

Preparation of ox acids of nitrogen

Name	Formula	Oxidation state	Preparation
Hyponitrous acid	$\text{H}_2\text{N}_2\text{O}_2$	+1	$\text{Ag}_2\text{N}_2\text{O}_2 + 2\text{HCl} \longrightarrow 2\text{AgCl} + \text{H}_2\text{N}_2\text{O}_2$
Nitrous acid	HNO_2	+3	$\text{Ba}(\text{NO}_2)_2 + \text{H}_2\text{SO}_4 \longrightarrow 2\text{HNO}_2 + \text{BaSO}_4$
Pernitrous acid	HOONO	+5	$\text{H}_2\text{O}_2 + \text{ON}(\text{OH}) \longrightarrow \text{ON}(\text{OOH}) + \text{H}_2\text{O}$
Nitric acid	HNO_3	+5	$4\text{NH}_3 + 5\text{O}_2 \longrightarrow 4\text{NO} + 6\text{H}_2\text{O}$ $2\text{NO} + \text{O}_2 \longrightarrow 2\text{NO}_2$ $2\text{NO}_2 \longrightarrow \text{N}_2\text{O}_4$ $2\text{N}_2\text{O}_4 + 2\text{H}_2\text{O} + \text{O}_2 \longrightarrow 4\text{HNO}_3$
Pernitric acid	HNO_4	+7	$\text{H}_2\text{O}_2 + \text{N}_2\text{O}_5 \longrightarrow \text{NO}_2\text{OOH} + \text{HNO}_3$