

Bacto™ Tryptose

Product Description

Bacto™ Tryptose is a mixed enzymatic hydrolysate with distinctive nutritional properties. The digestive process of Tryptose results in assorted peptides of higher molecular weight suitable for long-chain amino acid requirements.

Potential Applications

Bacto Tryptose was originally developed as a peptone particularly adapted to the growth requirements of *Brucella*. Tryptose is very useful for cultivation of streptococci, pneumococci, meningococci and other fastidious organisms, and was found to be superior to meat infusion peptone media previously used for these organisms.^{1,2} Mobley et al.³ reported that Tryptose Broth was the preferred medium for strains of *Bordetella bronchiseptica* in studies of phosphatase activity.

Tryptose has been reported as beneficial for cell culture applications. Litwin⁴ found Tryptose suited to supplementing a serum-free medium for growing human diploid fibroblasts. Vaughn and Fan⁵ established that Tryptose provided free amino acids necessary for growth of *Spodoptera frugiperda* and *Lymantria dispar* insect cell lines. Tryptose Peptone is often used as a biomass enhancer for recombinant *Escherichia coli* production.

Tryptose is the major ingredient and only peptone in the formulation, Tryptose Phosphate Broth, an often-used medium for various culture applications. Hata and Kojima⁶ have shown Tryptose Phosphate Broth (TPB) to be a useful supplement in culturing the nematode, *Angiostrongylus cantonensis*, *in vitro*. TPB was also reported as a supplement to a medium for cultivating a protozoan parasite, which parasitizes vectors of Chagas' disease, on its insect cell host.⁷ *Spodoptera frugiperda*, a cotton pest in Argentina⁸ and several tick cell lines have also been grown using a TPB supplemented medium.⁹ Tryptose Phosphate Broth has been reported as a suitable supplement for growth of baby hamster kidney cells¹⁰ and porcine kidney cells.¹¹

Physical Characteristics

Bacto™ Tryptose appears as tan, free-flowing granules.

Availability

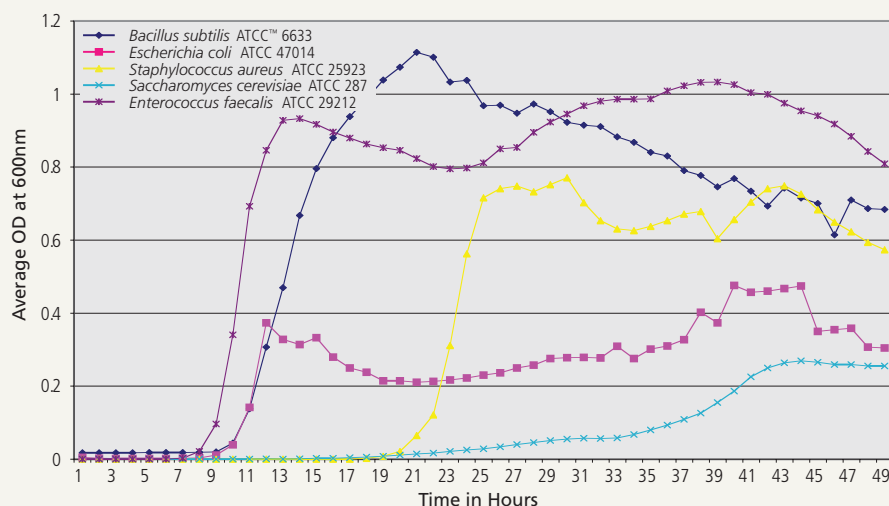
Product Description	Cat. No.	Qty.
Bacto™ Tryptose.	211713. . .	500 g
Bacto™ Tryptose.	211709. . .	10 kg

References

- Casman. 1942. A dehydrated medium to supplement meat infusion as a base for blood agar. *J. Bacteriol.* 43:33.
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- Mobley, Chengappa, Kadel and Stuart. 1984. Effect of pH, temperature and media on acid and alkaline phosphatase activity in "clinical" and "nonclinical" isolates of *Bordetella bronchiseptica*. *Can. J. Comp. Med.* 48:175-178.
- Litwin. 1985. Further studies on a tryptose based serum-free medium for human diploid fibroblasts. *Dev. Biol. Stand.* 60:25-33.
- Vaughn and Fan. 1997. Differential requirements of two insect cell lines for growth in serum-free medium. *In Vitro Cell. Dev. Biol. Anim.* 33:479-482.
- Hata and Kojima. 1990. *Angiostrongylus cantonensis*: *in vitro* cultivation from the first-stage to infective third-stage larvae. *Exp. Parasitol.* 70:467-482.
- Reduth, Schaub and Pudney. 1989. Cultivation of *Blastocrithidia triatomae* (Trypanosomatidae) on a cell line of its host *Triatoma infestans* (Reduviidae). *Parasitology* 98:387-393.
- Deutschmann and Jager. 1994. Optimization of the growth conditions of Sf21 insect cells for high-density perfusion culture in stirred-tank bioreactors. *Enzyme Microb. Technol.* 16:506-512.
- Munderloh and Kurtti. 1989. Formulation of medium for tick cell culture. *Exp. Appl. Acarol.* 7:219-229.
- Prodafikas and Plavsic. 2000. Effects of medium supplements on BHK-21 cell growth and bluetongue virus production. *Focus* 22:35.
- Sakoda and Fukusho. 1998. Establishment and characterization of a porcine kidney cell line, FS-L3, which forms unique multicellular domes in serum-free culture. *In Vitro Cell Dev. Biol. Anim.* 34:53-57.

Growth Curve

1% Bacto™ Tryptose Peptone in 1.13% M9 Minimal Salts + 0.4% Glucose, BioScreen C



Molecular Weight

Bacto™ Tryptose

