

# 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/dm<sup>3</sup>.  
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/dm<sup>3</sup>.  
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.