BBL™ Beef Extract Powder
Bacto™ Beef Extract, Desiccated

Product Description

Beef Extract is derived from infusion of beef and provides an undefined source of nutrients. Beef Extract is not exposed to the harsh treatment used for protein hydrolysis, so it can provide some of the nutrients lost during peptone manufacture.[1] Beef Extract is a mixture of peptides and amino acids, nucleotide fractions, organic acids, minerals and some vitamins. "Its function can therefore be described as complementing the nutritive properties of peptone by contributing minerals, phosphates, energy sources and those essential factors missing from peptone."[2] Beef Extract Powder is a meat extract dried to powder form. Bacto™ Beef Extract, Desiccated, is the dried form of Beef Extract paste.

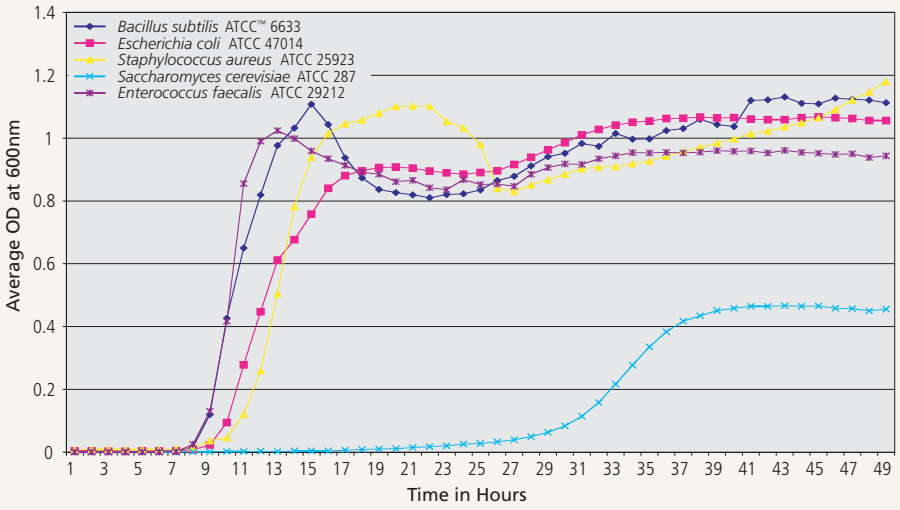
Potential Applications

Beef Extract is intended to replace aqueous infusion of meat in microbiological culture media. Beef Extract is frequently used at a concentration of 0.3 to 1.0% in culture media, although concentrations may vary depending on the nutritional requirements for the medium formulation.

Beef Extract was used in media for early studies of non-sporulating anaerobes of the intestinal tract and as a stock broth in the study of nutritional needs of streptococci. Prokofeva et al.[3] used Beef Extract for growing thermoacidophilic organisms newly isolated from hot springs in Kamchatka, Russia. Kataoka and Tokiwa[4] used Beef Extract as a nitrogen source in studies of mannose production by *Clostridium tertium* strains isolated from soil and methanogenic sludge. In addition, Beef Extract is a nutritive ingredient in many classical culture media, including Antibiotic Assay media described in *The United States Pharmacopeia*,[5] and several media recommended for standard methods applications.[6-8]

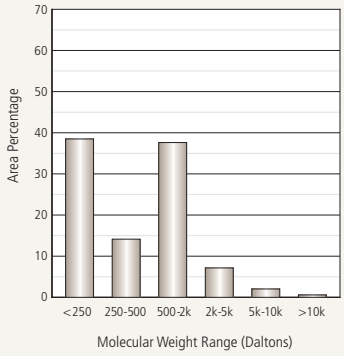
Growth Curve

1% BBL™ Beef Extract Powder 212303 in 1.13% M9 Minimal Salts + 0.4% Glucose, BioScreen C



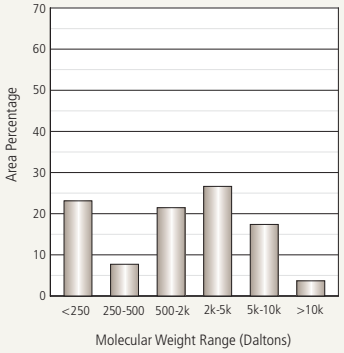
Molecular Weight

BBL™ Beef Extract Powder



Molecular Weight

Bacto™ Beef Extract, Desiccated



Physical Characteristics

BBL™ Beef Extract Powder is a light to medium, cream to tan, free-flowing, homogeneous powder.

Bacto™ Beef Extract, Desiccated is a medium to dark brown, crystalline powder.

Availability

Product Description	Cat. No.	Qty.
BBL™ Beef Extract Powder	212303	500 g
Bacto™ Beef Extract, Desiccated	211520	500 g

References

1. Cote. 1999. Media composition, microbial, laboratory scale. *In* Flickinger and Drew (ed.), Encyclopedia of bioprocess technology: fermentation, biocatalysis, and bioseparation. John Wiley & Sons, Inc., New York.
2. Bridson and Brecker. 1970. Design and formulation of microbial culture media. *In* Norris and Ribbons (ed.), Methods in microbiology, vol. 3A. Academic Press, New York.
3. Prokofeva, Miroshnichenko, Kostrikina, Chernyh, Kuznetsov, Tourova and Bonch-Osmolovskaya. 2000. *Acidilobus aceticus* gen. nov., sp. nov., a novel anaerobic thermoacidophilic archaeon from continental hot vents in Kamchatka. Int. J. Syst. Evol. Microbiol. *50*: Pt 6:2001-2008.
4. Kataoka and Tokiwa. 1998. Isolation and characterization of an active mannanase-producing anaerobic bacterium, *Clostridium tertium* KT-5A, from lotus soil. J. Appl. Microbiol. *84*:357-367.
5. United States Pharmacopeial Convention. 2006. The United States pharmacopeia 29/The national formulary 24—2006. United States Pharmacopeial Convention, Inc., Rockville, Md.
6. Clesceri, Greenberg and Eaton (ed.). 1998. Standard methods for the examination of water and wastewater, 20th ed. American Public Health Association, Washington, D.C.
7. U.S. Food and Drug Administration. 1998. Bacteriological analytical manual, 8th ed., rev. A. AOAC International, Gaithersburg, Md.
8. Downes and Ito (ed.). 2001. Compendium of methods for the microbiological examination of foods, 4th ed. American Public Health Association, Washington, D.C.