ATCC

Product Sheet

# *Trichomonas vaginalis* (ATCC® 30188™)

**Please read this FIRST**

Storage Temp.

***Frozen Cultures:***
**-70°C for 1 week; liquid $N_2$ vapor for long term storage**

***Freeze-dried Cultures:***
**2-8°C**

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

Biosafety Level
**2**

## 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: *Trichomonas vaginalis* (ATCC® 30188™)

American Type Culture Collection
PO Box 1549
Manassas, VA 20108 USA
www.atcc.org

800.638.6597 or 703.365.2700
Fax: 703.365.2750
Email: Tech@atcc.org

*Or contact your local distributor*

## Description

**Strain Designation:** RP
**Deposited Name:** *Trichomonas vaginalis* Donne
**Depositor:** R Samuels
**Isolation:** Human vagina, England, (?)

## Propagation

**Growth Conditions**
**Temperature:** 35°C
**Atmosphere:** Anaerobic
**Culture System:** Axenic; pH 6.0

**Medium**
ATCC® Medium 2154: LYI Entamoeba medium
ATCC® Medium 361: Modified TYM basal medium (ATCC medium 358) with pH adjusted to 6.0 and 0.2-0.5 ml of heat-inactivated horse serum added per tube before use

**Instructions for Complete Medium**
**Medium:** ATCC Medium 2154 adjusted to pH 6.0 with the addition of 150 µL sterile 1N HCl per 13 mL of medium (ATCC medium 2154 is available in a freeze-dried format as cat. no. PRA-2154; contact ATCC sales for details).

**Alternate Medium:** ATCC medium 361

## 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 it in a 35°C water bath, until thawed (2 to 3 min). Immerse the ampule just sufficient to cover the frozen material. Do not agitate the ampule.
2. Immediately after thawing, aseptically transfer contents to a screw-capped test tube containing either 9 mL of ATCC medium 361 (completed with serum) or 13 mL ATCC Medium 2154 adjusted to pH 6.0. Incubate the tube at 35°C (tube should be vertical for medium 361 or on a 15° horizontal slant for medium 2154).

**Culture Maintenance**

1. When the culture is at or near peak density, place the tubes on ice for 10 minutes.
2. Gently invert the culture tube 10 times and aseptically transfer a 0.1 mL to 0.4 mL aliquot to a screw-capped test tube containing either 9 mL of ATCC medium 361 (completed with serum) or 13 mL ATCC Medium 2154 adjusted to pH 6.0.
3. Incubate the culture at 35°C (tube should be vertical for medium 361 or on a 15° horizontal slant for medium 2154).
4. Transfer the culture every 3 to 4 days as described in steps 1 through 2. The transfer interval will depend on the quantity of the inoculum and the quality of the medium. This should be empirically determined by examining the culture on a daily basis until the growth cycle has stabilized. Do not allow the culture to overgrow. The culture crashes soon after reaching peak density.

## 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. The cells grown in a medium containing agar are concentrated by centrifugation, a solid pellet does not form. The soft pellet is resuspended to desired cell concentration with agar-free supernatant.
2. Adjust the concentration of cells to $2 \times 10^6$ to $2 \times 10^7$/mL in fresh medium.
3. While cells are centrifuging prepare a 10% (v/v) solution of sterile DMSO in fresh medium.
    a. Add 1.0 mL of DMSO to an ice cold 20 x 150 mm screw-capped test tube.

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b. Place the tube on ice and allow the DMSO to solidify (~5 min) and then add 9.0 mL of ice cold medium.
c. Invert several times to dissolve the DMSO.
d. Allow to warm to room temperature.

4. Mix the cell preparation and the DMSO in equal portions. Thus, the final concentration will be $10^6$ to $10^7$ cells/mL and 5% (v/v) DMSO. The time from the mixing of the cell preparation and DMSO stock solution before the freezing process is begun should no less than 15 min and no longer than 30 min.
5. Dispense in 0.5 mL aliquots into 1.0 mL to 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°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 stabile indefinitely. Those stored at temperatures above -130°C are progressively less stabile as the storage temperature is elevated. Vials should not be stored above -55°C.
8. 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.
9. Immediately after thawing, do not leave in the water bath, aseptically remove the contents of the ampule and inoculate a 16 x 125 mm screw-capped test tube containing either 9 mL of ATCC medium 361 (completed with serum) or 13 mL ATCC Medium 2154 adjusted to pH 6.0.
10. Incubate the culture at 35°C with the cap screwed on tightly (tube should be vertical for medium 361 or on a 15° horizontal slant for medium 2154).

## References

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

## Biosafety Level: 2

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

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.

While ATCC uses reasonable efforts to include accurate and up-to-date information on this product sheet, ATCC makes no warranties or representations as to its accuracy. Citations from scientific literature and patents are provided for informational purposes only. ATCC does not warrant that such information has been confirmed to be accurate.

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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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