

PhytoTechnology Laboratories®

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Product Information Sheet

C195 Coconut Water

Properties

Form: Liquid Appearance: Clear, Colorless to Slight Yellow Tint Application: Plant Media Supplement Solubility: Miscible with Water Typical Working 25 to 50 mL/L Concentration: Storage Temp: 2 to 6 °C Other Notes: Plant Tissue Culture Tested Sterile Filtered

Application Notes

Coconut water has been shown to stimulate shoot proliferation in many plant species. This is most likely due to its unique composition of nutrients and natural phytohormones (e.g. zeatin and kinetin) (Mamaril et al., 1988). It is most commonly used in orchid tissue culture as a medium supplement. Introduced by Overbeek et al. in 1940, coconut water was used as a new component of nutrient medium for callus cultures (1941) and has since become a popular additive in tissue culture media.

PhytoTechnology Laboratories® also carries Coconut Powder, Product No. C187, and Freeze Dried Organic Coconut Powder, Product No. C1780.

References

Afroz A, Z. Chaudhry, U. Rashid, M.R. Khan and G.M. Ali (2010) Enhanced regeneration in explants of tomato (Lycopersicon esculentum L.) with the treatment of coconut water. African Journal of Biotechnology 9(24), pp. 3634-3644.

Alam MF, Sinha P, Hakim ML.(2010) Micropropagation of Vanda teres (Roxb.) Lindle. Methods Mol Biol. 589:21-8.

Al-Khavri, JM (2010) Somatic embryogenesis of date palm (Phoenix dactylifera L.) improved by coconut water. Biotechnology, 9: 477-484. DOI: 10.3923/biotech.2010.477.484

- Baskaran, P and N. Jayabalan (2005) An Efficient Micropropagation System for Eclipta alba: A Valuable Medicinal Herb. In Vitro Cellular & Developmental Biology. Plant, 41:4 Pp. 532-539
- Jayasih, Y. and Wattimena, D.I.G. (1994) The effect of coconut water and zeolite on micropropagation of potato shoot. Acta Hort. (ISHS) 369:451-454 http://www.actahort.org/books/369/369_49.htm
- Kunisaki J, Araki A, Sagawa Y (2003) Micropropagation of 'awa (kava, Piper methysticum). Honolulu (HI): University of Hawaii. 11 p. Biotechnology; BIO-4. http://hdl.handle.net/10125/2842
- Manaril, Juanita C., Estella T. Paner, Lorele C. Trinidad, Emmanuel S. Palacpac, and Angela dela Cruz. (1988). Enhancement of Seedling Growth with Extracts from Coconut Water. Philipp J. Crop Sci. 13(1):1-7.
- Mandal AB, A. Maiti and Elanchezhian R. (2002) In vitro micropropagation of Ananas comosus L. (Merr.) var. Queen. Jour. Appl. Hort. 4(2):107-112.
- Martin KP (2007) Micropropagation of the bamboo orchid (Arundina graminifolia (d. Don) hochr.) through protocorm-like-bodies using node explants. Propagation of Ornamental Plants 7(2): 97-100.
- Modi, P.; Banerjee, M. (2009) Effect of growth regulator and additives (AdSO4, zeatin and coconut water) on micropropagation of Rauvolfia serpentina. Journal of Applied Bioscience, v. 35(1): p. 79-81.
- Nasib A, K. Ali and S. Khan (2008) An optimized and improved method for the in vitro propagation of kiwifruit (Actinidia deliciosa) using coconut water. Pak. J. Bot., 40(6): 2355-2360.

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Overbeek, V.J.; Conklin, M.E.; Blakeslee, A.F. (1941) Factors in coconut milk essential for growth and development of very young Datura embryos. Science, 94, 350-351

Peixe A, Raposo A, Lourenco R, Cardoso H, Macedo E (2007) Coconut water and BAP successfully replaced zeatin in olive (Olea europaea L.) micropropagation. Scientia Horticulturae (Amsterdam) 113, 1-7.

Sayeed Hassan AKM and SK Roy (2005) Micropropagation of *Gloriosa superba L*. Through High Frequency Shoot Proliferation. Plant Tissue Cult. 15(1): 67-74.

Sinha P, Alam MF, Hakim ML (2010) Micropropagation of Phalaenopsis Blume. Methods Mol Biol. 589:77-85.

Soundararajan, T. and C.M. Karrunakaran (2011) Micropropagation of Bacopa monnieri through protoplast. Asian J. Biotechnol., 3: 135-152.

Tefera W and S. Wannakrairoj (2004) Micropropagation of Krawan (Amomum krervanh Pierre ex Gagnep). Science Asia 30: 9-15

Tefera W. and S. Wannakrairoj (2004) A Micropropagation Method for Korarima (Aframomum corrorima (Braun) Jansen). ScienceAsia 30: 1-7

Yam T W, Ichihashi S and Arditti J (1991) Callus Growth and Plantlet Regeneration in Taro, Colocasia esculenta var. esculenta (L) Schott (Araceae). Ann Bot 67(4): 317-323.

Yong, JWH, Ge L, Ng YF, and Tan SN (2009) The Chemical Composition and Biological Properties of Coconut (Cocos nucifera L.) Water. Molecules 14, 5144-5164. doi:10.3390/molecules14125144

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