.

### **Important notes prior to using BULK GenTegra-DNA:**

1. It is required that you have received approval from the JGI Project Management Office to ship the GenTegra treated DNA. Once your samples are approved by the JGI, you will receive prelabeled matrix tubes or 96-well plates.
2. The JGI does NOT support GenTegra treated DNA in the LIQUID format. Your sample must be sent dry.
3. If using matrix tubes, transfer one sample ID per corresponding prelabeled matrix tubes before drying your DNA.
4. If using 96-well plates, it is required to leave the 4 corners empty at A1, H1, A12, and H12 wells, and only add one sample ID per corresponding well before drying your DNA. A minimum of 22 samples are required per plate.
5. You will need to contact GenTegra to order BULK GenTegra-DNA product. Testing Bulk GenTegra-DNA product on your samples is recommended. We tested the GenTegra-DNA 5X Protocol at the JGI following that protocol in the GenTegra user guide.

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## Please review **BULK GenTegra-DNA** product information and user guide before starting:

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

### Protocol:

1. Purchase **BULK GenTegra-DNA (GTD100-B)** directly from GenTegra by contacting either [orders@gentegra.com](mailto:orders@gentegra.com) or [sales@gentegra.com](mailto:sales@gentegra.com).
2. The JGI recommends that you test your sample first using BULK GenTegra-DNA on a small aliquot of your samples.
3. Please use the pre-labeled matrixed tubes or plates provided by the JGI to add your DNA samples to.
4. Determine the concentration of purified DNA of your samples. GenTegra-DNA recommends  $\leq 250$  ng/ $\mu$ L. Apply between **0.05-11  $\mu$ g** of DNA in **45  $\mu$ L of 1X Low EDTA-TE Buffer, pH 8.0 (VWR: 10128-588)** into each JGI-provided matrix tube or a plate well.

*Note: DNA should be resuspended in 1X Low EDTA-TE Buffer, pH 8.0 prior to treating your sample with BULK GenTegra-DNA. Take into consideration your samples will be reconstituted into 45  $\mu$ L of Low EDTA-TE buffer after arrival.*

5. Use GenTera DNA **5X Protocol** for adding to your samples. Please follow the GenTegra manual at <https://gentegra.com/wp-content/uploads/2022/11/GenTegra-DNA-Bulk-User-Guide-Nov-2022-vD.pdf>. Briefly:
  - a. Add **0.55 mL of nuclease-free water** to the BULK GenTegra-DNA Dry tube to make **5X solution** and dissolve using gentle mixing for 5-10 minutes.
  - b. Add **5  $\mu$ L** of GenTegra-DNA 5X solution to each **45  $\mu$ L** of the DNA sample between **0.05-11  $\mu$ g**. Please add enough material for your planned work at the JGI.
  - c. Mix thoroughly and gently to disperse the GenTegra Matrix and avoid foaming. If any foaming or bubbles occur during mixing, briefly centrifuge the tubes to remove bubbles and place solution in the bottom of the plate well or tube.
  - d. Quickly centrifuge to bring the matrix and sample to the well or tube bottom and remove any foaming or bubbles.
  - e. Dry your samples in the JGI provided containers. Drying should occur at room temperature **WITH NO ADDED HEAT**. Ensure that your DNA sample is completely dry (in our tests at the JGI, a SpeedVac at ambient temperature was used). Please note that the drying times will vary based on your drying method. Please check your sample frequently during drying process.
  - f. Once each of the samples is dry, cap your matrix tubes or seal your plates with the JGI provided seal. Store them at room temperature.

### Shipping Instructions:

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1. Ensure that your samples are completely dry prior to the shipping in the JGI provided pre-labeled containers.
2. Ship your BULK GenTegra-DNA treated samples in a SECONDARY containment for protection.
3. Prepare a package for a room-temperature shipment.
4. Ensure that the box for BULK GenTegra-DNA is checked on the JGI shipping checklist, with the number of treated tubes and/or plates you are sending.

Check this box if you have included BULK GenTegra DNA treated sample/s and list the total amount

\_\_\_\_\_# of tubes of BULK GenTegra DNA treated

\_\_\_\_\_# of plates of BULK GenTegra DNA treated

5. Ship samples 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.*

## **Change History:**

5/13/2025 Added option for BULK GenTegra-DNA use in JGI-supplied pre-labeled matrix tubes or plates.

*Last updated 5/21/2025*