



Casein, Acid Hydrolysate

AS-1003

For preparation of microbial culture media, vaccine production, industrial fermentation processes using yeast and fastidious species of *bacillus spp.*

Casein, the major protein of milk, is rich in amino nitrogen. When casein is treated by hydrolysate by hydrochloric acid, hydrolyzed in free amino acids and some peptide fragments. This product is called casein, acid hydrolysate that is a suitable source of nitrogen and growth factors for culture media.

Due to hydrochloric acid exposure, tryptophan is destroyed, and inorganic salts content is high because of neutralization of digestion reaction.

Casein, acid hydrolysate is appropriate for supplying amino nitrogen in culture media, large-scale cultivation of *tetanus bacilli*, *diphtheria*, and *streptococci*.

Typical analysis

Powder appearance	Homogeneous, free-flowing, beige
2% solution appearance	Clear, amber
pH (2% in water)	6.5 – 7.3

Amino acid composition (mg/g)

Aspartic acid	44
Threonine	22
Serine	27
Glutamic acid	125
Proline	61
Glycine	12
Alanine	20
Cysteine	-
Valine	39
Methionine	12
Isoleucine	24
Leucine	34
Tyrosine	6
Phenylalanine	25
Histidine	18
Lysine	56
Arginine	22
Tryptophan	-



Microbial Quality Control

Cultural response after 18-24 hours incubation at 35-37 °C on Peptone agar (AS-1318) prepared by casein, acid hydrolysate as nitrogen and vitamin source.

Strain	ATCC	Growth
<i>Escherichia Coli</i>	29922	+
<i>Staphylococcus aureus</i>	25923	+
<i>Enterococcus faecalis</i>	11700	+
<i>Listeria monocytogenes</i>	19113	+
<i>Klebsiella pneumoniae</i>	13883	+
<i>Salmonella typhimurium</i>	14028	+

Shelf life and storage

Store between 2-30 °C in a ventilated and low humidity place and protected from light. Close the container tightly after use. Use before expiry date.

Note that this product is for R&D use only. DO NOT USE for drug, household, or any other uses.