



OXIDATION STATES

1)

species	Fe	FeCl ₃	FeCl ₂	K ₂ FeO ₄	[Fe(H ₂ O) ₆] ²⁺
oxidation state	Fe 0	Fe +3	Fe +2	Fe +6	Fe +2

species	Cl ₂	ClO ₃ ⁻	ClO ⁻	Cl ₂ O ₇	Cl ₂ O ₃
oxidation state	Cl 0	Cl +5	Cl +1	Cl +7	Cl +3

2)

species	SO ₂	S ₈	SO ₃	H ₂ S	NH ₃
oxidation state	S +4 O -2	S 0	S +6 O -2	H +1 S -2	N -3 H +1

species	NO ₂	NO ₃ ⁻	N ₂	KCl	SO ₄ ²⁻
oxidation state	N +4 O -2	N +5 O -2	N 0	K +1 Cl -1	S +6 O -2

species	Na ₂ CO ₃	Cr ₂ O ₃	CrO ₃	MnO ₄ ²⁻	MnO ₄ ⁻
oxidation state	Na +1 C +4 O -2	Cr +3 O -2	Cr +6 O -2	Mn +6 O -2	Mn +7 O -2

species	Cu ₂ O	CuO	KCuCl ₂	NaH	H ₂ O ₂
oxidation state	Cu +1 O -2	Cu +2 O -2	K +1 Cu +1 Cl -1	Na +1 H -1	H +1 O -1

- 3 a) phosphorus +5 to -3
b) silicon +4 to -4
c) iodine +7 to -1
d) gallium +3 to -5

- 4 a) Sc +3 yes
b) Ni +2 yes
c) K +2 no
d) W +6 yes
e) Se -3 no
f) Mo +7 no
g) Sb +5 yes