



BACTOSURE PRIME

How to Test

How to Test

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Collecting your first sample

After successfully completing the quiz and selecting your preferred language, you will screen three options on the home screen:



Step 1: Start App collection

1. Select **Collect Samples**.
2. Select the **Sample Type** from the list and click **Next** to proceed.
3. Follow the sample collection instructions on screen.

Step 2: Prepare for sample collection

4. **Wear disposable gloves** to prevent contamination.
5. **Sanitise your gloves** using an alcohol-based hand sanitiser (70%-80% ethanol).
6. Gather the sample collection kit, which includes the sample bag and necessary tools.

Collecting your first sample

Step 3: Flush and sterilise the tap

1. Run the tap for at least 2 minutes to flush out any stagnant water that might contain elevated levels of bacteria.
 2. Remove any attachments from the tap (e.g., filters or aerators).
 3. Sterilise the tap by heating it with a flame (such as a cigarette lighter) for 15 seconds, or use an alcohol wipe if the tap is unsuitable for flaming.
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Step 4: Collect the water sample

1. Ensure the sample bag contains a white tablet or powder to neutralise possible chlorine in the water. If the tablet is missing, contact Bactosure support at bactosure.com/support.
 2. Tear the top of the sample bag along the perforated line using the white tabs to open it.
 - **Important:** Avoid touching the inside of the bag to prevent contamination.
 3. Hold the sample bag under the tap and allow water to fill the bag up to the 100 mL line.
 - Ensure that the bag does not touch the tap.
 4. Remove any excess air from the bag before sealing it. Seal the bag by holding the white wire tags on the sides and twirling the bag at least three times.
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Collecting your first sample

Step 5: Record sample details in the app

1. Enter the following details in the app:

- **Water Supply ID:** This is the unique identifier for the water supply (pre-assigned during account setup).
- **Location:** Verify or update the GPS location of the sample collection point. If there is a discrepancy in the location, click  to update the current location.
- **Time:** Ensure the correct date and time are recorded.

2. Once all details are entered, tap "**Save**" to complete the process.

3. **Tap** the sample bag against the back of the mobile device to complete the sample collection.

Note: The Bactosure App uses Near Field Communication (NFC) to store data on the sample bag. While NFC is similar to the technology used in Apple Pay and Google Pay, it is used here solely for communicating with the sample bag and does not access any payment data on your device. The NFC antenna on most mobile devices is typically located at the rear, near the top or centre of the device.

Step 6: Store Sample

1. Make sure the sample bag is properly sealed to prevent leaks.
2. If you are not testing the sample immediately, store the sample in a refrigerator at a temperature of between 2 and 9 degrees celsius until you are ready for testing.

Note: Testing must commence within 24 hours of sample collection. Samples that are older than 24 hours cannot be processed by the Bactosure testing device.

Sample Testing

Before you begin: Ensure that you are working in a clean and well-lit area. The room that testing is undertaken in should be between 8°C and 30°C.

Step 1: Preparing for Sample Testing

- Wear disposable gloves.
- Sanitise your gloves using a reputable alcohol-based hand sanitiser.

Step 2: Cleaning the Device

- Sanitise the outer surface of the device with a wipe saturated in 70-80% alcohol.
- Unscrew the lid of the device. Gently clean the inside of the device using an alcohol wipe. Use plastic tweezers or forceps to hold the alcohol wipe to clean the inside of the chamber.

Note that 70% -80% alcohol solution provides the most effective properties for inactivation of bacteria.

Stronger ethanol solutions may be less effective and could damage the device.

Step 3: Cleaning the Device

- Carefully check that the sample bag has 100 mL of liquid using the line printed on the bag.

Note: Avoid touching the inside of the bag to prevent contamination.

Sample Testing

Step 4: Adding the Reagent

- Retrieve the reagent packet and check its expiration date.
- If within the valid date range, gently shake the reagent packet and pour its entire contents into the sample bag.

Note:

- *Never use a reagent packet that has expired as this will likely impact the test results.*
- *Use clean blades or scissors that have been sterilised with an alcohol wipe if you need to cut reagent packet.*

Step 5: Sealing the Sample Bag

- Remove any excess air from the sample bag.
- To seal the bag, hold the white wire tags on the sides and twirl the bag at least three times.

Step 6: Mixing the Sample

- Vigorously shake the sample bag until all the reagent powder has dissolved completely in the liquid sample.
- Clean the exterior of the bag using fresh tissue paper and discard the tissue in landfill waste.

Step 7: Powering the Device

- Locate the power switch positioned at the rear of the device.
- Ensure that the device is turned ON. Hold the power button for 3 seconds.

Sample Testing

Step 8: Traceability Microchip Scanning

- Press the '**Start**' button on the device.
- Scan the **Blue Sticker** located on the sample bag by touching it against front of the device on:



Step 9: Inserting the Sample Bag

- Carefully place the sample bag inside the test device.
- Remove excess air from the sample bag if it does not easily fit inside the test device.

Step 10: Running the Test

- Securely close the lid of the device. The test will start automatically.
 - Ensure the device remains undisturbed throughout the testing process. The screen will notify you when the test is completed.
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Results and Interpretation

Viewing the Results

 [Summary Report](#)

- Go to www.admin.bactosure.com and use the admin credentials.
- Click on the **Summary Report** menu.
- Click **View**
- Ask the Observer to Open the Report
- Use the details below to interpret the results

RESULT	ACTION
APPROVED	View

Result Interpretation:

If your test result is positive for E. coli, the following tables provide more detailed information about the associated health risks:

Health Risk Score for E. coli in Drinking Water (as recommended by WHO)

CFU (Colony Forming Unit)/ <u>100ml</u> of water	Health Risk
0	No risk
1-10	Low risk
10-100	Intermediate risk
100-1000	High risk
>1000	Very high risk

Health Risk Score for E. coli in Swimming Water (as recommended by the New Zealand Ministry for the Environment)

CFU (Colony Forming Unit)/ <u>100ml</u> of water	Category
130 or less	Excellent, Good, or fair
More than 130	Intermittent
More than 260	Poor

Disclaimer: The data provided in these tables are meant for estimation purposes only. For detailed information and guidelines, please refer to the WHO water guidelines.

Inactivation of Sample

To safely inactivate and discard the sample, follow the steps provided below:

Step 1: Safety Precautions

- Put on a new pair of disposable gloves to ensure safety.
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Step 2: Removing the Sample Bag

- Gently open the lid of the test device.
 - Carefully take out the sample bag.
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Step 3: Opening the Bag

- To open the sample bag, unroll it. Caution: Do not twirl it back as the water inside might splash out.
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Step 4: Neutralising the Sample

- Pour 10mL of bleach into the sample bag. You can use any standard household grade bleach.
 - After adding bleach, seal the bag by holding the white wire tags on the sides and twirl the bag at least 3 times. .
 - Let it sit undisturbed for at least 30 minutes. This will inactivate any contaminants present.
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Step 5: Disposal

After ensuring the sample is neutralised, discard the sample into a wastewater drain (such as a toilet) and the sample bag into landfill waste.

Note: Always ensure to handle contaminated samples with care, adhering to safety protocols.

Troubleshooting Guide

When encountering issues with the device, error messages might display on the screen. Below is a list of common error messages and the recommended solutions:

a) Test sample is not mixed.

Solution:

- Remove the sample bag from the device.
 - Shake the bag vigorously until the contents are fully dissolved.
 - Re-insert the sample bag into the device.
 - Close the lid securely and follow the instructions on the screen.
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b) Display is white.

Solution:

- Turn off power using the switch at the rear of the device and wait 10 seconds. Turn the power switch back on.
 - If the problem persists, contact Bactosure's support team at bactosure.com/support or via email at support@bactosure.com.
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c) Display is black.

Solution:

- Check that the power adapter is plugged into the device and turn on the power at the rear of the device.
 - Turn off power using the switch at the rear of the device and wait 10 seconds. Turn the power switch back on.
 - If the problem persists, contact Bactosure's support team at bactosure.com/support or via email at support@bactosure.com.
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Troubleshooting Guide

d) Display freezes or does not responding to touch input

Solution:

- Turn off power using the switch at the rear of the device and wait 10 seconds. Turn the power switch back on.
 - If the problem persists, contact Bactosure’s support team at bactosure.com/support or via email at support@bactosure.com.
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e) Display shows a “critical hardware” error message

Solution:

- Turn off power using the switch at the rear of the device and wait 10 seconds. Turn the power switch back on.
 - If the problem persists, contact Bactosure’s support team at bactosure.com/support or via email at support@bactosure.com.
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f) Insufficient battery

Solution:

Plug the power adapter into the device to charge the battery. You can complete tests while the device is charging.

g) If the battery is not charging.

Solution:

- Ensure the power cable is inserted properly into the device and that the power adapter has power.
 - If the problem persists, contact Bactosure’s support team at bactosure.com/support or via email at support@bactosure.com.
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Troubleshooting Guide

h) The test programme will not start

Solution:

- Open the device lid and ensure it's closed tightly. The program won't initiate if the lid isn't properly secured.
 - Check that the power cable is inserted in the device and that the mains power is switched on.
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i) No or Poor internet connection

Solution:

Move the device closer to a WiFi access point and connect to it using the Settings menu.

Note: Provisional test results will be provided on the display but a formal accredited report will not be issued until test results have been successfully sent to Bactosure from the device over WiFi.

i) Temperature too low

Solution:

- Relocate the device to an environment above 8°C.
 - Allow the device to adjust to the optimal temperature.
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j) Temperature too high

Solution:

- Turn off the device.
 - Move the device to a location with temperatures below 30°C.
 - Let the device sit undisturbed until it returns to a normal operating temperature.
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Precautions Guide

Read the Operating Manual First:

- Always read the operating manual thoroughly before operating the testing device. Familiarise yourself with all controls and functions.

Regulatory Compliance Notice:

- Changes or modifications to this equipment not expressly approved by Bactosure, the party responsible for compliance, could void the user's authority to operate the equipment. This includes alterations to the device's hardware, software, or any of its components. Always consult Bactosure's support team or refer to this operating manual for approved guidelines on using the equipment.

Battery Safety Compliance Statement

This product contains a lithium-ion battery that complies with the International Standard IEC 62133 for battery safety. To ensure continued safety and compliance with this standard, users are advised to follow these guidelines:

1. **Charging:** Only use the charger provided with this device or other chargers approved by Bactosure to charge the batteries.
2. **Replacement:** Battery replacement should be done using only the specified and approved battery model. Contact our customer service for a replacement battery.
3. **Handling:** Avoid exposing the battery to high temperature, direct sunlight, or fire. Do not puncture, modify, or apply pressure to the battery.
4. **Disposal:** Dispose of used batteries according to local regulations or return them to an approved recycling or disposal facility.

Failure to comply with these instructions may lead to a reduction in battery life, operational failure, or pose a safety hazard. Compliance with these guidelines will ensure the safe and optimal performance of your device under the terms of IEC 62133.

Precautions Guide

Placement:

- Ensure that the testing device is placed on a flat, stable surface.
 - Avoid direct sunlight or places with rapid temperature changes.
 - Ensure adequate air circulation around the device. Do not place it against walls or close to other large equipment.
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Power Source:

- Disconnect the power source when the testing device is not in use, or during maintenance/cleaning.
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Temperature control:

- Avoid opening the testing device lid, as this can lead to temperature fluctuations.
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Hygiene and Cleaning:

- Regularly clean the testing device to prevent microbial contamination.
 - Use only alcohol to clean the device. Avoid using bleach, harsh chemicals or abrasive pads.
 - Ensure the testing device is unplugged and cooled before cleaning.
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Handling and Transport:

- Handle the testing device with care. Avoid dropping or jarring.
 - If transporting, use the supplied box and ensure the testing device is secured to prevent movement and potential damage.
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Precautions Guide

Maintenance and Repairs:

- Do not attempt to repair the testing device yourself unless you are trained to do so.
 - If you suspect a malfunction, unplug the device and consult the manufacturer or a certified technician.
 - Regularly inspect cords and connections for damage or wear.
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Usage:

- Ensure that containers or samples placed inside the incubator are properly sealed to prevent spillage or contamination.
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Storage:

- Store in a cool, dry place when not in use.
 - If storing for an extended period, clean and dry the testing device thoroughly to prevent mould or bacterial growth.
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Safety:

- Keep away from children.
 - Wear appropriate personal protective equipment (e.g., gloves) when handling samples or cleaning the device.
 - In case of any unusual sounds, odours, or smoke, turn off and unplug the testing device immediately. Consult the manual or manufacturer for guidance.
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Environmental Concerns:

- Dispose of the testing device and its batteries and components in accordance with local regulations.
 - Consider recycling or reusing components when possible.
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