



# ***Bdellovibrio* sp.**

**27047™**

## **Description**

**Strain designation:** ICPB 3326 [Bd. W]

**Deposited As:** *Bdellovibrio* sp.

**Type strain:** No

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## **Storage Conditions**

**Product format:** Freeze-dried

**Storage conditions:** 2°C to 8°C

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## **Intended Use**

This product is intended for laboratory research use only. It is not intended for any animal or human therapeutic use, any human or animal consumption, or any diagnostic use.

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## **BSL 1**

ATCC determines the biosafety level of a material based on our risk assessment as guided by the current edition of *Biosafety in Microbiological and Biomedical Laboratories (BMBL)*, U.S. Department of Health and Human Services. It is your responsibility to understand the hazards associated with the material per your organization's policies and procedures as well as any other applicable regulations as enforced by your local or national agencies.

ATCC highly recommends that appropriate personal protective equipment is always used when handling vials. For cultures that require storage in liquid nitrogen, it is

important to note that some vials may leak when submersed in liquid nitrogen and will slowly fill with liquid nitrogen. Upon thawing, the conversion of the liquid nitrogen back to its gas phase may result in the vial exploding or blowing off its cap with dangerous force creating flying debris. Unless necessary, ATCC recommends that these cultures be stored in the vapor phase of liquid nitrogen rather than submersed in liquid nitrogen.

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## Certificate of Analysis

For batch-specific test results, refer to the applicable certificate of analysis that can be found at [www.atcc.org](http://www.atcc.org).

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## Growth Conditions

**Medium:**

ATCC Medium 587: YPSC medium

ATCC Medium 0550: R 8 A H medium

**Temperature:** 30°C**Atmosphere:** Anaerobic

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## Handling Procedures

ATCC 27047 is a predator of ATCC 27048 *Rhodospirillum rubrum* and is host-dependent. Therefore, it is necessary to establish a growing culture of the host strain before opening the vial of the *Bdellovibrio*.

**Growth of host ATCC 27048:**

1. Fill 13 mm screw cap test tubes completely to the top with #550 broth and then add 0.02 mL of 3% cysteine.

2. Let the test tubes sit for at least one hour prior to opening.
3. Open vial according to enclosed instructions.
4. Using a single tube of #550 reduced broth (5 to 6 mL), withdraw approximately 0.5 to 1.0 mL with a Pasteur or mL pipette. Rehydrate the entire pellet.
5. Aseptically transfer this aliquot back into the broth tube. Mix well.
6. Use 0.5 mL of the suspension to inoculate a #550 secondary broth tube.
7. Incubate the tubes at 30°C for 3 to 7 days under a tungsten lamp. Ensure that the screw cap tops are sealed during the incubation period.

**Propagation of *Bdellovibrio*:**

1. Open a vial of ATCC 27047 according to enclosed instructions.
2. Rehydrate the entire pellet with 0.5 mL of #587 broth. Withdraw suspension into a sterile test-tube.
3. Add approximately 0.5 mL of the host strain.
4. Melt tubes containing 2.5 mL of 0.8% semi-solid agar, and place in a 45°C water bath.
5. Add 0.2 to 0.3 mL of the host/predator suspension to each melted tube and pour over the surface of pre-warmed #587 plates.
6. Incubate plates anaerobically at 30°C for at least 10 days. After this time, plaques may be visible. Observe daily until plaques or clearing are seen.
7. Scrape off overlay into a test-tube and centrifuge at low speed to sediment the agar and cellular debris. The *Bdellovibrio* cells should be in the supernatant. Check for tiny, rapidly moving cells under a wet mount.

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**Notes**

*Escherichia coli* strain ML35 (ATCC 43827) has also been used as prey for this strain (Appl Environ Microbiol 66(6): 2365-2371, 2000).

This item will exhibit growth under aerobic conditions but growth is better under anaerobic conditions.

When further propagating the strain, use the tube of the host set aside for this purpose to obtain a more concentrated suspension of the host. It should be transferred and used as a 24 hour culture.

Additional information on this culture is available on the ATCC® web site at [www.atcc.org](http://www.atcc.org).

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## Material Citation

If use of this material results in a scientific publication, please cite the material in the following manner: *Bdellovibrio* sp. (ATCC 27047)

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## References

References and other information relating to this material are available at [www.atcc.org](http://www.atcc.org).

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