



Gluten Hydrolysate, Maize

RM6406

Principle And Interpretation

It is a protein hydrolysate of gluten from maize (corn). An enzymatic digest of maize (corn) protein using non-animal enzymes of microbial or plant origin. As it is obtained from plant source it is free of TSE/BSE risks. It is recommended for use in microbial media or as a fermentation nutrient.

Quality Control

Appearance

Light yellow to yellow may have slight green tinge homogenous free flowing powder, having characteristic odour but not putrescent.

Solubility

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

Clarity

1% w/v aqueous solution is clear to opalescent may have precipitate after autoclaving at 15 lbs pressure (121°C) for 15 minutes.

Reaction

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

pH

6.30- 7.30

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 : <= 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 : <= 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

Indole test

Tryptophan content: Passes

Cultural response

Cultural response observed after incubation at 35 - 37°C for 18-48 hours by preparing HiVeg Soyabean Casein Digest Medium (MV011), using Gluten Hydrolysate, Maize as an ingredient.

Cultural Response

Organism	Growth
<i>Escherichia coli</i> ATCC 25922	Characteristic, luxuriant growth
<i>Pseudomonas aeruginosa</i> ATCC 27853	Characteristic, luxuriant growth
<i>Enterobacter aerogenes</i> ATCC 13048	Characteristic, luxuriant growth
<i>Salmonella</i> Typhi ATCC 6539	Characteristic, luxuriant growth
<i>Staphylococcus aureus</i> ATCC 25923	Characteristic, luxuriant growth

<i>Streptomyces albus</i> ATCC 3004	Characteristic, luxuriant growth
<i>Streptococcus pyogenes</i> ATCC 19615	Luxuriant w/beta haemolysis (With addition of sterile 5% sheep blood to above medium, after an incubation at 35-37°C for 48 hours).
<i>Neisseria gonorrhoeae</i> ATCC 19424	Luxuriant (With addition of sterile 10% sheep blood to above medium heated to 80-90°C until blood has turned to chocolate brown and incubated in 10% CO ₂ atmosphere at 35- 48 hours).

Chemical Analysis

Total Nitrogen	>= 9.0%
Amino Nitrogen	>= 2.30%
Loss on drying	<= 6.0%
Residue on ignition	<= 15.0%

Storage and Shelf Life

Store between 10-30°C in tightly closed container and away from bright light. Use before expiry date on label. On opening, product should be properly stored in dry ventilated area protected from extremes of temperature and sources of ignition. Seal the container tightly after use.

Revision : 04/2019

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