



Product Sheet

## *Dunaliella tertiolecta* (ATCC® 30929™)

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: *Dunaliella tertiolecta* (ATCC® 30929™)

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

**Deposited Name:** *Dunaliella tertiolecta* Butcher  
**Depositor:** AJ Repak  
**Isolation:**  
seawater, Plymouth, England, 1950

### Propagation

#### Growth Conditions

**Temperature:** 25.0°C  
Duration: axenic; under 100 foot candles

#### Medium

ATCC® Medium 1194: DV medium

### Instructions for Complete Medium

ATCC Medium 1194

#### Culture Maintenance

1. Inoculate medium with 0.1 ml from a growing culture at or near peak density.
2. Incubate at 50-100  $\mu\text{Einsteins}/\text{m}^2/\text{s}$  irradiance at 25°C. Maintain under a 14/10 h light-dark photoperiod.

### Cryopreservation

1. Prepare a 10% (v/v) sterile methanol solution in fresh ATCC 1194 medium.
2. Harvest cells from a culture which is at or near peak density. Centrifuge at 800 x g for 5 min.
3. Adjust the concentration of cells to  $2 \times 10^9/\text{ml}$  in fresh methanol solution.
4. Mix the cell preparation in equal volume with the methanol solution. The final concentrations will be  $1 \times 10^6$  cells/ml in 5% methanol.
5. Dispense in 0.5 ml aliquots into 1.0 - 2.0 ml sterile plastic screw-capped cryules (special plastic vials for cryopreservation). The time from mixing of the cell preparation and the methanol solution, before the cooling cycle begins, should be no greater than 15 min.
6. Place vials in a controlled rate freezing unit. From room temperature cool at  $-1^\circ\text{C}/\text{min}$  to  $-40^\circ\text{C}$ . If freezing unit can compensate for the heat of fusion, maintain rate at  $-1^\circ\text{C}/\text{min}$  through heat of fusion. At  $-40^\circ\text{C}$  plunge ampules 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. Store ampules in either the vapor or liquid phase of a nitrogen refrigerator. Frozen preparations stored below  $-130^\circ\text{C}$  are stable indefinitely. Those stored at temperatures above  $-130^\circ\text{C}$  are progressively less stable as the storage temperature is elevated. Shelf life must be determined empirically for storage temperatures above  $-130^\circ\text{C}$ .
8. To establish a culture from the frozen state place an ampule in a water bath set at  $35^\circ\text{C}$ . Immerse the vial to a level just above the surface of the frozen material. Do not agitate the vial.
9. Immediately after thawing, do not leave in the water bath, aseptically remove the contents of the ampule and add to 5 ml of ATCC medium 1194.
10. Incubate on a  $15^\circ$  horizontal slant at 50-100  $\mu\text{Einsteins}/\text{m}^2/\text{s}$  irradiance at 25°C. Maintain under a 14/10 h 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



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for Health.

### **ATCC Warranty**

The viability of ATCC® products is warranted for 30 days from the date of shipment, and is valid only if the product is stored and cultured according to the information included on this product information sheet. ATCC lists the media formulation that has been found to be effective for this strain. 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 strain. 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](http://www.atcc.org)

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

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