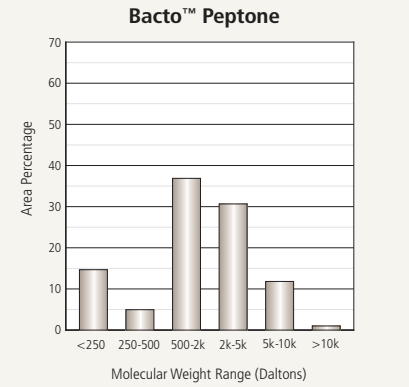
Bacto™ Peptone

Molecular Weight



Product Description

Bacto™ Peptone is an enzymatic digest of animal protein. Bacto Peptone was first introduced in 1914 and became the standard Peptone for the preparation of bacteriological culture media. The nutritive value of Bacto Peptone is largely dependent on the amino acid content that supplies essential nitrogen. Bacto Peptone contains only a negligible quantity of proteoses and more complex constituents.

Potential Applications

Bacto Peptone is used as an organic nitrogen source in microbiological culture media for cultivation of a variety of bacteria and fungi. For example, Iwanaga et al.[1] utilized Bacto Peptone for production of cholera toxin by *Vibrio cholerae* O1 El Tor. Benkerroum et al.[2] reported using Bacto Peptone in a selective medium developed for isolating *Leuconostoc* spp. from food samples. Bacto Peptone was used in a culture medium for two anaerobic, extremely thermophilic Archaea, *Thermococcus celer* and *Pyrococcus woesei*, by Blamey et al.[3]

Bacto Peptone has also been utilized as a nitrogen source in cell culture media formulations. Taylor et al.[4] used Bacto Peptone to supplement serum-free medium for several mammalian cell lines and reported the solubility of Bacto Peptone as very good at 10 g/100 mL water. Sakoda and Fukusho[5] also utilized Bacto Peptone in serum-free culture for maintaining porcine kidney epithelial cells. Bacto Peptone is also useful as a supplement in cell culture with serum.

Researchers uncovered estrogenic activity associated with Bacto Peptone when including the peptone in medium for culture of yeast; the estrone contained in Bacto Peptone was converted to estrodiol by *Saccharomyces cerevisiae*. These findings suggest that adding estrogens to a medium containing Bacto Peptone for studies of estrodiol production by yeast may confound results.[6,7]

Physical Characteristics

Bacto™ Peptone is a tan, free-flowing, homogeneous powder.

Availability

Product Description	Cat. No.	Qty.
Bacto™ Peptone	211677	500 g
Bacto™ Peptone	211820	2 kg
Bacto™ Peptone	211830	10 kg

References

1. Iwanaga, Yamamoto, Higa, Ichinose, Nakasone and Tanabe. 1986. Culture conditions for stimulating cholera toxin production by *Vibrio cholerae* O1 El Tor. Microbiol. Immunol. *30*:1075-1083.
2. Benkerroum, Misbah, Sandine and Elaraki. 1993. Development and use of a selective medium for isolation of *Leuconostoc* spp. from vegetables and dairy products. Appl. Environ. Microbiol. *59*:607-609.
3. Blamey, Chiong, Lopez and Smith. 1999. Optimization of the growth conditions of the extremely thermophilic microorganisms *Thermococcus celer* and *Pyrococcus woesei*. J. Microbiol. Methods *38*:169-175.
4. Taylor, Dworkin, Pumper and Evans. 1972. Biological efficacy of several commercially available peptones for mammalian cells in culture. Exp. Cell Res. *74*:275-279.
5. 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.
6. Feldman and Krishnan. 1995. Estrogens in unexpected places: possible implications for researchers and consumers. Environ. Health Perspect. 103 Suppl *7*:129-133.
7. Miller, Bottema, Stathis, Tokes and Feldman. 1986. Unexpected presence of estrogens in culture medium supplements: subsequent metabolism by the yeast *Saccharomyces cerevisiae*. Endocrinology *119*:1362-1369.