

Product Specification # 20-21-1.3

Natural Calf Rennet Liquid

Strength - 580 IMCU/mL, minimum 92% Chymosin

Product Description:

A purified and standardised solution of milk clotting enzymes extracted from the fourth stomach of young milk fed calves sourced from New Zealand and/or Australia. Supplied as a liquid saline solution containing a minimum of 92% chymosin as active component. Manufactured in New Zealand.

Purity:

Renco Natural Calf Rennet is purified by cellulose ion exchange chromatography. The unique chromatography step in the purification of rennet ensures a sparkling clear solution with a much lower mucoprotein content than most other similar products currently available. It does not contain any deodorants or reodorants.

Strength:

The strength of Renco Natural Calf Rennet is maintained at a constant level directly related to the coagulation of whole milk. Coagulation, however, is influenced by such factors as seasonal variations affecting milk quality, additions of calcium chloride, pH or acidity variations, and the occurrence of inhibitory agents in the milk.

How to Use:

For manual addition to cheese vats it is recommended that the measured amount of rennet be diluted with 15 to 20 times its own volume of clean cold water prior to addition.

For automatic addition, multiple injection points are recommended. In addition, the rennet volume should be followed by at least 5 volumes of clean water to clear the lines.

Diluting water must be free of all residual chlorine.

Normally, use rates are between 0.4 and 0.6 litre per 10,000 litre of milk.

Storage:

Store in a cool dark place. The ideal storage temperature is 3 to 7°C. Containers should be kept closed. Stock should be used in rotation to maintain maximum strength.

Stability:

Under ideal storage the extract displays excellent stability properties without sedimentation. The average activity loss is 0.5% per month.

Availability:

Renco Natural Calf Rennet is available in 20 litre plastic containers, 200 litre drums and 1000 litre intermediate bulk containers.

Note: SG = 1.112 ± 0.005 kg/L

Animal Origin Guaranteed:

It is guaranteed that the active enzymes are obtained only from the fourth stomach of milk fed calves without the addition of any other animal or fermentation produced enzymes.

Certification:

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

Chemical Analysis

	Standard	Method
Strength :	580 IMCU/mL	IDF Standard 157:1992
pH at 20°C :	5.6-6.1	pH meter
Salt % :	min 16 ^{w/v}	titration with AgNO ₃
Sodium Benzoate :	typically 0.1%	not routinely tested
Chymosin :	min 92 %	IDF Standard 110B:1997
Pepsin :	max 08 %	IDF Standard 110B:1997
Foreign Matter	not detected	visual

Bacteriological Analysis

Standard plate count	<100/mL	Modified AS 5013.1
Anaerobic plate count	<10/mL	Renco In House
Yeasts & Moulds	< 10/mL	NZTM2 61.1
Lactobacilli	< 50/mL	NZTM2 54.1
Coliforms	absent in 50 mL	Modified AS 5013.3
Staphylococci (Coagulase positive)	absent in 5 mL	Modified AS 5013.12.3
Salmonella	absent in 100 mL	Modified Rappaport – Vassiliadis Soy
Listeria	absent in 100 mL	FDA Bact. Anal. Manual, 8th Ed, 1998 (mod)

Food Chemicals Codex:

Product conforms to additional requirements of FCC III, 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.