

## Acids and Bases

	Examples	Produces hydrogen ions (H <sup>+</sup> )	Produces hydroxide ions (OH <sup>-</sup> )	Concentration of H <sup>+</sup> to OH <sup>-</sup>	pH greater than, less than, or equal to 7
Acid solution	HCl	Yes	No	H <sup>+</sup> > OH <sup>-</sup>	pH < 7
Base solution	NaOH	No	Yes	H <sup>+</sup> < OH <sup>-</sup>	pH > 7
Neutral solution	Water			H <sup>+</sup> = OH <sup>-</sup>	pH = 7

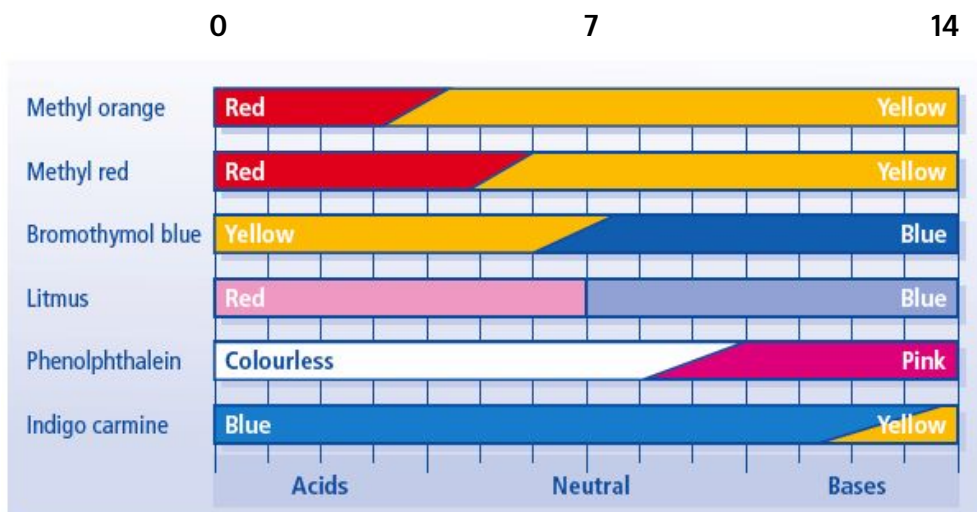
## pH Scale



One unit of change represents a 10-fold change in the degree of acidity. For example:

- Lemon has a pH of 2
- Milk has a pH of 6

That is a change of 10<sup>4</sup> or 10 000 times. Therefore, the lemon has 10 000 times more hydrogen ions than milk.



pH indicators are chemicals that change colour depending on the pH of a solution