



Peptone, Bacteriological

RM001

Principle And Interpretation

Peptone, Bacteriological confer nutritional benefit, especially at low dilution rates, and is recommended to support good growth of wide variety of microorganisms, for identification of bacteria by performing various biochemical tests. It can also be used for commercial production of enzymes, vaccines, antibiotics, steroids and other products.

Quality Control

Appearance

Light yellow to brownish yellow homogenous free flowing powder, having characteristic odour but not putrescent.

Solubility

Freely soluble in distilled/ purified water, insoluble in alcohol.

Clarity

2% w/v aqueous solution remains clear and neutral without any haziness after autoclaving at 15 lbs pressure (121°C) for 15 minutes.

Reaction

Reaction of 2% w/v aqueous solution at 25°C.

pH

6.10- 7.10

Microbial Load:

Total aerobic microbial count (cfu/gm)

By plate method when incubated at 30-35°C for not less than 3 days.

Bacterial Count : \leq 2000 CFU/gram

Total Yeast and mould count (cfu/gm)

By plate method when incubated at 20-25°C for not less than 5 days.

Yeast & mould Count : \leq 100 CFU/gram

Test for Pathogens

1. *Escherichia coli* - Negative in 10 gms of sample 2. *Salmonella* species - Negative in 10 gms of sample 3. *Pseudomonas aeruginosa* - Negative in 10 gms of sample 4. *Staphylococcus aureus* - Negative in 10 gms of sample 5. *Candida albicans* - Negative in 10 gms of sample 6. *Clostridia* - Negative in 10 gms of sample.

Degree of digestion

As per method specified in USP 35, NF30. a. Absence of undigested protein b. Presence of proteoses c. Presence of tryptophan

Nitrite test

As per method specified in USP 35, NF30 Negative: No development of pink or red colour.

Microbial Content

As per method specified in USP 35, NF30 \leq Total of 50 microorganisms or clumps in 10 consecutive fields.

Bacteriological Testing

Bacteriological tests are carried out as per USP 35, NF30 where respective medium is prepared by using peptone under test.

Test for fermentable carbohydrate

Medium :2% peptone w/phenol red broth w/durhams tube.After inoculation with test culture and incubation for 24 hours at 35-37°C

Escherichia coli ATCC 25922 (WDCM 00013) Acid production, (Positive test)

Streptococcus liquefaciens No acid production, (Negative test)

Production of acetyl methyl carbinol

Medium :0.1% peptone and 0.5% of dextrose in water.After inoculation with test culture and incubation for 24 hours at 35-37°C.

* *Klebsiella aerogenes* ATCC 13048 (WDCM 00175) Formation of pink colour (Positive test).

Escherichia coli ATCC 25922 (WDCM 00013) No formation of pink colour (Negative test).

