



SCIENCE TECHNICS SDN BHD

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Product Description and Specification

PROTEASE BLEND FOR SOYA SAUCE ST

Description

Protease Blend for Soya Sauce ST is a blend of proteases formulated to increase the solubilization of protein during the production of soya sauce.

The production of soya sauce involves the solubilization of soy protein and wheat protein in the raw materials. The solubilization is done enzymatically with the addition of a microbial starter culture which produces protease and amylase enzymes.

A common problem in the production of soya sauce is that the starter culture is not rich in enzymes. Another problem is that due to the long fermentation the starter culture enzymes will be denatured. This results in less protein solubilization and a lower protein content.

Specification

Appearance : The product is a white powder of maltodextrin carrier in which the enzyme granules are dispersed.

Solubility : The ingredients in the product are freely soluble in water.

Moisture : The product has a maximum moisture content of 13%.

Heavy Metal Content

Protease Blend for Soya Sauce ST complies with Malaysian Food Laws with respect to heavy metals. Typical analysis is :

Heavy Metal Limits

Lead	Max 0.5 mg/kg
Arsenic	Max 1 mg/kg
Cadmium	Max 1 mg/kg
Mercury	Max 0.05 mg/kg

Microbial Count	Protease Blend for Soya Sauce ST complies with FAO/WHO JECFA recommended specifications for food grade enzymes. Maximum limits are as follows:								
	<table> <tr> <td>Total Count</td><td>< 5 x 10⁴ per gram</td></tr> <tr> <td>Moulds</td><td><10² per gram</td></tr> <tr> <td>Coliforms</td><td>Absent in 25g</td></tr> <tr> <td>E.coli</td><td>Absent in 25g</td></tr> </table>	Total Count	< 5 x 10 ⁴ per gram	Moulds	<10 ² per gram	Coliforms	Absent in 25g	E.coli	Absent in 25g
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Moulds	<10 ² per gram								
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E.coli	Absent in 25g								
GMO Status	<p>No genetic modification technology is involved in the production of the enzyme component of Protease Blend for Soya Sauce ST.</p> <p>The carrier used in production of Protease Blend for Soya Sauce ST is food grade non-GMO maltodextrin.</p> <p>Protease Blend for Soya Sauce ST can therefore be described as a non-GMO product.</p>								
Storage	<p>Protease Blend for Soya Sauce ST should be stored in a dry place and cool.</p> <p>Storage in an air-conditioned room is recommended.</p> <p>The product has an overfill and when stored in an air-conditioned room it has a shelf life of 12 months from production date.</p> <p>Storage under direct sunlight or in hot rooms or warehouses may result in a shorter shelf life.</p>								
Packaging	Protease Blend for Soya Sauce ST is available in 10kg plastic-lined carton boxes.								
Method of Use	<p>Soya sauce production is started as normal using soya beans, wheat flour and koji inoculum. This production continues till brine is added to the koji in jars or tanks.</p> <p>After 1 month of brine fermentation it can be said that the koji enzymes would have been denatured.</p> <p>At this stage (after 1 month of brine fermentation) Protease Blend for Soya Sauce ST is dissolved in a small quantity of water and added with mixing to the fermentation.</p> <p>The dosage is 1% on total dry weight of the soya sauce mash.</p> <p>This will increase the protein solubilization and protein content of the soya sauce.</p>								