




Product Sheet


# *Pseudokirchneriella subcapitata* (ATCC® 22662™)

Please read this **FIRST**



Storage Temp.  
**Frozen: -70°C or colder**  
**Freeze-Dried: 2°C to 8°C**  
**Live Culture: See Protocols Section**

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Biosafety Level  
**1**

## 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: *Pseudokirchneriella subcapitata* (ATCC® 22662™)

American Type Culture Collection  
PO Box 1549  
Manassas, VA 20108 USA  
[www.atcc.org](http://www.atcc.org)

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Fax: 703.365.2750  
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## Description

**Strain Designation:** Not applicable  
**Deposited Name:** *Selenastrum capricornutum* Printz  
**Depositor:** DT Specht  
**Isolation:** Nitelv River, Askershus, Norway ca. 1964

## Notes

This culture was originally deposited as *Selenastrum capricornutum*.

## Propagation

### Growth Conditions

**Temperature:** 25°C  
**Culture System:** Axenic; under 400 foot candles

### Medium

ATCC® Medium 625: Gorham's medium for algae

## Protocols

### Storage and Culture Initiation

Frozen ampules packed in dry ice should either be thawed immediately or stored in liquid nitrogen. If liquid nitrogen storage facilities are not available, frozen ampules may be stored at or below -70°C for approximately one week. **Do not under any circumstance store frozen ampules at refrigerator freezer temperatures (generally -20°C).** Storage of frozen material at this temperature will result in the death of the culture.

1. To thaw a frozen ampule, place in a 35°C water bath, until thawed (2-3 min). Immerse the ampule just sufficiently to cover the frozen material. Do not agitate the ampule.
2. Immediately after thawing, aseptically transfer the entire contents to a single 16 x 125 mm screw-capped test tube containing 5 ml of ATCC Medium 625. Incubate the tube on a 15° horizontal slant with the cap screwed on loosely (loosened one half turn) at 25°C under a 14 hour light (~50  $\mu$ Einsteins/m<sup>2</sup>/s irradiance)/10 hour dark cycle.

### Culture Maintenance

1. Inoculate a tube of fresh medium with 0.1 ml from a growing culture at or near peak density.
2. Incubate on a 15° horizontal slant with the cap on loosely (loosened one-half turn) at 25°C under a 14 hour light (50-100  $\mu$ Einsteins/m<sup>2</sup>/s irradiance)/10 hour dark cycle.
3. Subculture as necessary (i.e., typically every 14-21 days).

## Cryopreservation

### Harvest and Preservation


1. Harvest cells from a culture that is at or near peak density by centrifugation at 700-800 x g for 5 min.
2. Adjust the concentration of cells to  $2 \times 10^6$  -  $2 \times 10^7$ /mL in fresh medium.
3. While cells are centrifuging prepare a 14% (v/v) solution of sterile DMSO in fresh medium.
4. Mix the cell preparation and the 14% DMSO solution in equal portions. Thus, the final concentration will be  $10^6$  -  $10^7$  cells/mL and 7% (v/v) DMSO. The time from the mixing of the cell preparation and DMSO stock solution to the beginning of the freezing process should be no less than 5 min and no greater than 15 min.
5. Dispense in 0.5 mL aliquots into 1.0 - 2.0 mL sterile plastic screw-capped cryovials (special plastic vials for cryopreservation).
6. Place the vials in a controlled rate freezing unit. From room temperature cool at -1°C/min to -40°C. If the freezing unit can compensate for the heat of fusion, maintain rate at -1°C/min through the heat of fusion. At -40°C plunge into liquid nitrogen. Alternatively, place the vials in a Nalgene 1°C freezing apparatus. Place the apparatus at -80°C for 1.5 to 2 hours and then plunge ampules into liquid nitrogen. (The cooling rate in this apparatus is approximately -1°C/min.)
7. The frozen preparations should be stored in either the vapor or liquid phase of a nitrogen refrigerator. Frozen preparations stored below -130°C are stable indefinitely. Those stored at temperatures above -130°C are progressively less stable as the storage temperature is elevated. Vials should not be



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stored above -55°C.

- To establish a culture from the frozen state place an ampule in a water bath set at 35°C. Immerse the vial just to a level just above the surface of the frozen material. Do not agitate the vial.
- Immediately after thawing, do not leave in the water bath, aseptically remove the contents of the ampule and add to a 16 x 125 mm screw-capped test tube containing 5 mL of ATCC medium 625.
- Incubate the culture at 50-100 µEinsteins/m<sup>2</sup>/s irradiance at 25°C. Maintain under a 14/10h light-dark photoperiod.



### 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

This product is intended for laboratory research purposes only. It is not intended for use in humans.

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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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