

Manildra Group's Ethyl Alcohol Production Process

Located in the regional New South Wales town of Nowra, home to Australian family-owned Manildra Group's world-class Shoalhaven Starches site – is the largest distillery in South East Asia.

Wheat is grown by thousands of Australian farming families, delivered by rail and road to our state-of-the-art facility and milled into high-quality flour.

The flour is wet milled through a series of processes, producing wheat starch which is then distilled through a seven column process.

Liquification

The starch mixture is converted to a sugar using an enzymatic process.

Fermentation

Yeast is added to the starch mixture to ferment the sugar to ethyl alcohol and carbon dioxide to form the product of 'beer'.

Beer column

Alcohol is removed from the beer product.

Concentration column

The column concentrates the alcohol to 95%, which is the first stage in the removal of non-ethyl alcohol components.

Reverse Osmosis unit input

Highly purified water is added to the distillery, to clean the alcohol.

Hydroselection column

The alcohol is lowered in alcohol strength, to allow the further removal of different non ethyl alcohol components through their respective boiling points. Fusel oils are extracted at this point.

Two Rectification columns

Here, the alcohol is concentrated to a minimum of 96.4% and non ethyl alcohol components are removed.

Demethylation column

At the final column, the remaining component of methanol is removed. This results in premium ethyl alcohol that is distilled into a range of ethanol suitable for beverages and food, pharmaceuticals and personal care products and industrial applications.