



Periodic Table Group VII Trends

	(1) Size	(2) Colour	(3) Physical State	(4) Reactivity
F ₂		Pale Yellow	Gas	
Cl ₂		Greenish-Yellow	Gas	
Br ₂		Reddish-Brown	Liquid	
I ₂		Purplish-Black	Solid	
At ₂		Black	Solid	

Down Group VII,

(1) The **size** of the diatomic molecules **increases** due to **increasing number of inner shells** in the atoms. Size of At₂ is bigger than F₂.

(2) The **color** of the halogens becomes **darker**.

(3) Based on the physical states of the halogens, the **melting** and **boiling** points **increases**.

(4) The **reactivity** of halogen **decreases**.

For a halogen to be reactive, it is the ease of accepting electron to the valence shell to form a stable electronic configuration.

As we go down Group VII, the size of the atom increases, making it more difficult for the positive nucleus to attract one more electron since the valence shell is further away.

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