

# Pouring Agar Plates

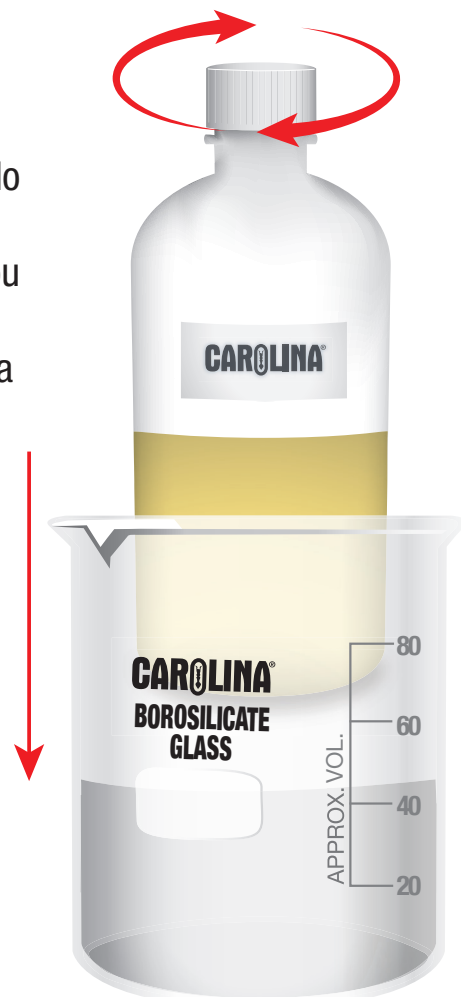


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## Heating Melt-and-Pour Media

1

Loosen the cap, but do not remove it. During the entire process, you want to minimize the exposure of the media to air.



2

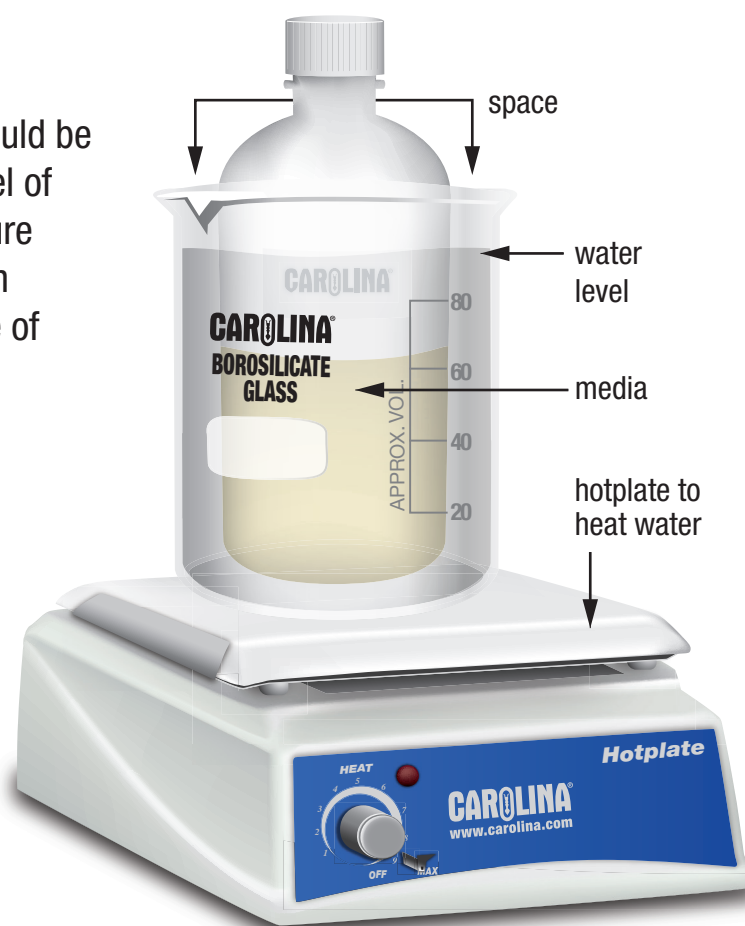
Place the media bottle in room-temperature water.

3

The water level should be higher than the level of the media. Make sure that there is enough space to either side of the bottle as well.

4

Begin heating the water. Once the water comes to a boil, check the media periodically.



5

Using a hot mitt or glove, lift the bottle from the water.

Swirl it, looking for lumps or streamers.



6

If any lumps or streamers remain, return it to the water bath.

Check that the level of the water remains above the level of the media.

7

Once the media is completely melted, place it on a heat-resistant surface to cool for around 15–30 minutes.



### Microwave Instructions:

**WARNING:** Media can become super-heated and will boil over if not watched carefully.

1. Loosen cap.
2. Place in microwave and begin heating.
3. Watch carefully! Once it begins to liquify, take it out and swirl it gently.
4. Continue swirling every 30 seconds to a minute, more often as it gets closer to melted.
5. When it appears melted, hold it up to the light and check for lumps or streamers that indicate it is not fully melted.
6. Set on a heat-resistant surface to cool to about 45° C.

### Things to Remember:

- Use heat-resistant gloves when melting the agar.
- Minimize the exposure of the media to air.
- Plan to pour all the media at once. Multiple pours increase the risk of contamination.
- Plates may be stored for 2–4 weeks before use.

## Pouring Media Plates

sanitize area

1

Select a draft-free area to pour your plates.

Clean the area with 70% ethanol or a 10% bleach solution.

Wash and dry your hands.

sterilize

2

Cool the agar to 45° C. Sterilize the mouth of the bottle with a flame or an alcohol pad.

horizontal

3

Keep the bottle as close to horizontal as possible. Pour a thin layer of media, enough to cover the bottom of the plate, then immediately replace the lid.

4

Cool at least 30 minutes and up to overnight.



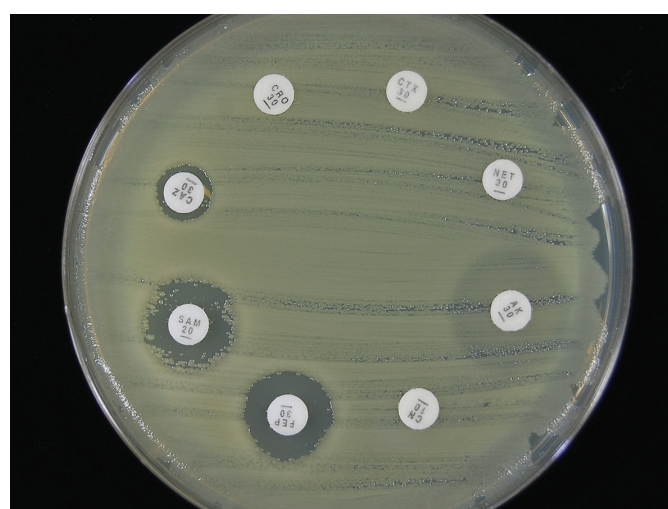
invert

store

5

Store inverted in a plastic bag at 4° C.

## Real World Connections



### Antibiotic Susceptibility

Agar plates are used in combination with antibiotic-infused disks to determine the best antibiotic to use to treat a patient.



### Water Monitoring

Chromogenic agar is used to detect the presence of coliform bacteria in water samples.



### Food Safety

Contact plates and swab samples from industrial kitchens and food manufacturers verify food safety procedures.



### Air Quality

Settling plates are used to find bacteria and fungi contaminants in indoor and outdoor air.