



## Product Specification # 20-52-2.9

### Calf Pregastric Esterase Powder (PGE) Strength - 80 LFU/g

#### **Description:**

Calf Pregastric Esterase Powder (PGE) is a preservative free extract of the epiglottis (tongue root) of calves containing lipolytic and esterase activity. The product is freeze-dried, and supplied as a water soluble powder. The powder is slightly hygroscopic, and pink/brown in colour.

#### **Purity:**

Calf PGE Powder is extracted from certified disease-free export quality calf tongue roots. The product contains no solvent residues and is stabilised by freeze-drying in the presence of salt and refined maltodextrin. Activity is standardised by the addition of salt.

#### **Strength:**

Calf PGE is standardised to 80 LFU/g (lipase fore-stomach units) where 1 LFU releases 1.25  $\mu$ moles of butyric acid per minute at 42°C and pH 6.20 from tributyrin under the conditions defined by the IDF 218:2011 test procedure.

#### **Use:**

It is recommended that the measured amount of PGE powder is dissolved into clean cold water prior to use. **Diluting water must be free of all residual chlorine.** Addition rates can only be ascertained by trials under manufacturing conditions.

#### **Packaging:**

Calf PGE powder is available in quantities of 20 kg (nett) packed in polybags in PVC pails. Other packaging configurations are available upon request.

#### **Storage:**

It is recommended that product be stored and transported under refrigeration (less than 8°C) and kept dry and away from sunlight. Containers should be kept closed. For long term storage the product may be frozen. Stock should be used in rotation to maintain maximum strength.

#### **Stability:**

At the recommended storage conditions, the powder loses activity at a rate of less than 0.5% per month. Under frozen storage there will be negligible activity loss observed over a 24 month period.

**Halal Certification:**

Halal certified calf PGE is available on request. It is manufactured from Halal raw materials by a Halal approved process.

**Certification:**

Each batch of PGE is analysed and certified to meet the following standards at the time of manufacture:

**Chemical Analysis**

Strength: 80 LFU/g, based on the IDF 218:2011 test procedure.

**Bacteriological Analysis**

	<b>Specification</b>	<b>Method</b>
Aerobic plate count	<1,000 cfu/g	AS 5013.1
Anaerobic plate count	<1,000 cfu/g	APHA 4th Ed. Ch.6
Yeasts and Moulds	<100 cfu/g	APHA 4th Ed. Chapter 20
Lactobacilli	<100 cfu/g	APHA 4th Ed. Chapter 19
Coliforms	<10 cfu/g	Modified AS 5013.3
Ecoli	Not detected in 25g	Modified AS 5013.3
Staphylococci (coagulase positive)	Not detected in 2.5g	Modified AS 5013.12.3
Salmonella	Not detected in 25g	Modified Rappaport-Vassiliadis Soy
Listeria	Not detected in 25g	FDA BAM Ch.10 (mod)

**Food Chemicals Codex:**

Product conforms to additional requirements of FCC IV, vis.,

Arsenic (as As)	< 3 ppm
Heavy metals (as Pb)	< 40 ppm
Lead	< 10 ppm
Cadmium	< 0.5 ppm
Mercury	< 0.5 ppm

**Compliance:**

Conforms to the requirements of the Australia New Zealand Food Standards and to the specifications of the Joint FAO/WHO Expert Committee on Food Additives (JECFA).

Not subjected to any irradiation treatment.