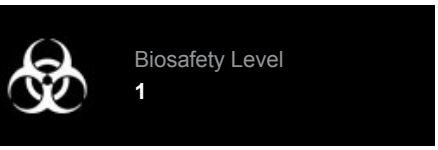
ATCC

Product Sheet

# *Geobacter pickeringii* (ATCC® BAA-1140™)

**Please read this FIRST**




## Intended Use

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

## Citation of Strain

If use of this culture results in a scientific publication, it should be cited in that manuscript in the following manner: *Geobacter pickeringii* (ATCC® BAA-1140™)

## Description

**Designation:** G13
**Deposited Name:** *Geobacter pickeringii*

## Propagation

**Medium**
ATCC® Medium 2635: *Desulfuromonas michiganenesis* Medium

**Growth Conditions**
**Temperature:** 30.0°C

**Propagation Procedure**
2. If needed exchange the gas in the test tube for 80% $N_2$-20% $CO_2$. If necessary add the appropriate reducing agent (see B, C, and D below) to the medium.
3. When the Balch tube is ready to inoculate, Open vial according to enclosed instructions.
4. For inoculation, use an anaerobic (see E below) 1.0 ml syringe tipped with 22-gauge needle. Withdraw 0.5 ml 2635 broth with which to rehydrate the cell pellet. Immediately upon the addition the 2635 broth to the cell pellet place the vial under a gentle stream of anaerobic gas. With the anaerobic syringe transfer the rehydrated cells back to the tube of 2635 broth. Transfer 0.5 ml the inoculated culture to additional broth tube(s) of 2635 broth. Plate 0.1 ml of the inoculated culture onto a non-selective medium and incubate aerobically at 30ºC. Use 0.1 ml of the inoculated culture to inoculate a nonselective aerobic broth and an additional tube of #2635 broth. Incubate the non-selective aerobic broth tubes at 30ºC. Incubate the anaerobic tube at 30ºC.
5. Growth should be detected in the #2635 broth within 3 to 5 days. There should be no growth detected on the aerobic plate or in the aerobic 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. Resazurin is a commonly used redox indicator that is pink when the redox potential is above 50 mv, and colorless when the redox potential is below 110 mv. i.e. highly reducing. Most strict anaerobes require this low redox potential for optimum growth.
C. To obtain a fully reduced medium, it is necessary that the medium be anoxic and that a reducing agent be added. Common reducing agents are sodium sulfide, cysteine, dithiothreitol, titanium citrate and Co-enzyme M (see D).
D. We suggest adding the reducing agent to the medium at least one hour before the medium is to be inoculated. Co-enzyme M (mercaptoethanesulfonic acid) (100 X solution): *Dissolve 5.0 g in 100 ml of deionized water. Distribute into screw cap test tubes, 56 ml per tube and seal with rubber stoppers under $N_2$ gas. Autoclave to sterilize. Excess tubes can be stored at room temperature for up to 2 months. Co-enzyme M is a compound produced by many methanogens. Some methanogens are sensitive to stronger reducing agents such as sodium sulfide. Co-enzyme M is the standard reducing agent we use when working with methanogens.*
E. Syringes can be made anaerobic by one of two methods.

## Notes

Cells are Gram-negative motile rods.

## References

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

## Biosafety Level: 1

Appropriate safety procedures should always be used with this material. Laboratory safety is discussed in the current publication of the *Biosafety in Microbiological and Biomedical Laboratories* from the U.S. Department of Health and Human Services Centers for Disease Control and Prevention and National Institutes for Health.

American Type Culture Collection
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*Or contact your local distributor*

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**1**

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**ATCC Warranty**

ATCC® products are warranted for 30 days from the date of shipment, and this warranty is valid only if the product is stored and handled according to the information included on this product information sheet. If the ATCC® product is a living cell or microorganism, ATCC lists the media formulation that has been found to be effective for this product. While other, unspecified media may also produce satisfactory results, a change in media or the absence of an additive from the ATCC recommended media may affect recovery, growth and/or function of this product. If an alternative medium formulation is used, the ATCC warranty for viability is no longer valid.

**Disclaimers**

This product is intended for laboratory research purposes only. It is not intended for use in humans.
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Please see the enclosed Material Transfer Agreement (MTA) for further details regarding the use of this product. The MTA is also available on our Web site at www.atcc.org

Additional information on this culture is available on the ATCC web site at www.atcc.org.


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