



Product Sheet

# *Acanthamoeba castellanii* (ATCC® 50373™)

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: *Acanthamoeba castellanii* (ATCC® 50373™)

American Type Culture Collection  
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Manassas, VA 20108 USA  
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Fax: 703.365.2750  
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## Description

**Strain Designation:** OS4-7B/Neff  
**Deposited Name:** *Acanthamoeba castellanii* (Douglas) Page  
**Depositor:** TJ Byers, RJ Gast  
**Isolation:**  
soil, Pacific Grove, CA, 1957

## Propagation

### Growth Conditions

**Temperature:** 25.0°C

Duration: axenic

**Protocol:** ATCCNO: 30010 SPEC: This strain is distributed as a freeze-dried preparation. See the general procedures for opening a freeze-dried vial. Aseptically add 0.5 ml of ice cold medium containing 12% (w/v) sucrose to the freeze-dried inner shell vial. Once the culture is completely rehydrated, aseptically add 1 ml of ATCC medium 712 and distribute to a 16 X 125 mm plastic screw-capped test tube or a T-25 tissue culture flask containing 5.0 ml of the same medium. Incubate the test tube culture horizontally with the cap on tight. Trophozoites should be evident in 1-5 days.

### Medium

ATCC® Medium 712: PYG w/ Additives

### Instructions for Complete Medium

ATCC Medium 712

### Culture Maintenance

1. When the culture is at or near peak density, vigorously agitate the culture.
2. Transfer approximately 0.25 ml to a fresh tube or flask containing 5 ml of fresh ATCC medium 712.
3. Screw the caps on tightly and incubate at 25°C (incubate test tubes at a 15° horizontal slant).
4. The amoebae will form an almost continuous sheet of cells on the bottom surface of the flask or test tube. Repeat steps 1-3 at 10-14 d intervals.

## Cryopreservation

1. To achieve the best results set up cultures with several different inocula (e.g. 0.25 ml, 0.5 ml, 1.0 ml). Harvest cultures and pool when the culture that received the lowest inoculum is at or near peak density.
2. If the cell concentration exceeds the required level do not centrifuge, but adjust the concentration to between  $2 \times 10^6$  and  $2 \times 10^7$  cysts/ml with fresh medium. If the concentration is too low, centrifuge at 600 x g for 5 min and resuspend the pellet in the volume of fresh medium required to yield the desired concentration.
3. While cells are centrifuging prepare a 15% (v/v) solution of sterile DMSO as follows: Add the required volume of DMSO to a glass screw-capped test tube and place it in an ice bath. Allow the DMSO to solidify. Add the required volume of refrigerated medium. Dissolve the DMSO by inverting the tube several times.  
\*NOTE: If the DMSO solution is not prepared on ice, an exothermic reaction will occur that may precipitate certain components of the medium.
4. Mix the cell preparation and the DMSO in equal portions. Thus, the final concentration will be between  $10^6$  and  $10^7$  cells/ml and 7.5% (v/v) DMSO. The time from the mixing of the cell preparation and DMSO stock solution before the freezing process is begun should be no less than 15 min and no longer than 30 min.
5. Dispense in 0.5 ml aliquots into 1.0 - 2.0 ml sterile plastic screw-capped cryules (special plastic vials for cryopreservation).
6. Place the vials in a controlled rate freezing unit. From room temperature cool at  $-1^\circ\text{C}/\text{min}$  to  $-40^\circ\text{C}$ . If the freezing unit can compensate for the heat of fusion, maintain rate at  $-1^\circ\text{C}/\text{min}$  through the heat of fusion. At  $-40^\circ\text{C}$  plunge into liquid nitrogen. Alternatively, place the vials in a Nalgene  $1^\circ\text{C}$  freezing apparatus. Place the apparatus at  $-80^\circ\text{C}$  for 1.5 to 2 hours and then plunge ampules into liquid nitrogen. (The cooling rate in this apparatus is approximately  $-1^\circ\text{C}/\text{min}$ .)
7. The frozen preparations are stored in either the vapor or liquid phase of a nitrogen freezer.
8. To establish a culture from the frozen state place an ampule in a water bath set at  $35^\circ\text{C}$  (2-3 min). Immerse the vial just sufficient to cover the frozen material. Do not agitate the vial.
9. Immediately after thawing, aseptically remove the contents of the ampule and inoculate into 5 ml of fresh ATCC medium 712 in a T-25 tissue culture flask or plastic 16 x 125 mm screw-capped test tube. Incubate at



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25°C.



### References

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

### ATCC Warranty

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### Disclaimers

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

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