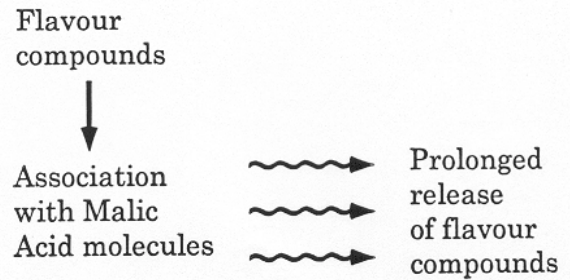


Malic Acid in Alcoholic Apple Beverages

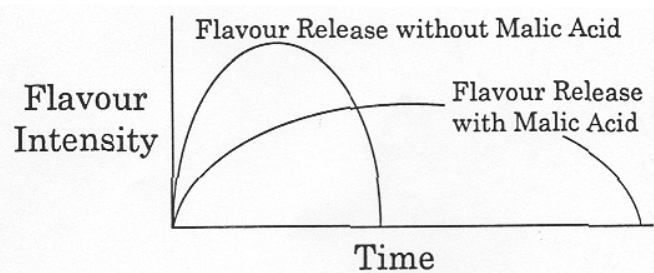
Enhances Apple Flavour

Malic Acid enhances apple flavours by prolonging their release. Receptor cells are stimulated by these apple flavours over a longer period of time and this prolonged stimulation is translated by the brain as **stronger apple flavour**.



Results in a Smoother, more Natural Tasting Flavour Profile

By prolonging the release of various flavour compounds, **Malic Acid acts as a flavour blender** and creates a smoother, more natural tasting flavour profile.



Sustains Malolactic Fermentation

Malic Acid is converted to Lactic Acid by lactobacilli during the secondary fermentation of hard cider. This reduces the total acidity and results in a less sour, more complex flavour profile. Malic Acid can be added before fermentation to **standardise the initial level of Malic Acid**, since the level of Malic Acid in the apples may vary.

Prevents Turbidity

Trace metal ions, particularly those of copper and iron, accelerate the precipitation of metal-tannin complexes which cause turbidity and sedimentation in cider. **Malic Acid inactivates trace metal ions** by binding or chelating them and prevents turbidity.



RECOMMENDATIONS FOR USE: Use 0.1 - 0.3%; can be added before fermentation to standardise the Malic Acid level in preparation for malolactic fermentation, or can be added after fermentation to adjust the flavour profile.