

Describing O.C.s

1 Colour / smell of gases

	Cl_2	very pale yellowish green gas
	Br_2	brown gas
requires heat (Br_2 is gas in room conditions)	NO_2	brown gas
	I_2	purple gas
	SO_2	choking / pungent smell
	NH_3	choking / pungent smell

2 Colour of salts (s)



- both colourless in aq → usually white
- either one coloured → follow its colour
- both coloured → mix colours / choose more distinct colour

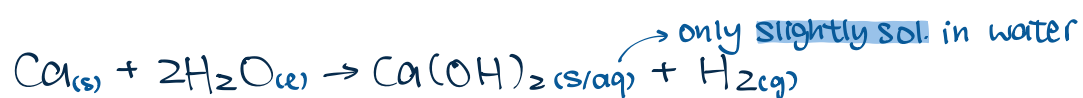
2 Observable changes

$\text{X}_{(s)} \rightarrow \text{X}_{(aq)}$	X dissolves
$\text{X}_{(aq)} \rightarrow \text{Y}_{(s)}$	<colour> solid deposits
$\text{aq} / (l) \rightarrow \text{g}$	<colour> bubbles evolve
$\text{aq} / (l) \rightarrow \text{aq} / (l)$	sol ⁿ turns from <colour> to <colour>
$\text{X}_{(s)} \rightarrow \text{X}_{(s)}$	<colour> solid turns <colour>
$\text{aq} \rightarrow (l) \rightarrow \text{out test tube}$	<colour> fumes evolve

3 Examples



- | | |
|---|--|
| - $\text{Cu}_{(s)} \rightarrow \text{Cu}^{2+}_{(aq)}$ | copper dissolves → 只能说有什么 reactant, product 要用 colour + state 形容
solution turns from colourless to blue
colourless gas bubbles evolve
choking smell |
| - $\rightarrow \text{Cu}^{2+}_{(aq)}$ | |
| - $\rightarrow \text{SO}_{2(g)}$ | |
| - $\rightarrow \text{SO}_{2(g)}$ | |



- | | |
|--|--|
| - $\text{Ca}_{(s)} \rightarrow \text{Ca}^{2+}_{(aq)}$ | calcium dissolves
white solid deposits
colourless gas bubbles evolve |
| - $\text{Ca}_{(s)} \rightarrow \text{Ca}(\text{OH})_{2(aq)}$ | |
| - $\rightarrow \text{H}_{2(g)}$ | |