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HALIDE ION TESTS

Halide ion	Action of $AgNO_3(aq)$	Action of dilute $NH_3(aq)$	Action of conc. $NH_3(aq)$
$F^-(aq)$			
$Cl^-(aq)$			
$Br^-(aq)$			
$I^-(aq)$			

Halide ion	Action of $AgNO_3(aq)$	Action of dilute $NH_3(aq)$	Action of conc. $NH_3(aq)$
$F^-(aq)$	No precipitate		
$Cl^-(aq)$			
$Br^-(aq)$			
$I^-(aq)$			

Halide ion	Action of $AgNO_3(aq)$	Action of dilute $NH_3(aq)$	Action of conc. $NH_3(aq)$
$F^-(aq)$	No precipitate		
$Cl^-(aq)$	$Ag^+(aq) + Cl^-(aq) \rightarrow AgCl(s)$ white ppt		
$Br^-(aq)$			
$I^-(aq)$			

Halide ion	Action of $AgNO_3(aq)$	Action of dilute $NH_3(aq)$	Action of conc. $NH_3(aq)$
$F^-(aq)$	No precipitate		
$Cl^-(aq)$	$Ag^+(aq) + Cl^-(aq) \rightarrow AgCl(s)$ white ppt	Soluble $AgCl(s) + 2\ NH_3(aq) \rightarrow [Ag(NH_3)_2]^+(aq) + Cl^-(aq)$	
$Br^-(aq)$			
$I^-(aq)$			

Halide ion	Action of $AgNO_3(aq)$	Action of dilute $NH_3(aq)$	Action of conc. $NH_3(aq)$
$F^-(aq)$	No precipitate		
$Cl^-(aq)$	$Ag^+(aq) + Cl^-(aq) \rightarrow AgCl(s)$ white ppt	Soluble $AgCl(s) + 2\ NH_3(aq) \rightarrow [Ag(NH_3)_2]^+(aq) + Cl^-(aq)$	Soluble $AgCl(s) + 2\ NH_3(aq) \rightarrow [Ag(NH_3)_2]^+(aq) + Cl^-(aq)$
$Br^-(aq)$			
$I^-(aq)$			

Halide ion	Action of $AgNO_3(aq)$	Action of dilute $NH_3(aq)$	Action of conc. $NH_3(aq)$
$F^-(aq)$	No precipitate		
$Cl^-(aq)$	$Ag^+(aq) + Cl^-(aq) \rightarrow AgCl(s)$ white ppt	Soluble $AgCl(s) + 2\ NH_3(aq) \rightarrow [Ag(NH_3)_2]^+(aq) + Cl^-(aq)$	Soluble $AgCl(s) + 2\ NH_3(aq) \rightarrow [Ag(NH_3)_2]^+(aq) + Cl^-(aq)$
$Br^-(aq)$	$Ag^+(aq) + Br^-(aq) \rightarrow AgBr(s)$ cream ppt		
$I^-(aq)$			

Halide ion	Action of $AgNO_3(aq)$	Action of dilute $NH_3(aq)$	Action of conc. $NH_3(aq)$
$F^-(aq)$	No precipitate		
$Cl^-(aq)$	$Ag^+(aq) + Cl^-(aq) \rightarrow AgCl(s)$ white ppt	Soluble $AgCl(s) + 2\ NH_3(aq) \rightarrow [Ag(NH_3)_2]^+(aq) + Cl^-(aq)$	Soluble $AgCl(s) + 2\ NH_3(aq) \rightarrow [Ag(NH_3)_2]^+(aq) + Cl^-(aq)$
$Br^-(aq)$	$Ag^+(aq) + Br^-(aq) \rightarrow AgBr(s)$ cream ppt	Insoluble	
$I^-(aq)$			

Halide ion	Action of $AgNO_3(aq)$	Action of dilute $NH_3(aq)$	Action of conc. $NH_3(aq)$
$F^-(aq)$	No precipitate		
$Cl^-(aq)$	$Ag^+(aq) + Cl^-(aq) \rightarrow AgCl(s)$ white ppt	Soluble $AgCl(s) + 2\ NH_3(aq) \rightarrow [Ag(NH_3)_2]^+(aq) + Cl^-(aq)$	Soluble $AgCl(s) + 2\ NH_3(aq) \rightarrow [Ag(NH_3)_2]^+(aq) + Cl^-(aq)$
$Br^-(aq)$	$Ag^+(aq) + Br^-(aq) \rightarrow AgBr(s)$ cream ppt	Insoluble	Soluble $AgBr(s) + 2\ NH_3(aq) \rightarrow [Ag(NH_3)_2]^+(aq) + Br^-(aq)$
$I^-(aq)$			

Halide ion	Action of $AgNO_3(aq)$	Action of dilute $NH_3(aq)$	Action of conc. $NH_3(aq)$
$F^-(aq)$	No precipitate		
$Cl^-(aq)$	$Ag^+(aq) + Cl^-(aq) \rightarrow AgCl(s)$ white ppt	Soluble $AgCl(s) + 2\ NH_3(aq) \rightarrow [Ag(NH_3)_2]^+(aq) + Cl^-(aq)$	Soluble $AgCl(s) + 2\ NH_3(aq) \rightarrow [Ag(NH_3)_2]^+(aq) + Cl^-(aq)$
$Br^-(aq)$	$Ag^+(aq) + Br^-(aq) \rightarrow AgBr(s)$ cream ppt	Insoluble	Soluble $AgBr(s) + 2\ NH_3(aq) \rightarrow [Ag(NH_3)_2]^+(aq) + Br^-(aq)$
$I^-(aq)$	$Ag^+(aq) + I^-(aq) \rightarrow AgI(s)$ yellow ppt		

Halide ion	Action of $AgNO_3(aq)$	Action of dilute $NH_3(aq)$	Action of conc. $NH_3(aq)$
$F^-(aq)$	No precipitate		
$Cl^-(aq)$	$Ag^+(aq) + Cl^-(aq) \rightarrow AgCl(s)$ white ppt	Soluble $AgCl(s) + 2\ NH_3(aq) \rightarrow [Ag(NH_3)_2]^+(aq) + Cl^-(aq)$	Soluble $AgCl(s) + 2\ NH_3(aq) \rightarrow [Ag(NH_3)_2]^+(aq) + Cl^-(aq)$
$Br^-(aq)$	$Ag^+(aq) + Br^-(aq) \rightarrow AgBr(s)$ cream ppt	Insoluble	Soluble $AgBr(s) + 2\ NH_3(aq) \rightarrow [Ag(NH_3)_2]^+(aq) + Br^-(aq)$
$I^-(aq)$	$Ag^+(aq) + I^-(aq) \rightarrow AgI(s)$ yellow ppt	Insoluble	

Halide ion	Action of $AgNO_3(aq)$	Action of dilute $NH_3(aq)$	Action of conc. $NH_3(aq)$
$F^-(aq)$	No precipitate		
$Cl^-(aq)$	$Ag^+(aq) + Cl^-(aq) \rightarrow AgCl(s)$ white ppt	Soluble $AgCl(s) + 2\ NH_3(aq) \rightarrow [Ag(NH_3)_2]^+(aq) + Cl^-(aq)$	Soluble $AgCl(s) + 2\ NH_3(aq) \rightarrow [Ag(NH_3)_2]^+(aq) + Cl^-(aq)$
$Br^-(aq)$	$Ag^+(aq) + Br^-(aq) \rightarrow AgBr(s)$ cream ppt	Insoluble	Soluble $AgBr(s) + 2\ NH_3(aq) \rightarrow [Ag(NH_3)_2]^+(aq) + Br^-(aq)$
$I^-(aq)$	$Ag^+(aq) + I^-(aq) \rightarrow AgI(s)$ yellow ppt	Insoluble	Insoluble