FACT SHEET

DISTILLATION FACT SHEET

Tests

- ✓ Methanol
- ✓ Ethyl acetate
- ✓ Acetaldehyde

The distillation process consists of four main cuts: Foreshots, Heads, Hearts, and Tails.

- **Foreshots:** Methanol, with a boiling point of 64.7°C, has the lowest boiling point and is the initial distillate. Methanol is a toxic substance, and there are regulatory limits regarding its presence in alcoholic beverages.

- **Heads:** Following methanol we have acetaldehyde and ethyl acetate. These compounds play a crucial role in shaping the taste and overall quality of the final product.

- **Heart:** Ethanol primarily resides in the heart of the distillate, which is the desired portion. It is important to be cautious as it can potentially be contaminated by foreshots or head cuts.

It is crucial to emphasize that a sudden rise in mash temperature can lead to a blend of distillate fractions, which is not advisable.

- **Tails :** Heavier compounds such as water and heavier alcohols separate after ethanol.

Why should I test for Methanol?

The Australian and New Zealand Food Standards Code, Schedule 19 (Reference May 2025), specifically defines the permissible limit for methanol in alcoholic beverages (see below).

Methanol	Red wine, white wine and fortified wine	3 g methanol / L of ethanol
	Whisky, rum, gin and vodka	0.4 g methanol / L of ethanol
	Other spirits, fruit wine, vegetable wine and mead	8 g methanol / L of ethanol

Please note: As the permissible limits may change, the original document should be consulted for current regulatory limits regarding methanol.

How is Methanol produced?

- Methanol is produced during fermentation as a result of pectin hydrolysis by the enzyme pectinmethylesterase. The quantity of methanol produced depends on the fruit quality, with stems and leaves favouring methanol production, as well as the type of yeast used.

Why Gas chromatography (GC) is your best friend while you're distilling?

- Precise measurement of methanol, acetaldehyde and ethyl acetate can be achieved using gas chromatography with flame ionization detection (GC-FID). As one of only a few labs in Australia offering in-house GC-FID analysis, we can offer accurate measurement with a fast turnaround.

Where can I test my samples and get help?

- Our dedicated team is available to assist you with any inquiries. Kindly visit our website to locate your nearest Winechek laboratory. To check the price of the tests, please contact your nearest Winechek.