

Three ways to prepare agarose gels for blueGelTM

- Refer to the following pages for detailed instructions on how to prepare 2% agarose gels.
- Visit https://links.minipcr.com/GelReagents to view gel electrophoresis reagents from miniPCR bio.

Option 1:	Option 2:	Option 3:
All-in-One Agarose Tabs™	Agarose Tabs™	Agarose powder
Tabs contain agarose, TBE buffer, and DNA stain. Just add water!	Tabs contain preweighed agarose powder. Add TBE buffer and DNA stain.	Weigh agarose powder and add TBE buffer and DNA stain.













e.g. SeeGreen™ or GelGreen®



Option 1: All-in-One Agarose Tabs

Prepare 2% agarose gels

Note: Adjust the volume of water to make gels of different percentages using All-in-One Tabs.

All-in-One Tab quantity	Liquid	Yield
1 tab	20 ml H ₂ O	One 2% gel

Video instructions

- 1. Set up your gel casting system by placing the clear gel tray in the white casting platform and inserting the comb.
- Combine 20 ml of room-temperature distilled <u>water</u> and one All-in-One Agarose Tab in a heat-resistant container. To prepare multiple gels, use multiple tabs and a proportional amount of water. To prevent boiling over, use a container with at least three times the capacity of the volume you are preparing.
- 3. Allow the tabs to soak until they break up.
- 4. Swirl the container to ensure the tabs have <u>fully</u> disintegrated before heating.
- 5. Microwave for 60 seconds or until the solution begins to boil.
- 6. Carefully remove the container using a heat-resistant mitt and swirl to mix.

!

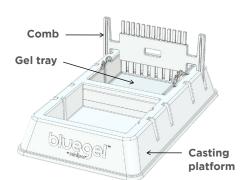
Caution: The solution will be very hot!

- 7. Check if the agarose crystals are completely dissolved. If needed, microwave for another 10 seconds, then check again. Repeat this process until the agarose is completely dissolved.
- 8. Pour the agarose solution into the prepared casting platform with gel trays and combs. The gel should cover the bottom of the gel tray and roughly the bottom third of the comb.
- 9. Allow the gel to solidify until it is firm to the touch. This typically takes 10 minutes.
- 10. Remove the comb by pulling firmly upwards.
- 11. Gels can be stored at room temperature in an airtight container protected from light for five days. Do <u>NOT</u> soak the gels in buffer or wrap them in paper towels.

Prepare TBE buffer

You will need at least 30 ml of TBE running buffer for each gel.

- 1. Combine TBE powder and distilled water in a heat-resistant container. Refer to the product packaging for the volume of distilled water to use.
- 2. Stir or intermittently shake the solution until the TBE powder is dissolved. This may take up to 15 minutes. Gently heating the solution will help the powder dissolve faster.
- 3. TBE buffer can be stored in an airtight container at room temperature for at least three months. Discard unused TBE if it becomes cloudy.



Option 2: Agarose Tabs



Prepare TBE buffer

For each gel, you will need at least 55 ml of TBE buffer. You will use 25 ml to make the gel and 30 ml as running buffer.

- 1. Combine TBE powder and distilled water in a heat-resistant container. Refer to the product packaging for the volume of distilled water to use.
- 2. Stir or intermittently shake the solution until the TBE powder is dissolved. This may take up to 15 minutes. Gently heating the solution will help the powder dissolve faster.
- 3. TBE buffer can be stored in an airtight container at room temperature for at least three months. Discard unused TBE if it becomes cloudy.



Video instructions

Prepare 2% agarose gels

Note: Adjust the volume of TBE to make gels of different percentages using Agarose Tabs.

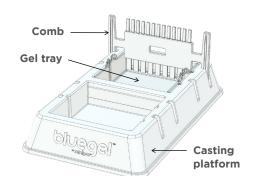
Agarose Tab quantity	Liquid	Yield
1 tab	25 ml TBE	One 2% gel

- 1. Set up your gel casting system by placing the clear gel tray in the white casting platform and inserting the comb.
- 2. Combine 25 ml of room-temperature **TBE buffer** and one Agarose Tab in a heat-resistant container. To prepare multiple gels, use multiple tabs and a proportional amount of TBE. To prevent boiling over, use a container with at least three times the capacity of the volume you are preparing.
- 3. Allow the tabs to soak until they break up.
- 4. Swirl the container to ensure the tabs have fully disintegrated before heating.
- 5. Microwave for 60 seconds or until the solution begins to boil.
- 6. Carefully remove the container using a heat-resistant mitt and swirl to mix.



Caution: The solution will be very hot!

- 7. Check if the agarose crystals are completely dissolved. If needed, microwave for another 10 seconds, then check again. Repeat this process until the agarose is completely dissolved.
- 8. Add 2.5 µl of SeeGreen™ or GelGreen® stain for each 25 ml of solution. Swirl the container until the stain is evenly distributed in the solution.
- 9. Pour the agarose solution into the prepared casting platform with gel trays and combs. The gel should cover the bottom of the gel tray and roughly the bottom third of the comb.
- 10. Allow the gel to solidify until it is firm to the touch. This typically takes 10 minutes.
- 11. Remove the comb by pulling firmly upwards.
- 12. Gels can be stored at room temperature in an airtight container protected from light for five days. Do <u>NOT</u> soak the gels in buffer or wrap them in paper towels.





Option 3: Agarose powder

Prepare TBE buffer

For each gel, you will need at least 50 ml of TBE buffer. You will use 20 ml to make the gel and 30 ml as running buffer.

- 1. Combine TBE powder and distilled water in a heat-resistant container. Refer to the product packaging for the volume of distilled water to use.
- 2. Stir or intermittently shake the solution until the TBE powder is dissolved. This may take up to 15 minutes. Gently heating the solution will help the powder dissolve faster.
- 3. TBE buffer can be stored in an airtight container at room temperature for at least three months. Discard unused TBE if it becomes cloudy.



Prepare 2% agarose gels

Note: Adjust the amount of agarose powder to make gels of different percentages.

Agaro	se powder	Liquid	Yield
0.4 g		20 ml TBE	One 2% gel

- 1. Set up your gel casting system by placing the clear gel tray in the white casting platform and inserting the comb.
- 2. Combine 20 ml of TBE buffer and 0.4 g agarose powder in a heat-resistant container. To prepare multiple gels, scale the amount of agarose powder and TBE buffer proportionally. To prevent boiling over, use a container with at least three times the capacity of the volume you are preparing.
- 3. Swirl the container to mix the agarose powder and buffer.
- 4. Microwave for 60 seconds or until the solution begins to boil.
- 5. Carefully remove the container using a heat-resistant mitt and swirl to mix.



Caution: The solution will be very hot!

- 6. Check if the agarose crystals are completely dissolved. If needed, microwave for another 10 seconds, then check again. Repeat this process until the agarose is completely dissolved.
- 7. Add 2 µl of SeeGreen™ or GelGreen® stain for each 20 ml of solution. Swirl until the stain is evenly distributed in the solution.
- 8. Pour the agarose solution into the prepared casting platform with gel trays and combs. The gel should cover the bottom of the gel tray and roughly the bottom third of the comb.
- 9. Allow the gel to solidify until it is firm to the touch. This typically takes 10 minutes.
- 10. Remove the comb by pulling firmly upwards.
- 11. Gels can be stored at room temperature in an airtight container protected from light for five days. Do NOT soak the gels in buffer or wrap them in paper towels.

