Chrysiogenes arsenatis Macy et al.

700172™

Description

Strain designation: BAL-1
Deposited As: *Chrysiogenes arsenatis* Macy et al.
Type strain: Yes

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.

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.

Certificate of Analysis

For batch-specific test results, refer to the applicable certificate of analysis that can be found at www.atcc.org.

Growth Conditions

Medium:
ATCC Medium 2139: Chrysiogenes arsenatis medium
Temperature: 28°C
Atmosphere: Anaerobic

Handling Procedures

1. Sterilize the top of the Balch tube by spraying it with 70% ethanol and then flaming the top.

2. If needed exchange the gas in the test tube for 100% N_2.

3. Open the freeze-dried vial according to the enclosed instructions. Take a gassed 1.0 ml syringe tipped with 22 gauge needle and withdraw 0.5 ml of medium from the Balch tube and rehydrate the freeze dried pellet. Immediately place the rehydrated vial under a stream of sterile gas, 100% N_2 to maintain anaerobicity.

4. Using the same syringe, withdraw the cell suspension from the vial and transfer it to the Balch tube. Plate

0.1 ml of the inoculated culture onto a non-selective medium and incubate

aerobically at 28ºC.

5. Growth should be detected in the broth within 4-6 days. No growth should be detected on the aerobic plate or broth.

ANAEROBIC CONDITIONS:

A. Balch tubes (available from Bellco Glass, Vineland, NJ; are specially designed for anaerobic work and use an aluminum crimp cap to hold a rubber stopper in place. Needles can easily be inserted through the stopper, and the tubes can be pressurized to 2 atm. Alternatively, serum vials may be used, or screw cap tubes with butyl rubber stoppers, in the latter case the stopper may be removed and the tube placed under a cannula system that dispenses sterile, oxygen free gas for addition of reducing agents or inoculation.

B. Syringes can be made anaerobic by one of two methods.

1. Displace the dead space in the syringe with a sterile

2. Displace the dead space in the syringe with a reducing

Notes

Chrysiogenes arsenatis grows by reducing arsenate [As (V)] to arsenite [As(III)], using acetate as the electron donor and carbon source.

Cells are Gram-negative, small vibroids, which are highly active exhibiting a spiral type motility

All culture work was done using the Hungate technique and no extra reducing agent was added to the media.

Growth from freeze-dried vials takes 4-6 days but subsequent transfers take 2 days.

Material Citation

If use of this material results in a scientific publication, please cite the material in the following manner: *Chrysiogenes arsenatis* Macy et al. (ATCC 700172)

References

References and other information relating to this material are available at www.atcc.org.

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Revision

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