



Product Sheet

# *Scenedesmus obliquus* (ATCC® 30430™)

Please read this **FIRST**

Storage Temp.  
**Frozen Cultures:**  
-70°C for 1 week;  
liquid N<sub>2</sub> vapor  
for long term  
storage



**Freeze-dried Cultures:**  
2-8°C

**Live Cultures:**  
See Protocols  
section for  
handling  
information



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: *Scenedesmus obliquus* (ATCC® 30430™)

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

800.638.6597 or 703.365.2700  
Fax: 703.365.2750  
Email: [Tech@atcc.org](mailto:Tech@atcc.org)

Or contact your local distributor



## Description

**Strain Designation:** UTEX 78 [CCAP-276/3b]  
**Deposited Name:** *Scenedesmus obliquus* (Turpin) Kutzing  
**Depositor:** UTEX  
**Isolation:** Freshwater, Lund, Sweden, 1939



## Propagation

### Growth Conditions

**Temperature:** 25°C  
**Culture System:** Axenic

### Medium

ATCC® Medium 847: Algal proteose agar



## Protocols

### Storage and Culture Initiation

This strain is distributed as a freeze-dried preparation. If the culture will not be rehydrated immediately upon arrival, store at 5°C until processed.

1. To rehydrate an ampule, aseptically add 0.5 mL of ice-cold medium 847 broth containing 12% sucrose to the freeze-dried inner shell vial.
2. Once completely rehydrated, aseptically transfer the entire contents to a single 16 x 125 mm screw-capped test tube containing 5 mL of ATCC medium 847 broth. 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 μEinsteins/m<sup>2</sup>/s irradiance)/10 hour dark cycle. Alternatively, add the entire thawed contents to the surface of a 20 x 100 mm Petri plate containing 20 mL of ATCC medium 847 agar. Wrap the plate culture with parafilm and incubate upright under the same light/dark cycle as specified for a test tube culture.

**Note:** Some algae grow poorly or not at all when recovered from a dried state in broth media. In such cases, the algae should be recovered on agar media.

### Culture Maintenance

1. For a plate culture, transfer cells with an inoculating loop to a plate of fresh agar medium from a growing culture at or near peak density. For a broth culture, inoculate a tube of fresh broth medium with 0.1 mL from a growing culture at or near peak density.
2. Incubate at 25°C under a 14 hour light (~50 μEinsteins/m<sup>2</sup>/s irradiance)/10 hour dark cycle, with the cap loosened one half turn in the case of a test tube culture.
3. Subculture every 14-21 days.



## Cryopreservation

### Harvest and Preservation

1. Harvest cells from a culture that is at or near peak density by centrifugation at 800 x g for 5 min.
2. Adjust the concentration of cells to 2 x 10<sup>6</sup> - 2 x 10<sup>7</sup>/ml in fresh medium.
3. While cells are centrifuging prepare a 10% (v/v) solution of sterile methanol in fresh medium.
4. Mix the cell preparation and the 10% methanol in equal portions. Thus, the final concentration will be 10<sup>6</sup> - 10<sup>7</sup> cells/ml and 5% (v/v) Methanol. The time from the mixing of the cell preparation and methanol 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 centrifuge tube containing 5 ml of ATCC medium 847 without agar. Centrifuge at 300 x g for 5 min.
- Remove most of the supernatant (=methanol, which can inhibit growth) and then resuspend the pellet. Transfer the culture to a 16 x 125 mm screw-capped test tube containing 5 ml of ATCC medium 847 broth or to the surface of an ATCC medium 847 agar plate (20 x 100 mm Petri plate containing 20 ml of ATCC medium 847 agar).
- Incubate the culture at ~50 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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