

The pH Scale

How acidic or alkaline is it? Everyday substances placed on the scale from 0 to 14.



pH 0

Strong acid

Hydrochloric acid at 1 mol/dm³.
Corrosive: laboratory use only.



pH 1.5

Gastric juice

Your stomach makes hydrochloric acid to help digest food.



pH 2

Lemon and lime juice

Citric acid gives citrus fruit its sour taste.



pH 5

Coffee

Weakly acidic: about 1,000 times less acidic than lemon juice.



pH 5.6

Clean rain

Normal rain is slightly acidic, even without pollution.



pH 7

Pure water: neutral

Neither acidic nor alkaline at 25 °C.



pH 8

Seawater

Slightly alkaline.



pH 10.5

Milk of magnesia

An antacid: a base that neutralises excess stomach acid.



pH 12

Household ammonia

An alkaline cleaner. Irritant: keep away from eyes.



pH 14

Strong alkali

Sodium hydroxide at 1 mol/dm³.
Corrosive: laboratory use only.



Each step is ×10

pH 3 is 10 times more acidic than pH 4 and 100 times more acidic than pH 5. Lower pH means more acidic; higher pH means more alkaline.



Indicator colours

Universal indicator: red for strong acids, green at neutral, purple for strong alkalis. Litmus: red in acid, blue in alkali.