

Lactanol

Sustainable
New Zealand
Ethanol





Sustainable
high quality
ethanol from
New Zealand



We are the experts at producing sustainable, high-quality ethanol. Made to the highest standards of consistency and quality, our ethanol is produced using whey, the natural by-product of pure, grass-fed New Zealand dairy.





Lactanol pioneered the manufacture of ethanol from dairy in the southern hemisphere. We are now the world's leading producer of ethanol from this sustainable source.

With decades of experience, a highly skilled team, and advanced processing facilities, we deliver high-quality, sustainable ethanol to New Zealand and the world all year round.

Consistent Quality

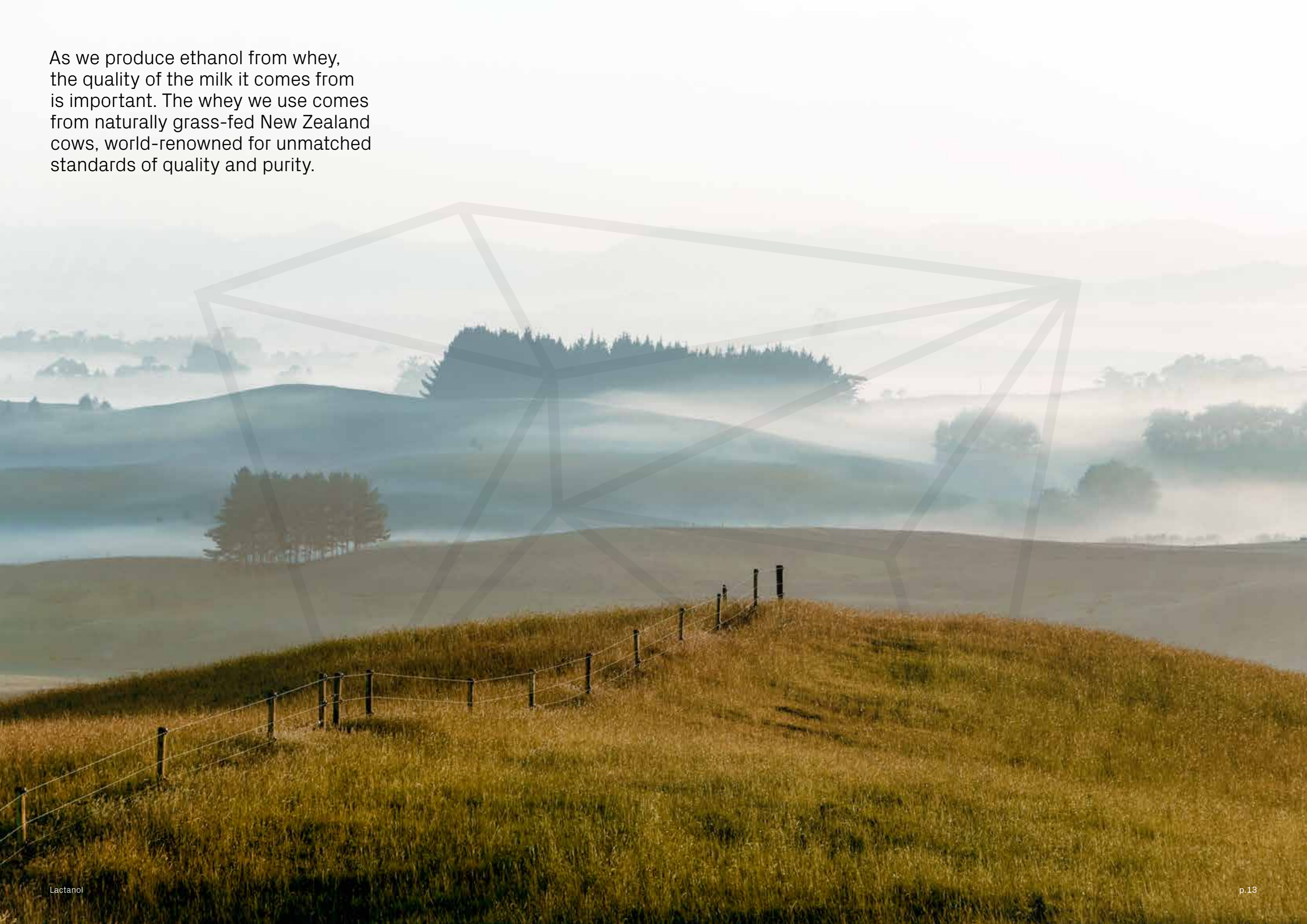
At Lactanol, we have a total focus on quality. Our staff are highly skilled with specialised knowledge of both the manufacturing process and our customers' needs.

We apply the strictest quality standards to every aspect of our business, from raw materials and manufacture to final product and packaging. Quality control is maintained by a full range of sampling and product monitoring tests, including colourimetric, gas chromatographic and other laboratory techniques which ensure the utmost quality. Every delivery from our plants is sampled, tested and provided with its own Certificate of Analysis which includes specialised testing if required by your business.

This rigorous testing gives us fingertip control over the final product, ensuring complete consistency and absolute quality all the way from us to you.



As we produce ethanol from whey, the quality of the milk it comes from is important. The whey we use comes from naturally grass-fed New Zealand cows, world-renowned for unmatched standards of quality and purity.

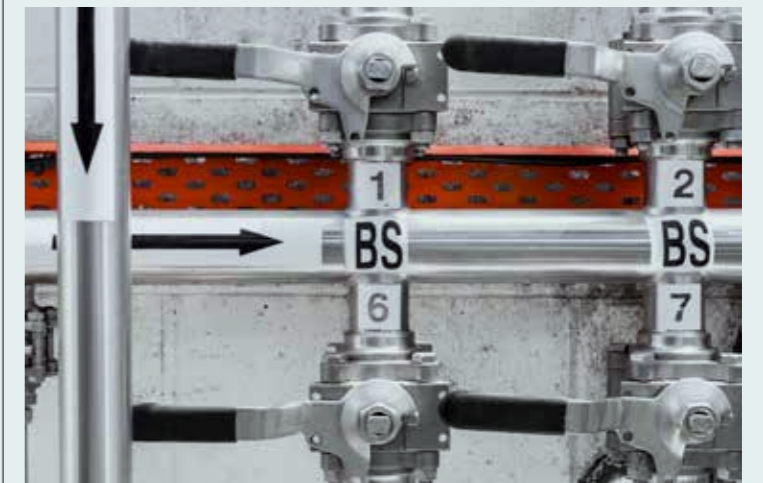
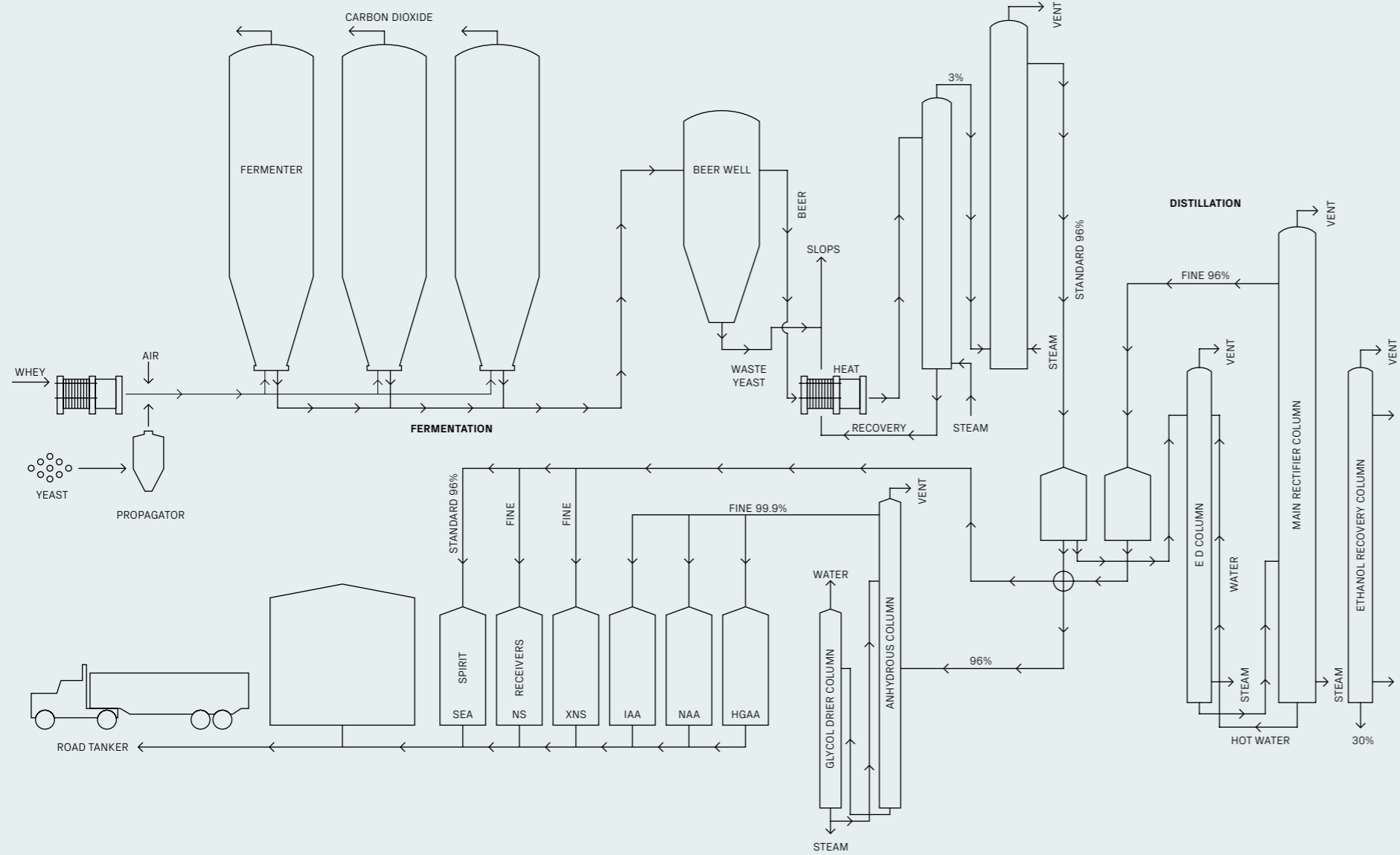


The process

We produce high-quality ethanol from whey, a natural by-product of pure grass-fed New Zealand milk. Traditionally, ethanol is manufactured using molasses, cane sugar or grain as the raw material. Our operation is one of the few in the world where casein whey is the feedstock for ethanol production. The casein whey contains lactose (milk sugar), which is broken down into ethanol in an anaerobic process.

The ethanol is recovered from the fermented liquid by distillation, and the ethanol is then concentrated to 96% or 99.9%. While production takes place from August through to May, we always make sure sufficient stocks are available to meet local and global customers' needs throughout the year. The use of whey in manufacturing ethanol results in a final product that is pure and clean with less contaminants.

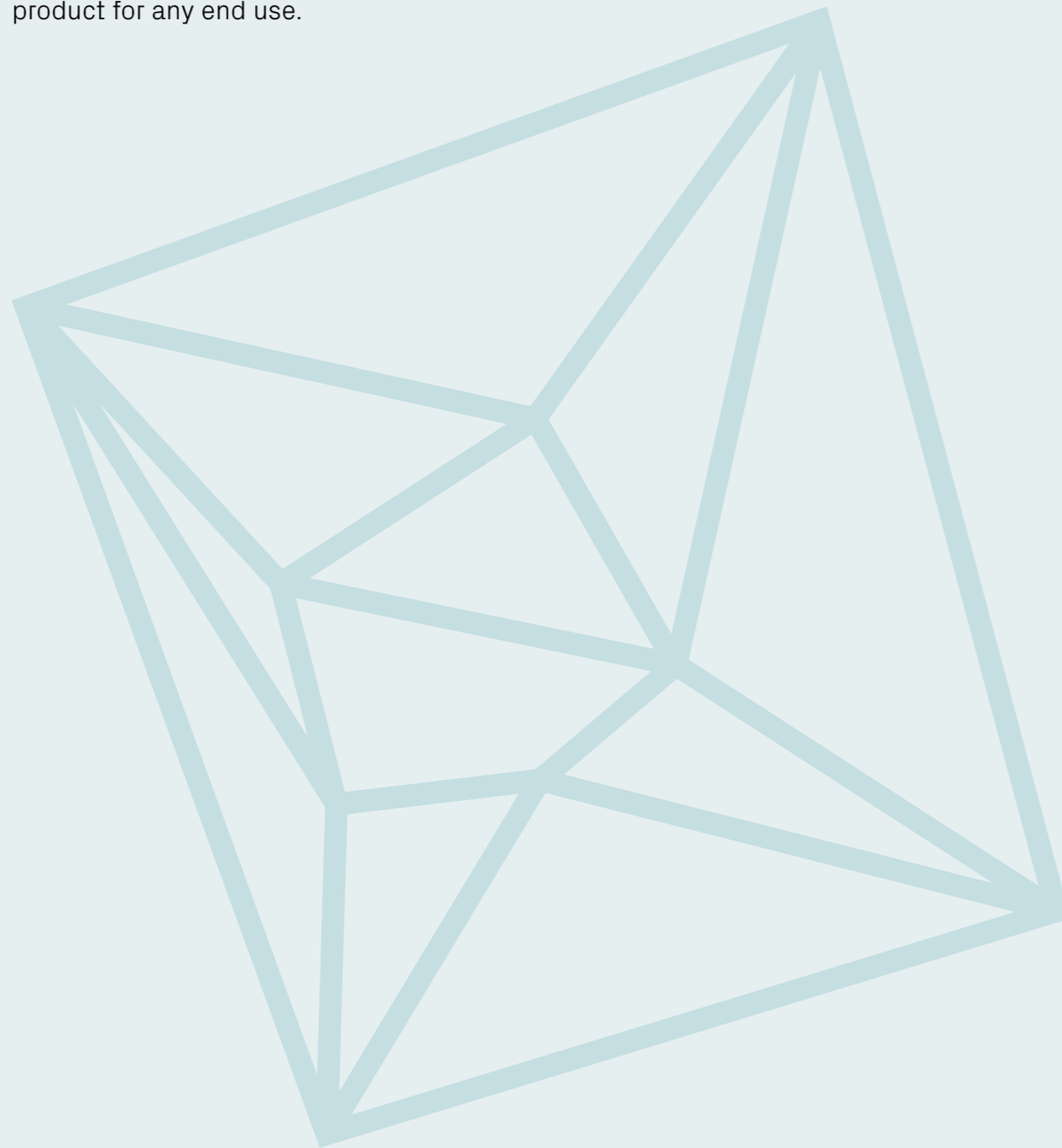
We have three processing plants in New Zealand – Reporoa, Tirau, and Edgecumbe. At our Reporoa plant, we manufacture ethanol using batch fermentation followed by a four stage distillation process. Our Edgecumbe facility is also a batch fermentation plant, but with the added benefit of a reverse osmosis unit to increase overall plant capacity. At our Tirau plant, we utilise a specially developed continuous fermentation process.



Specifications and applications

We produce a total of 15 million litres of ethanol per year, and deliver to customers in New Zealand and around the world.

We offer a comprehensive range of ethanol grades in terms of strength and purity, and can supply the appropriate product for any end use.



Grade	SEA	NS	XNS	IAA	HGAA	NAA
Description	Clear, Colourless, Flammable Liquid					
EP Analysis	-	Full Monograph	Full Monograph	-	Impurities Only	-
Strength (% V/V @ 20 C)	96.0 min	96.0 min	96.0 min	99.85 min	99.85 min	99.5 min
Water (%w/w By K.F.)	-	-	-	0.20 max	0.15 max	0.75 max
Specific Gravity (@20/20C)	0.8088 max	0.8088 max	0.8088 max	0.7912 max	0.7912 max	0.7929 max
Residue On Evaporation (%w/v)	0.0015 max	0.0015 max	0.0010 max	0.0010 max	0.0010 max	0.0015 max
Alkalinity & Acidity as per EP test method	Pass 35 max	Pass 25 max	Pass 20 max	Pass 50 max	Pass 20 max	Pass 25 max
Absorbance	-	Pass	Pass	-	Pass	Pass
Turbidity 1+19 Water	Clear	Clear	Clear	Clear	Clear	Clear
Gas Chromatograph as per EP test method	-	Complies	Complies	-	Complies	-
Gas Chromatograph (ppm of each impurity)	Max	Max	Max	Max	Max	Max
Acetaldehyde	50	5	5	50	5	10
Acetone, Ethyl Acetate	90	20	5	90	5	20
Methanol	90	20	5	90	5	20
N-Propanol, Iso-Butanol	90	10	5	90	5	20
Complies With EP	-	Yes	Yes	-	-	-
Odour Neutral	-	Complies	Complies	-	-	-

Key:

SEA Standard Ethyl Alcohol
NS Neutral Spirit
XNS Extra Neutral Spirit


IAA Industrial Absolute Alcohol
HGAA High Grade Absolute Alcohol
NAA Neutral Absolute Alcohol

EP European Pharmacopoeia

Distilled by nature



Refined by science



Our Commitment

Quality support
Personalised solutions

We are committed to producing excellent quality product and ensuring customer satisfaction. All our customers get access to a full range of support services, and we will work with you to provide personalised advice and solutions to suit your business.



For more information about Lactanol and how we can work with your business, contact: lactanol@fonterra.com

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Image courtesy of NASA