OXOID QUALITY ASSURANCE PRODUCT SPECIFICATION

CASEIN HYDROLYSATE (ACID) LP0041

CASEIN HYDROLYSATE (ACID) **LP0041**

Description

Prepared by the acid hydrolysis of high grade casein, this hydrolysate has applications in media for vaccine production, microbiological assay, and many other purposes. Generally used at a concentration of 1% to provide the necessary nitrogenous material for culture media. Note that acid hydrolysis destroys tryptophan and vitamins and partially destroys cystine, serine and threonine. Enzymatic hydrolysates, e.g. Lactalbumin hydrolysate (LP0048) and Tryptone (LP0042) may be used as alternatives.

Physical Characteristics

Appearance	Straw, hygroscopic powder
Absorbance at 450nm (2% soln.)	0.040 - 0.163 units
pH (25°C) (2% soln.)	7.0 ± 0.2
Clarity (2% soln.)	Clear, bright and free from sediment and insoluble particles
Loss on drying	Less than or equal to7.5%

Chemical Characteristics

Ash	Less than or equal to 43.0%
Chloride (as NaCl)	Less than or equal to 35.0%
Formol nitrogen	4.5 - 6.5%
Total nitrogen	7.5 - 9.0%

Microbiological Characteristics

Test	Solution	Organism	Control Inoculum	Incubation	Result
Growth recovery in broth	2%	*Escherichia coli* ATCC®25922	10 - 100 CFU	37°C for 24 hours	Turbid growth
		Enterococcus faecalis ATCC®29212	10 - 999 CFU	37°C for 24 hours	White colonies**
Growth recovery in broth	Mueller & Miller medium*	*Clostridium tetani* ATCC®9441	10 - 100 CFU	37°C for 48 hours	Turbid growth

***References** ** results after subculture

Hepple J.R. Chem. Ind. (1968) 21 p.670 - 674

Total Viable Aerobic Count

A 2% peptone solution is further diluted and 1ml amounts are placed in sterile Petri dishes. Sterile Tryptone Soya Agar (CM0131) cooled to 44°C is added to the dilutions using the pour plate technique. Plates are incubated at 37°C for 18 hours. Colonies present are counted; they shall be less than 10,000 cfu/g.

Thermophilic Spore Count

A 2% peptone solution is further diluted and heated at 80°C for 10 minutes. 1ml amounts are placed in sterile Petri dishes. Sterile Tryptone Soya Agar (CM0131) cooled to 44°C is added to the dilutions using the pour plate technique. Plates are incubated at 37°C for 18 hours. Colonies present are counted; they shall be less than 1,000 spores/g.

Revision History

Section / Step	Description of Change	Reason for Change	Reference
Entire document	Update to new format	Update to new format	BT-SOP-7767
Physical and chemical characteristics	Change loss on drying, ash and chloride to less than or equal. Add formol nitrogen limits.	Change control	BT-CC-1811
Microbiological characteristics	Add limits for Total Viable Aerobic and Spore Count. Change non-selective medium for total viable aerobic and spore counts from Plate Count Agar (CM0325) to Tryptone Soya Agar (CM0131)		