

Nanyang Girls' High School – Redox – Word Search

N M Q M T N Z R H N Z N M B V M X N
 E E L E C T R O L Y S I S X J K O D
 O W H F M M V Z R D F R T V T I M M
 N N Y B V A L I N C Q P N L T N R M
 M G D G R W G E T N A O Y A B N I J
 C M R F R O V N N A I E N R N P R K
 R M O T Z E M N E T M O S R E B O V
 L C G L S T N I A S I I E I L D N X
 L C E R H G R D N T I P N Q U P O E
 D Y N Q K X I L R E P U T C X M T X
 B S Y L W X Y O H O R K M J B A H Z
 J T K N O Y P Z C T P K N N M K R K
 N E T D K O R E D U C T I O N F E X
 C I M C R C B J F L U O R I N E E B
 J N N P M H V N M P Q H T C Z T P R
 N E S Q C V R B L D C Z T Y G Z M C
 V I R E A C T I V I T Y S E R I E S
 D N Y M P P R H D Q K V J F I V E L

Clues:

- 1) $2\text{Fe}(s) + 3\text{Cl}_2(g) \rightarrow 2\text{FeCl}_3(s)$ During this chemical reaction, the state of iron has increased.
- 2) is the strongest oxidising agent in the Periodic Table.
- 3) is a natural antioxidant found in fresh fruit and vegetables.
- 4) $\text{Fe}_2\text{O}_3(s) + 2\text{Al}(s) \rightarrow \text{Al}_2\text{O}_3(s) + 2\text{Fe}(s)$ During this chemical reaction, the has been reduced.
- 5) The allows chemists to predict which metal can displace another metal from its compound.
- 6) The equations: $\text{Al}^{3+}(l) + 3e^- \rightarrow \text{Al}(l)$ and $2\text{O}^{2-}(l) \rightarrow \text{O}_2(g) + 4e^-$ represent the of aluminium oxide.
- 7) The metallic element can reduce aluminium, but cannot reduce calcium.
- 8) $2\text{AgNO}_3(aq) + \text{Cu}(s) \rightarrow \text{Cu}(\text{NO}_3)_2(aq) + 2\text{Ag}(s)$ During this chemical reaction, the has been oxidised.
- 9) In HNO_2 , the oxidation state of the nitrogen is (+ / -)
- 10) With the exception of francium, is the strongest reducing agent in the Periodic Table.
- 11) During a reaction, the same chemical element is both oxidised and reduced.
- 12) In KIO_4 , the oxidation state of the iodine is (+ / -)
- 13) When straight hair is given a permanent wave, the amino acid is firstly reduced, and then oxidised.
- 14) During a reaction, one chemical element is oxidised while another chemical element is reduced.
- 15) $5\text{Fe}^{2+}(aq) + \text{MnO}_4^-(aq) + 8\text{H}^+(aq) \rightarrow 5\text{Fe}^{3+}(aq) + \text{Mn}^{2+}(aq) + 4\text{H}_2\text{O}(l)$ During this chemical reaction, the oxidation state of the manganese has (increased / decreased) by
- 16) is the gain of electrons.
- 17) $\text{Cl}_2(aq) + 2\text{NaBr}(aq) \rightarrow \text{Br}_2(aq) + 2\text{NaCl}(aq)$ During this chemical reaction, the has been oxidised.
- 18) In the following list of compounds, only has an oxidation state of +1: MgF_2 , H_2O , AlCl_3 , CO_2 , CuSO_4 .
- 19) The element takes its name from the Greek word for *new* and cannot be oxidised or reduced.
- 20) When acidified, the(VI) ion (formula $\text{Cr}_2\text{O}_7^{2-}$) is a versatile oxidising agent.

- Scan the QR code below for the answers to this assignment.



http://www.chemist.sg/redox/redox_word_search_ans.pdf