**Oxidation and reduction**

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| --- | --- | --- |
|  | Oxidation | Reduction |
| Oxygen | gain | Lose |
| Hydrogen | lose | gain |
| electron | lose | gain |
| Oxidation number | increase | decrease |

Oxidising agents and reducing agents

|  |  |
| --- | --- |
| Oxidising agent  (Undergo reduction) | Half equation |
| Acidified potassium manganate (VII), KMnO4 | MnO4- (aq) + 8H+ (aq) + 5e- 🡪 Mn2+ (aq) + 4H2O (l) |
| Acidified potassium dichromate (VI), K2Cr2O7 | Cr2O72- (aq) + 14H+ (aq) + 6e- 🡪 2Cr3+ (aq) + 7H2O (l) |
| Chloride water, Cl2 | Cl2 (aq) + 2e- 🡪 2Cl- (aq) |
| Bromine water, Br2 | Br2 (aq) + 2e- 🡪 2Br- (aq) |
| Iron (III) chloride, FeCl3 | Fe3+ (aq) + e- 🡪 Fe2+ (aq) |
| Acidified hydrogen peroxide, H2O2 | H2O2 (aq) + 2H+ (aq) + 2e- 🡪 2H2O (aq) |