Question #60381, Chemistry / General Chemistry |

What would be the most likely formula for the compound formed with Na and the polyatomic ion X?

Answer:

The valence of Na is 1 and its charge equals +1. On the other hand, the polyatomic anion X can have the charge of -1, -2, -3, -4 or more. Therefore, the most likely formula is:

 Na_nX where n – the charge of anion X.

For instance,

$$X = I_3^-$$
, n=1, NaI₃

$$X = SO_4^{2-}, n=2, Na_2SO_4$$

$$X = PO_4^{3-}, n=3, Na_3PO_4$$

$$X = P_2O_7^{4-}$$
, n=4, $Na_4P_2O_7$

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