
SOP for GenTegra DNA Use for Collaborators

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Purpose:

GenTegra DNA product use is for stabilizing your DNA samples and protecting them for dry shipment without dry ice. Your samples will be reconstituted at the JGI. Use of DNA GenTegra 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 DNA GenTegra. You must ship your samples treated and DRIED.

Important notes prior to using DNA GenTegra:

- 1.) *Before you use GenTegraDNA, make sure that you have received approval from the JGI Project Management Office, and that you have received a set of labels for your GenTegra treated samples from the JGI to apply to the GenTegraDNA treated tubes.*
- 2.) *The JGI does **NOT** support GenTegra treated DNA in the **LIQUID** format.*
- 3.) *The JGI does **NOT** support **PLATE** format at this time.*
- 4.) *You will need to contact GenTegra to order supplies and testing GenTegra on your samples is recommended*
- 5.) *Please contact GenTegra to order 0.5 mL screw-cap microtubes containing the translucent drying compound.*

GenTegra company information and supplier:

For ordering GenTegra DNA tubes (**0.5 mL screw-cap microtubes**) contact either orders@gentegra.com or sales@gentegra.com

For GenTegra DNA product information and user guide:

Product sheet: <https://gentegra.com/wp-content/uploads/2020/05/GenTegra-DNA-Flyer.pdf>

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User

guide: <https://gentegra.com/wp-content/uploads/2022/07/GenTegraDNA-User-Guide-july-2022-v01-2.pdf>

Protocol: Sample Drying and Storage:

1. Purchase GenTegra DNA **0.5 mL screw-cap microtubes** 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 on a small aliquot of your sample**
3. Determine the amount of purified DNA ($\mu\text{g}/\text{mL}$) in the sample and calculate the amount to be added into the DNA GenTegra tubes (*taking into account that when your sample arrives at the JGI, it will be rehydrated in 25 μL of 1X Low EDTA-TE Buffer, pH 8.0 (VWR: 10128-588)*).
Note: The maximum concentration should be $\leq 200 \text{ ng}/\mu\text{L}$ when reconstituted into 25 μL of TE, so no more than 5ug can be dried down and shipped to the JGI.
Note: DNA should be resuspended in 1X Low EDTA-TE Buffer, pH 8.0 prior to adding to the GenTegraDNA tube.
4. Label your GenTegraDNA treated tube with the label provided by the JGI.
5. Apply up to 5 μg of DNA in 25 μL of **1X Low EDTA-TE Buffer, pH 8.0** to GenTegraDNA tube in 25uL. **Take into consideration that the maximum concentration should be $\leq 200 \text{ ng}/\mu\text{L}$ when reconstituted into 25 μL of Low EDTA-TE buffer.**
6. Mix by pipetting up and down 10 times to solubilize the GenTegra DNA.
Note: GenTegraDNA is supplied as a transparent coating at the bottom of each GenTegraDNA Tube.
7. Leave the tube open for drying. Drying should occur at room temperatures (20°C–25°C) **with no added heat**. Ensure that your DNA sample is **completely dry**.
Please note that the drying times will vary based on your volume.
The following table are only recommendations and are approximate please check your sample frequently.

Recommended Drying Times at Room Temperature:

| Sample Volume | Drying times with SpeedVac (no heat) |
|------------------------|--------------------------------------|
| $\leq 50 \mu\text{L}$ | 1-4 hrs |
| $\leq 100 \mu\text{L}$ | 2-8 hrs |
| $\leq 250 \mu\text{L}$ | 4-12 hrs |

*** For a 25uL sample drying time in speed vac with no heat was 45 minutes at the JGI during the testing phase.**

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9. Tightly recap sample tubes after drying and ensure that your sample is labeled. Store and/or ship at room temperature.

Shipping Instructions:

1. Confirm approval from the JGI Project Management Office to ship GenTegra treated DNA sample/s.
2. Before using GenTegraDNA, wait for both your JGI shipping approval e-mail and your set of labels to be sent to your lab.
3. Label your GenTegra treated samples with the JGI labels you receive from the JGI.
4. Dry down your sample/s in the GenTegraDNA labeled tubes.
5. Ship your dried sample/s in the GenTegra tubes in SECONDARY containment for protection and to keep samples together.
6. Ensure that the box for GenTegraDNA is checked on the JGI shipping checklist, with the number of treated tubes you are sending.
7. 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.

GenTegraDNA 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/2022/07/GenTegraDNA-User-Guide-july-2022-v01-2.pdf>

GenTegraDNA preserves DNA samples at room temperature. For optimal recovery do not exceed 5ug in a tube.

GenTegraDNA 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:

(Please note JGI does not support plate format at this time)

1. GenTegraDNA **0.5 mL screw-cap microtubes** 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)

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