



# *Nostoc punctiforme* (Kützing) Hariot

29133™

## Description

*Nostoc punctiforme* strain PCC 73102 was isolated from *Macrozamia* sp. root in Australia. This cyanobacterium is known to produce glycolipid and ornithine carbamoyltransferase.

**Strain designation:** PCC 73102

**Deposited As:** *Nostoc* sp.

**Type strain:** No

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## Storage Conditions

**Product format:** Frozen

**Storage conditions:** -80°C or colder

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## Intended Use

This product is intended for laboratory research use only. It is not intended for any animal or human therapeutic use, any human or animal consumption, or any diagnostic use.

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## BSL 1

ATCC determines the biosafety level of a material based on our risk assessment as guided by the current edition of *Biosafety in Microbiological and Biomedical Laboratories (BMBL)*, U.S. Department of Health and Human Services. It is your responsibility to understand the hazards associated with the material per your organization's policies and procedures as well as any other applicable regulations as enforced by your local

or national agencies.

ATCC highly recommends that appropriate personal protective equipment is always used when handling vials. For cultures that require storage in liquid nitrogen, it is important to note that some vials may leak when submersed in liquid nitrogen and will slowly fill with liquid nitrogen. Upon thawing, the conversion of the liquid nitrogen back to its gas phase may result in the vial exploding or blowing off its cap with dangerous force creating flying debris. Unless necessary, ATCC recommends that these cultures be stored in the vapor phase of liquid nitrogen rather than submersed in liquid nitrogen.

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## Certificate of Analysis

For batch-specific test results, refer to the applicable certificate of analysis that can be found at [www.atcc.org](http://www.atcc.org).

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## Growth Conditions

### Medium:

ATCC Medium 819: Blue-green nitrogen-fixing medium

**Temperature:** 26°C

**Atmosphere:** Aerobic

**Incubation:** Under light intensity of 2,000-3,000 lux

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## Handling Procedures

1. Open thawed vial according to enclosed instructions or visit [www.atcc.org](http://www.atcc.org) for instructions.
2. Aseptically transfer the entire contents to a 5-6 mL tube of #819 broth.

Additional test tubes can be inoculated by transferring 0.5 mL of the primary broth tube to these secondary tubes.

3. Use several drops of the primary broth tube to inoculate a #819 agar slant.
4. Incubate at 26°C for 14-28 days under 2000-3000 lux light. It is helpful to incubate test tubes in a slanted position to increase gas exchange in broth and to enhance exposure to light.

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## Notes

Good growth, indicated by increased pigmentation in the broth or on the slant, should occur after two to four weeks of incubation. Examine cells microscopically to assure that they are intact and healthy. At this time additional test tubes or flasks can be inoculated. A 5% inoculum is recommended (i.e. 5 ml of culture to 100 ml fresh medium).

To minimize change in a culture, it is recommended that a frozen seed stock be established from early passage cells. This may be accomplished by propagating the strain under ideal conditions, utilizing recommended medium, temperature and light. Prepare a concentrated cell suspension, after good growth is achieved. If grown in broth, pellet the cells by centrifugation. Decant the supernatant and resuspend the pellet in fresh #819 broth using 1/10 or less of the original volume. For slant cultures, wash cells off the agar surface with a minimal amount of #819 broth so that a concentrated cell suspension is attained. Add 50% DMSO solution to the concentrated cell suspension so that the final concentration of DMSO in the suspension is 5%. Dispense small aliquots (0.5 to 1 ml) of the suspension into small sterile vials. Store the vials at -50°C or below.

When needed, remove vials from storage, thaw contents in a 37°C water bath and inoculate into recommended medium. A minimum of 0.2 ml of the thawed stock should be used to inoculate 5 ml of broth or 1 agar slant.

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## Material Citation

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If use of this material results in a scientific publication, please cite the material in the following manner: *Nostoc punctiforme* (Kützing) Hariot (ATCC 29133)

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## **References**

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

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## ***Nostoc punctiforme* (Kützing) Hariot**

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