XSO_4 $\quad \%\, SO_4^{2-} = \dfrac{\text{mass } SO_4^{2-}}{\text{mass } XSO_4} \times 100$

Mg

$XSO_4 + \cancel{BaCl_2} \longrightarrow$ Mg $\cancel{BaSO_4}$ $\cancel{(s)}$ (aq) $+ XCl$

mass $BaSO_4$	1 mol $BaSO_4$	1 mol SO_4^{2-}	mass SO_4^{2-}
	g $BaSO_4$	1 mol $BaSO_4$	1 mol SO_4^{2-}

Calc. $\%\, SO_4^{2-}$ in $BaSO_4$

Multiply mass $BaSO_4$ by $\%\, SO_4^{2-}$