Beef Extract Powder

Intended Use
A nutritious extract used in preparation of a variety of culture media for the cultivation of a wide variety of microorganisms.

Summary and Principle
Beef extract powder is a meat extract dried to powdered form. It provides source of nitrogen, vitamins, amino acids and carbon in microbiological culture media. Beef extract powder is usually employed in concentrations of 0.3% to 1.0% in culture media. The beef extract products are replacements for infusion of meat.

Storage and Stability
Store dehydrated medium below 30°C in tightly closed container. Avoid freezing and overheating. Use before expiry date on the label. Once opened keep powdered medium closed to avoid hydration.
Note: TSE/BSE certificate is available on request.

Directions
Refer to the final concentration in the formula of the medium being prepared.

Quality Control

Test	Specification
Appearance	Light yellow/ yellowish brown coloured powder.
Solubility	Completely soluble in water.
Colour and Clarity of 1% w/v aqueous solution after autoclaving at 15 psi / 15 min.	Light yellow coloured, clear solution
pH after autoclaving	5.5 ± 1.5
Ash Content	Not More Than 20 %
Loss on Drying (Moisture Content)	Not More Than 5%
α-amino Nitrogen Content	Not Less Than 2.5%
Total Nitrogen Content	Not Less Than 7%
Total microbial count	Less than 5000 cfu/g
E. coli	Absent
Salmonella	Absent
Pseudomonas aeruginosa	Absent
Staphylococcus aureus	Absent

Cultural Response: Cultural characteristics observed after an incubation of 18-24 hours at 30°C-35°C for bacteria and 2-5 days for fungi at 20°C-25°C

Organism (ATCC)	Growth
Staphylococcus aureus subsp. *aureus* (6538)	Good
Escherichia coli (8739)	Good
Pseudomonas aeruginosa (9027)	Good
Streptococcus pyogenes Strain Bruno (19615)	Good
Candida albicans 3147 (10231)	Good
Aspergillus brasiliensis WLRI 034(120) (16404)	Good

Note: Growth for was observed after 72 hours at 20°C-25°C for quantitative test and the same is carried out for qualitative test and confirmed characteristic growth (White mycelial growth with black spores) after 4-5 days.

Typical Analysis

NaCl (%)	0.3	Isoleucine (% Free)	1.3
Calcium (µg/g)	264	Isoleucine (% Total)	5.1
Magnesium (µg/g)	285	Leucine (% Free)	3.8
Potassium (µg/g)	28793	Leucine (% Total)	7.2
Sodium (µg/g)	18510	Lysine (% Free)	4.0
Chloride (%)	*	Lysine (% Total)	5.7

Sulfate (%)	0.53	Methionine (% Free)	0.8
Phosphate (%)	3.22	Methionine (% Total)	1.6
Alanine (% Free)	1.8	Phenylalanine (%Free)	2.5
Alanine (% Total)	4.0	Phenylalanine	5.0
Arginine (% Free)	2.8 (% Total)		
Arginine (% Total)	2.8	Proline (% Free)	0.3
Asparagine (% Free)	0.6	Proline (% Total)	5.7
Aspartic acid (% Free)	0.6	Serine (% Free)	0.8
Aspartic acid (% Total)	5.5	Serine (% Total)	2.1
Cystine (% Free)	0.2	Threonine (% Free)	0.6
Glutamic Acid (% Free)	2.5	Threonine (% Total)	1.8
Glutamic Acid (% Total)	14.6	Tryptophan	0.7
Glutamine (% Free)	0.1 (% Free)		
Glycine (% Free)	0.5	Tyrosine (% Free)	0.6
Glycine (% Total)	2.3	Tyrosine (% Total)	1.5
Histidine (% Free)	0.4	Valine (% Free)	1.4
Histidine (% Total)	2.1	Valine (% Total)	5.4

* Below level of detection

Reference

1. United States Pharmacopeial Convention, Inc. 2008. The United States pharmacopeia 31/The national formulary 26, Supp. 1, 8-108, online. United States Pharmacopeial Convention, Inc., Rockville, Md.
2. Downes and Ito (ed.). 2001. Compendium of methods for the microbiological examination of foods, 4th ed. American Public Health Association, Washington, D.C.
3. Data on file: Microxpress®, A Division of Tulip Diagnostics (P) Ltd.

Product Presentation:

Cat No.	Product description	Pack Size
202020430500	Beef Extract Powder	500 g
202020432500	Beef Extract Powder	2.5 k
202020439925	Beef Extract Powder	25 k (Bag)
202020439825	Beef Extract Powder	25 k (Drum)