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# **Genes in a Bottle Kit DNA Necklace Module Instruction Manual**

**Catalog Number  
166-2200**

**(supports 18 students,  
order 2 modules for a  
class of 36 students)**

**For Classroom Use Only**

For Technical Service  
Call Your Local Bio-Rad Office or  
in the U.S. Call **1-800-4BIORAD**  
(1-800-424-6723)



## **GENES IN A BOTTLE: Capture your unique essence!**

Once your students have extracted genomic DNA from their cheek cells using the DNA Extraction module (166-2000-EDU), the DNA strands will be collected and transferred to a glass vial. The glass vial is then fashioned into a necklace that can be worn with pride, kept for posterity, or shared with a loved one! **Be the first to wear DNA on your block! Read more: [explorer.bio-rad.com](http://explorer.bio-rad.com).**

The DNA Necklace module contains enough material to prepare 18 DNA necklaces. Order 2 modules for a class of 36 students.

<b>Inventory Check List</b>	<b>Amount Provided</b>
Glass vials*	18
Silver caps	18
Plastic stopper caps	18
Waxed cords	18
Super glue gel	1

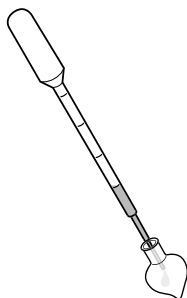
\*vials included in each set may vary

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## Instructions

**Warning:** Since super glue is required for assembling the DNA necklace, it is suggested that the teacher prepare the DNA necklaces for younger students. If you accidentally stick your fingers together, soak the bonded area with nail polish remover or acetone, then rinse the area thoroughly. If nail polish remover or acetone is not available, soak the bonded area in warm soapy water and gently and slowly roll the skin to break the bond.

1. Using a disposable plastic transfer pipet, carefully transfer an appropriate portion of the DNA in alcohol into the glass vial, leaving enough space for the plastic stopper cap. The glass vial should be filled with alcohol no higher than  $\frac{1}{2}$  cm from the top of the neck of the vial. Do not fill the entire glass vial with alcohol. (**Note that students can share plastic transfer pipets for transferring their DNA into the glass vials.**)



2. Firmly push the plastic stopper cap into the neck of the vial to seal the glass vial.



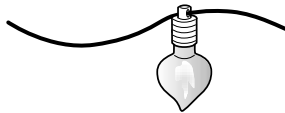
3. Apply a small drop of glue into the inside of the silver cap. Apply a small amount of glue around the rim of the glass vial/plastic stopper cap. Do not apply too much glue as it may interfere with the drying process.



4. Place the silver cap onto the top of the glass vial and press down firmly for 30 seconds. Allow the glue to dry for 10–15 min and then check for complete seal.



5. After the glue has dried, slip the waxed cord through the silver cap and tie the cord.



**Congratulations, you've created your very own DNA Necklace!**

**BIO-RAD****Bio-Rad  
Laboratories, Inc.**

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*Life Science  
Group*

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