

pH 4.5

pH 4.2

pH 3.8

pH 3.5

pH 3.2

pH 2.8

What is pH?

pH is a measure of hydrogen ion concentration in a liquid

You can measure it with pH strips or a calibrated pH meter



pH 4.5

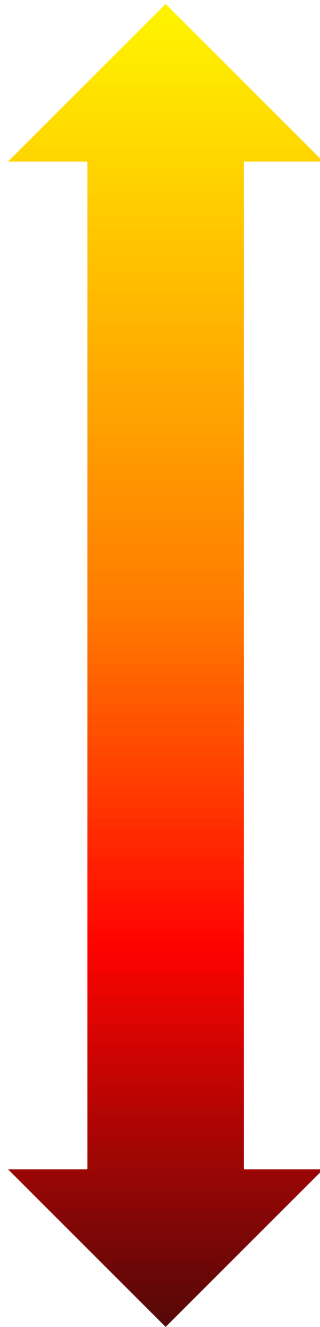
pH 4.2

pH 3.8

pH 3.5

pH 3.2

pH 2.8



Why should we measure pH?

pH gives us an idea of:

- The microbial threat to a cider
- How much SO_2 to add to the juice

Total acid tells us how sour the cider will taste

Both are important but they tell us different things

pH and acidity

pH is related to total acidity but not in a simple predictable way

pH 4.5

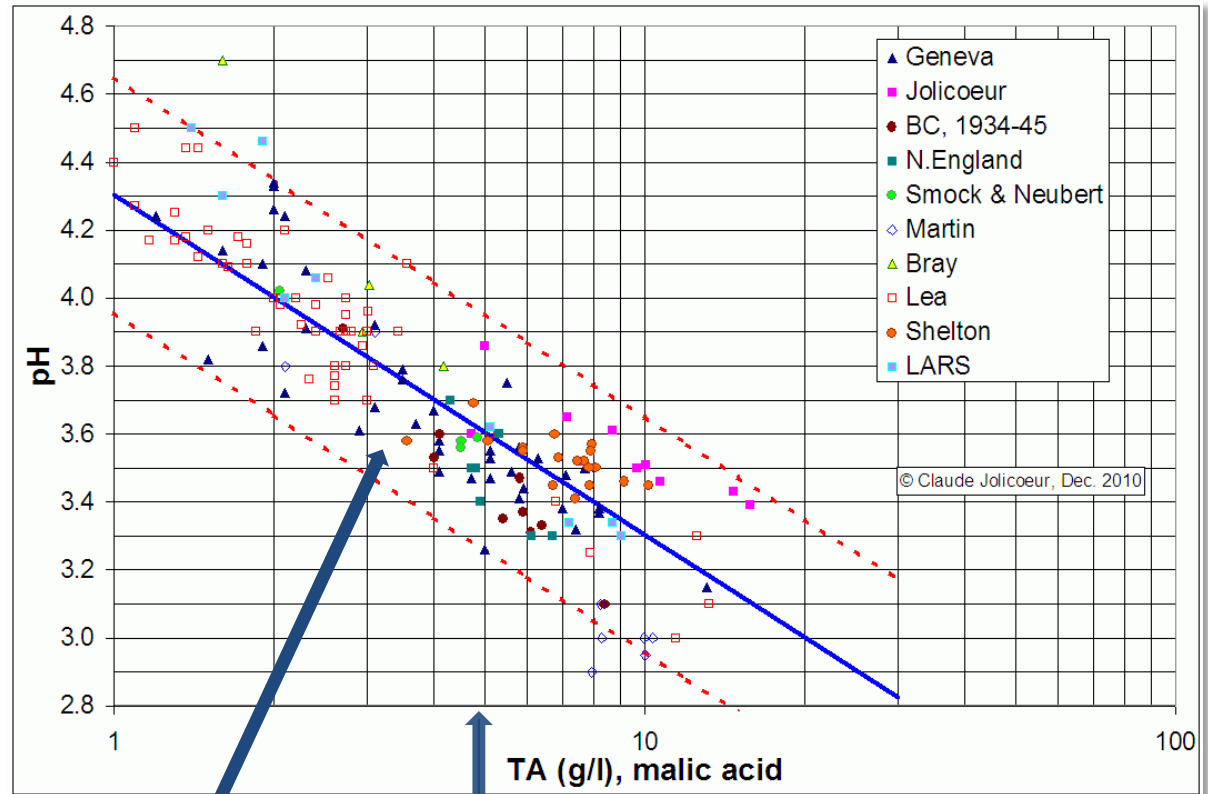
pH 4.2

pH 3.8

pH 3.5

pH 3.2

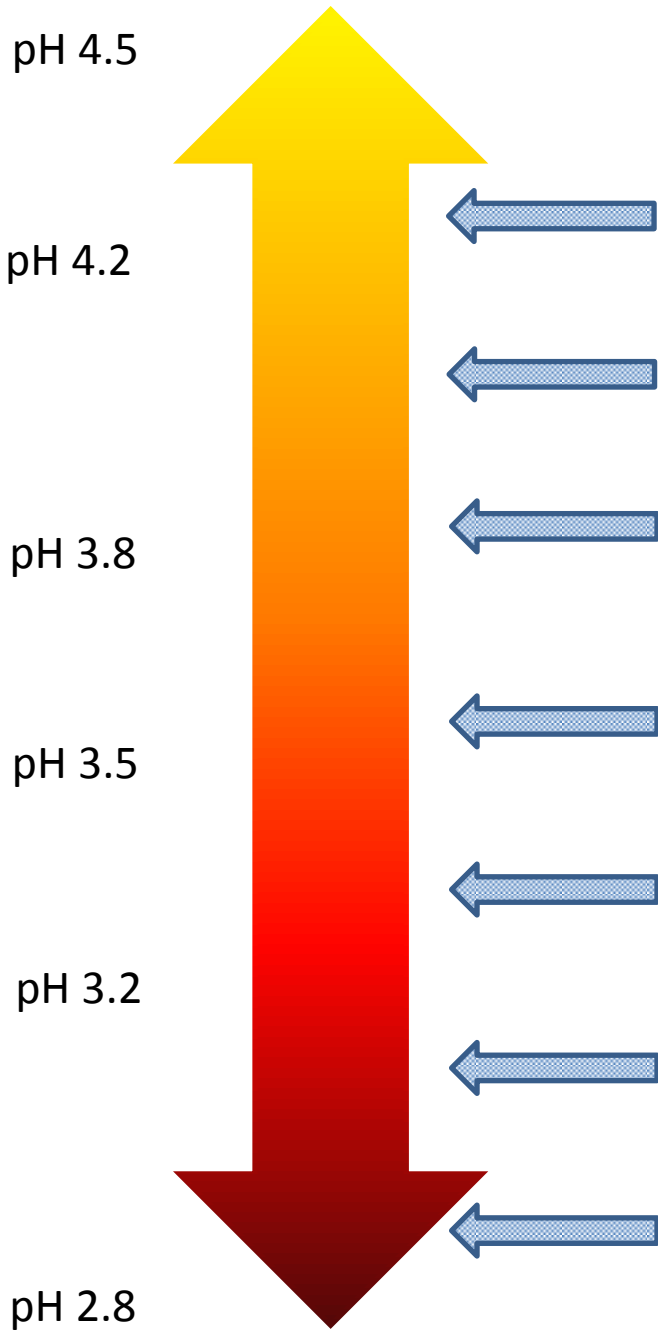
pH 2.8



lots of scatter

logarithmic scale

Typical pH of cider apples



Dabinett

Michelin

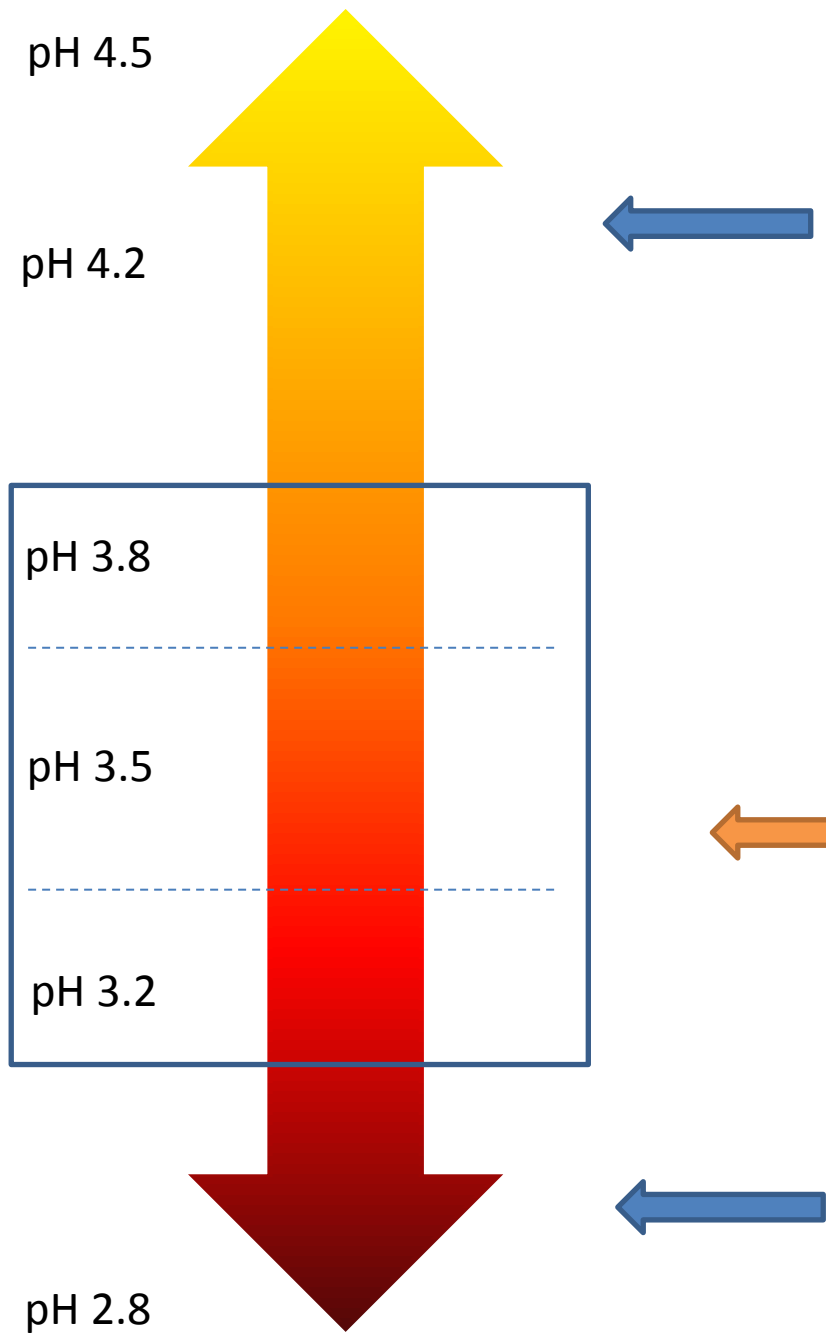
Yarlington Mill

Kingston Black

Most dessert apples

Bramley

Foxwhelp



Why is pH important?

Too high a pH allows for growth of unwanted spoilage bacteria.

The cider tastes 'flabby'.

Above pH 3.8, SO₂ at legal levels is ineffective.

Optimum pH range for microbial protection and sensory quality

Too low a pH gives too much acid for a drinkable cider

pH 4.5

pH 4.2

pH 3.8

pH 3.5

pH 3.2

pH 2.8

How to adjust pH

Ideally before fermentation, for best microbial control

Preferably by blending juices

But if you need to add acid:

To drop from pH 4 to pH 3.7 might take *ca* **2 g/L** of acid

To drop from pH 3.7 to pH 3.4 might take *ca* **4 g/L** of acid

Needs constant checking of where you want to be!