



Sample Preparation Quick Start Guide

Includes

Vessel description • Inoculation methods • Sample types • Vessel disposal

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1. Culture Vessel Description

Speedy Breedy culture vessels hold the sample to be tested. A new vessel is needed for every test. Culture vessels can be purchased either pre-filled with culture media, or empty, and are supplied sterile, in boxes of 8 vessels. The major components of a culture vessel are outlined in Figure 1. Vessels must be stored at room temperature, unless otherwise stated on the packaging. If the vessels are colder than room temperature, please let them warm up to ambient before use to avoid air displacement.

Empty vessels are available in aerobic and anaerobic versions. This allows users to conduct tests using their own media, for more diverse testing. For details on empty vessels, please refer to the Speedy Breedy User Manual.

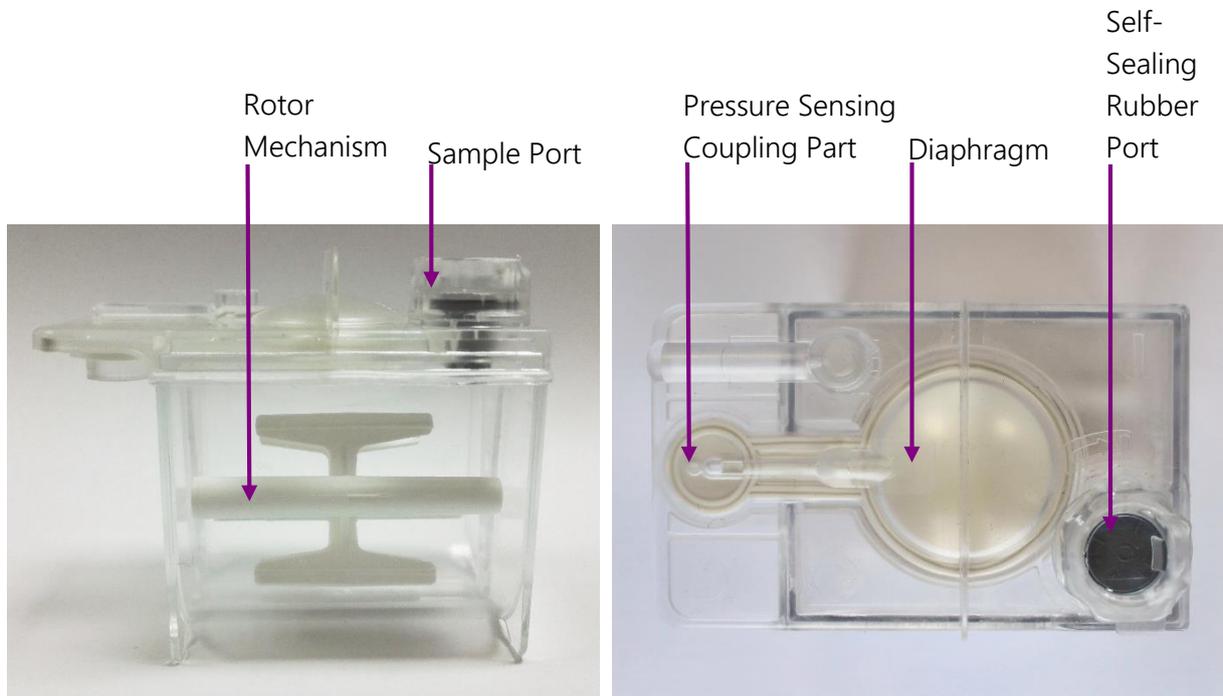


Figure 1: Components of a Speedy Breedy culture vessel.

2. Inoculation Methods

There are two methods of adding a sample to the vessel – through the 6mm sample port or through its self-sealing rubber septum.

2.1 Using the Vessel Port

To open the vessel port:

- Twist the vessel lid anticlockwise,
- Lift off the lid,
- Place the lid on a clean, dry surface with the inside facing upwards to avoid contamination. The inside of the lid should not come into contact with anything.

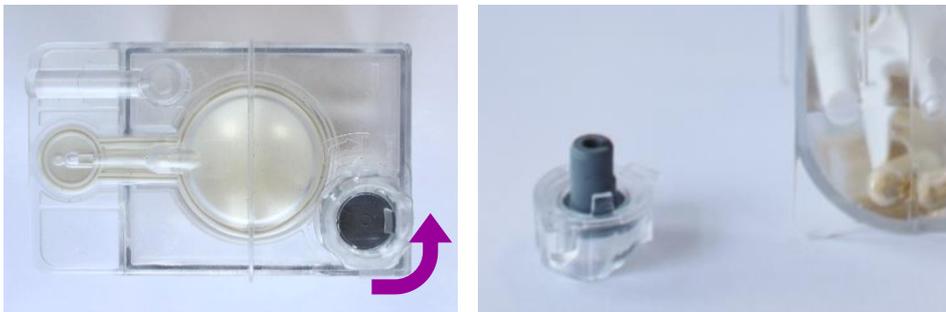


Figure 2: To open a culture vessel, turn the lid anti-clock wise, and place it on a clean, dry surface, facing upwards.

Samples can be introduced through the 6mm port using a 50ml syringe. Use disposable, individually packed sterile syringes. A new syringe should be used for each sample.

- Open up the sample container and take up 50ml of liquid sample into the syringe.
- Open the vessel port as shown in figure 2.
- Take care not to touch the tip of the syringe, the inside of the vessel lid or the sample itself, to avoid contamination.
- Introduce the sample through the vessel port as shown in figure 3.

Figure 3: Inoculating a sample through the vessel port



- Carefully replace the vessel lid, making sure not to touch the rubber component and dispose of the syringe. The vessel can now be placed in the Speedy Breedy instrument for testing.

50ml samples can also be poured into the vessel through the port directly, without the use of a syringe.

2.2 Using the Self-Sealing Needle Septum

For certain sample types, or when the system is used in a sterile environment, injecting a sample through the self-sealing rubber on the vessel lid can be the most suitable option.

To open the rubber port:

- Pull up the Tamper Evident Seal on top of the self-sealing rubber septum.
- Once snapped, pull off completely.
- Dispose of the Tamper Evident Seal.
- The self-sealing rubber septum is now accessible for the sample to be injected.

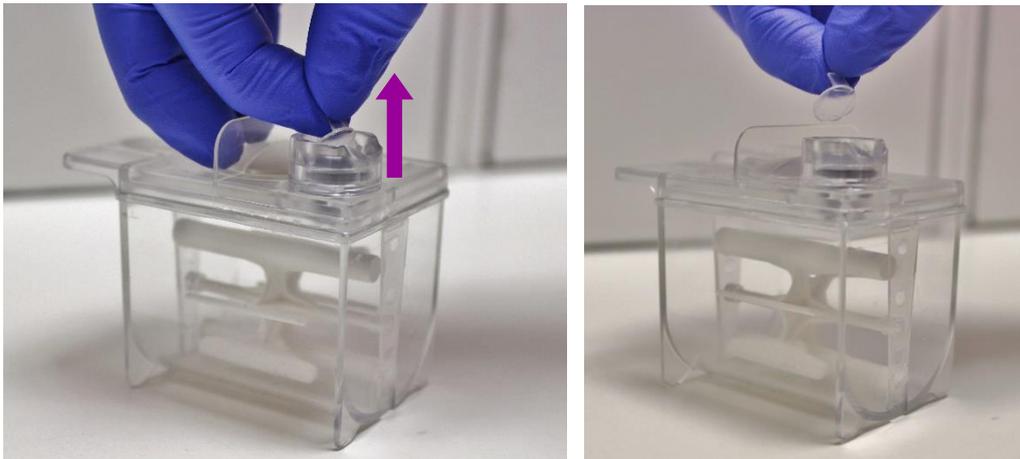


Figure 4: Removing the Tamper Evident Seal

To conduct testing using this method, you will need two sterile needles (up to 21G or 0.8mm) and a sterile syringe.

- Clean the surface of the rubber septum by wiping it with an alcohol wipe.
- Pierce the rubber septum with one needle, making sure the tip is just inside the vessel, as shown in figure 5. This will be the pressure release needle. For work environments that may carry a high contamination load in the air, a syringe filter can be attached to the top of this needle.



Figure 5: Pressure release needle inserted in the culture vessel.

- Pull up 50ml of the desired sample into the syringe. Attach the second needle to the tip of the syringe, as seen in figure 6.
- The syringe with the needle can now be inserted through the self-sealing rubber septum.
- When injecting the liquid, please make sure the pressure-release needle is out of the liquid at all times.
- Take out the syringe and the needles. The rubber will re-seal itself. The culture vessel is now ready to use.



Figure 6: Adding a sample through the self-sealing rubber.

3. Sample Types and Recommended Methods of Adding to Vessels

3.1 Water and other Liquid Samples:

- Open the vessel lid,
- Add 50ml liquid sample,
- Close the culture vessel and place it inside the Speedy Breedy instrument.

3.2 Viscous Liquids and Pastes:

We recommend diluting these samples with sterile water before adding them to the culture vessel. The speed of the rotor mechanism can be increased to prevent the sample from obstructing the rotation of the paddle. The rotor speed can be adjusted between 0 and 120 rpm, using the software. The default setting for all pre-designed protocols is 60rpm. The speed can be changed in the protocol settings in the software. If you require help, please contact us at support@speedybreedy.com.

3.3 Powders and Small Solids:

Powders and small solid samples (i.e. seeds, herbs, spices), can be introduced to the vessel through the vessel port. Top this up with 50ml sterile water.

Alternatively, mix the sample with sterile water before introducing it into the culture vessel.

Make sure the total content of the vessel does not exceed 50ml, and the paddle still reaches above the liquid surface.

3.4 Beer and Fizzy Liquids

You will need a sterile 50ml syringe, and a sterile plastic tube. Beer should be diluted with sterile water in a 1:1 ratio. Beer can be added to vessels by using a syringe barrel as a funnel (see Figure 7).

- Open the culture vessel, and introduce the sterile syringe barrel into the vessel port.
- Measure 25ml of sterile water into a sterile 50ml tube.
- Pour the sterile water into the vessel via the syringe barrel.

- Measure 25ml of beer into the same sterile 50ml tube as was used to measure the water.
- Pour the sample into the vessel via the syringe barrel.
- Close the culture vessel and place it in the Speedy Breedy instrument.



Figure 7: Adding sterile water and beer to a Speedy Breedy culture

3.5 Large Solids

Large solid samples can be macerated, or prepared in a food stomacher or food blender if such equipment is available. Mix these samples with sterile water, to allow the culture media capsules to dissolve.

Alternatively, large solid samples can be tested by means of a swab.

3.6 Swabs

Swabs are ideal for the testing of surfaces, large solids or other sample types which might be otherwise unsuitable for testing inside a culture vessel. Use sterile, individually packaged swabs.

- Add 50ml of water to the culture vessel, using a sterile syringe, or by pouring into the vessel directly.
- Swab a surface or sample taking care not to touch the swab tip or the vessel port to avoid contamination.
- Cut off the swab tip inside the 6mm port of the culture vessel, using sterile scissors.

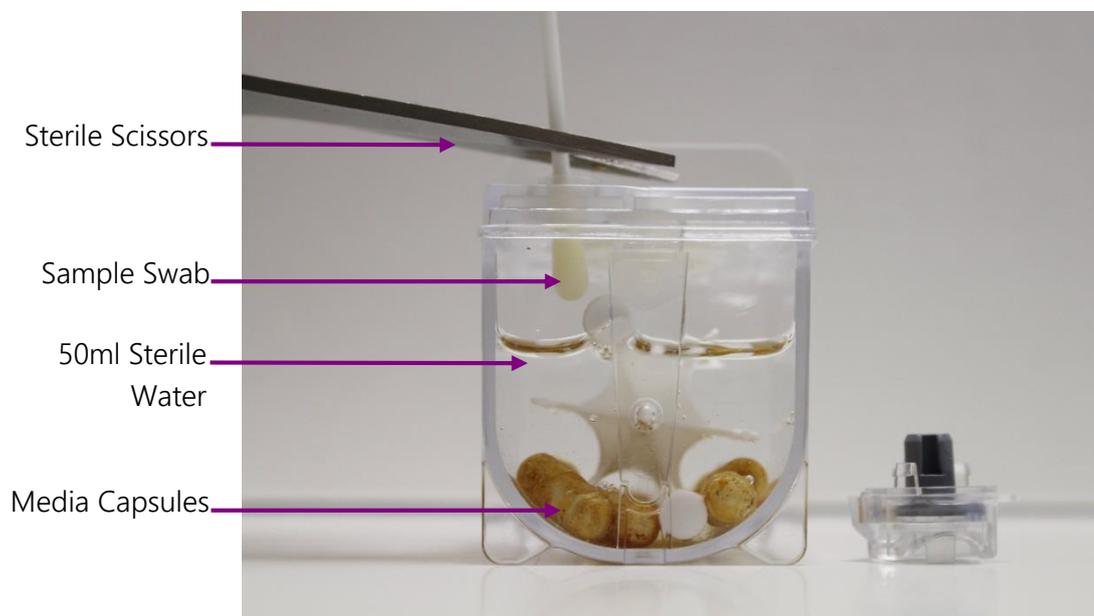


Figure 8: Cutting off a swab tip into a Speedy Breedy culture vessel.

3.7 Other

If you would like to add a different type of sample to your vessel and you are unsure of how to carry out the procedure, please contact us at support@speedybreedy.com and we will be able to advise you.

4. Vessel Disposal

Used and unused culture vessels may contain hazardous materials. Health and Safety hazard assessments should be made prior to all Speedy Breedy testing of samples. Used and unused vessels should be disposed in accordance with local and national regulations.

4.1 Precautions

Do not introduce a sample through the vessel port while the vessel is inside the Speedy Breedy instrument.

Do not open vessels any time after a sample has been added.

Do not open chamber lids during a test.

Do not introduce more than 50ml of liquid into the culture vessels.