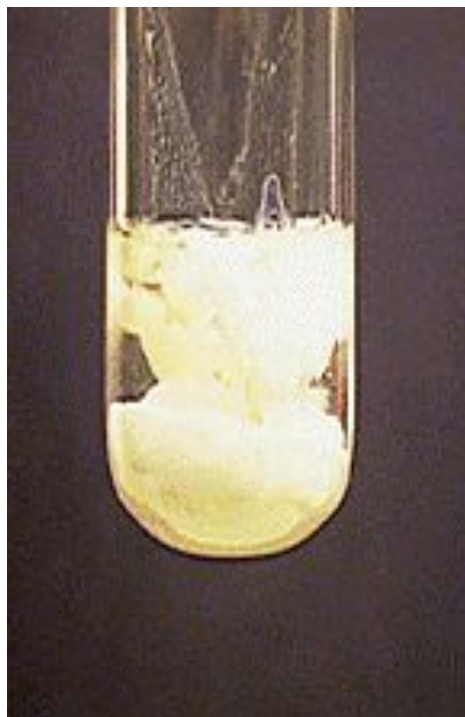


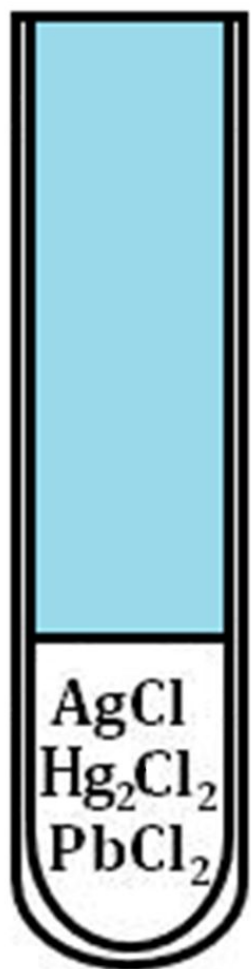
**Lead(II) chloride
(PbCl_2)**



**Mercury(I) chloride
(Hg_2Cl_2)**

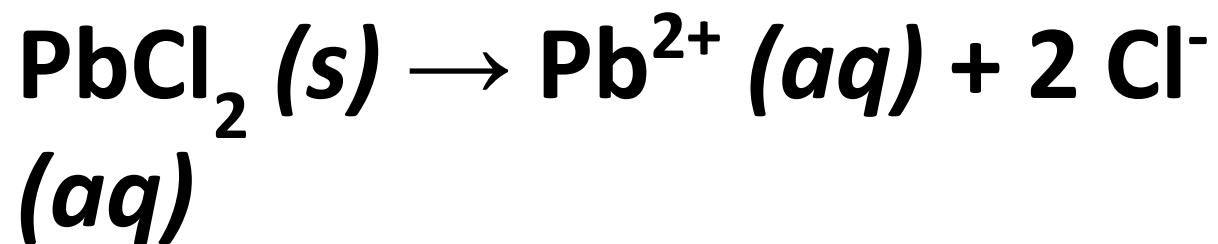
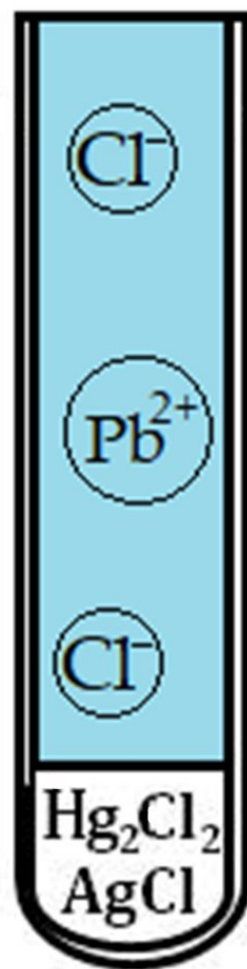


**Silver chloride
(AgCl)**



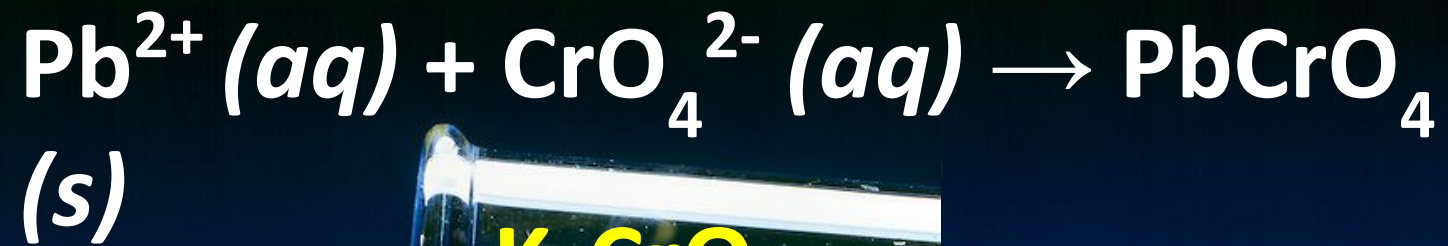
Heat
→

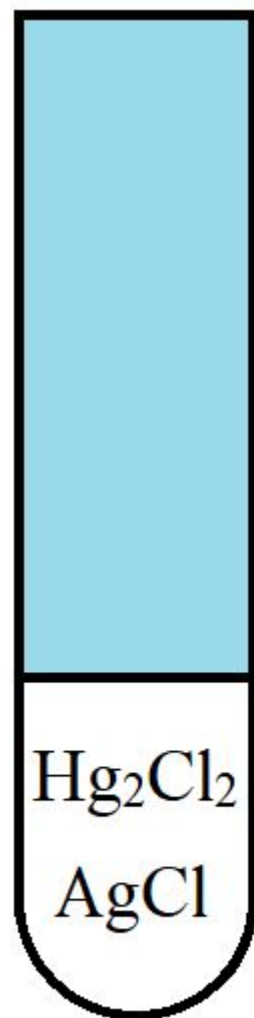
*Basis of Separation:
Difference in Solubility
as a Function of
Temperature



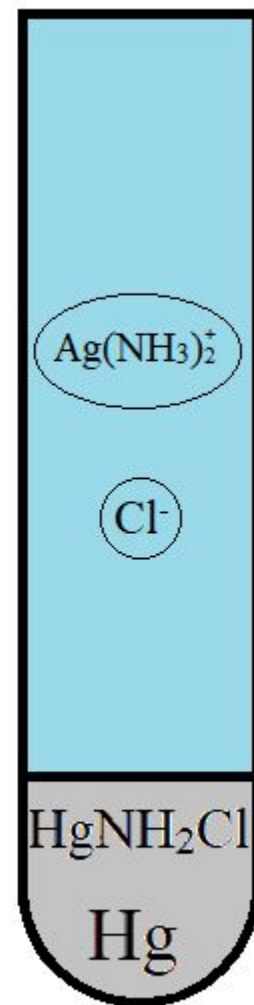
FUNDAMENTAL
PHOTOGRAPHS
<http://www.fphoto.com>

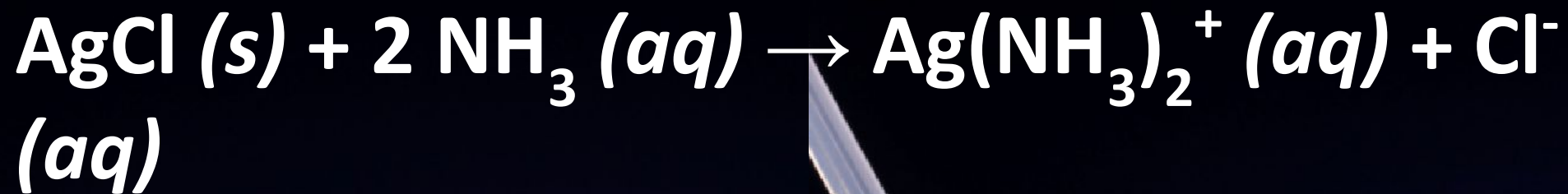






+ 6 M NH_3 (aq)





NH
3

3

AgCl

1

FUNDAMENTAL
PHOTOGRAPHS

<http://www.fphoto.com>

NH
3

3

NH
3

3

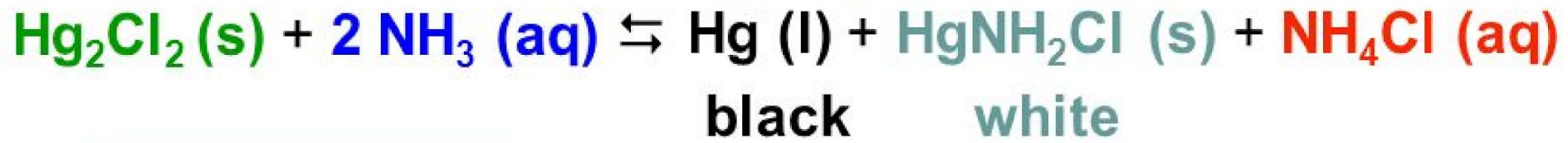
Ag(NH₃)₂Cl

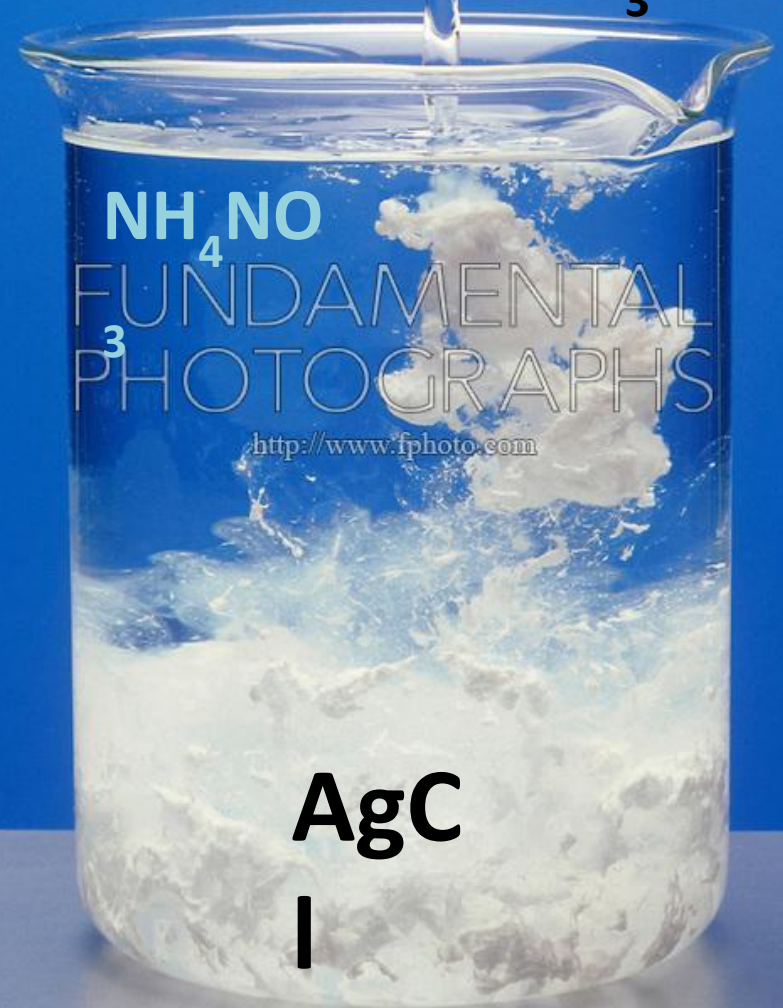
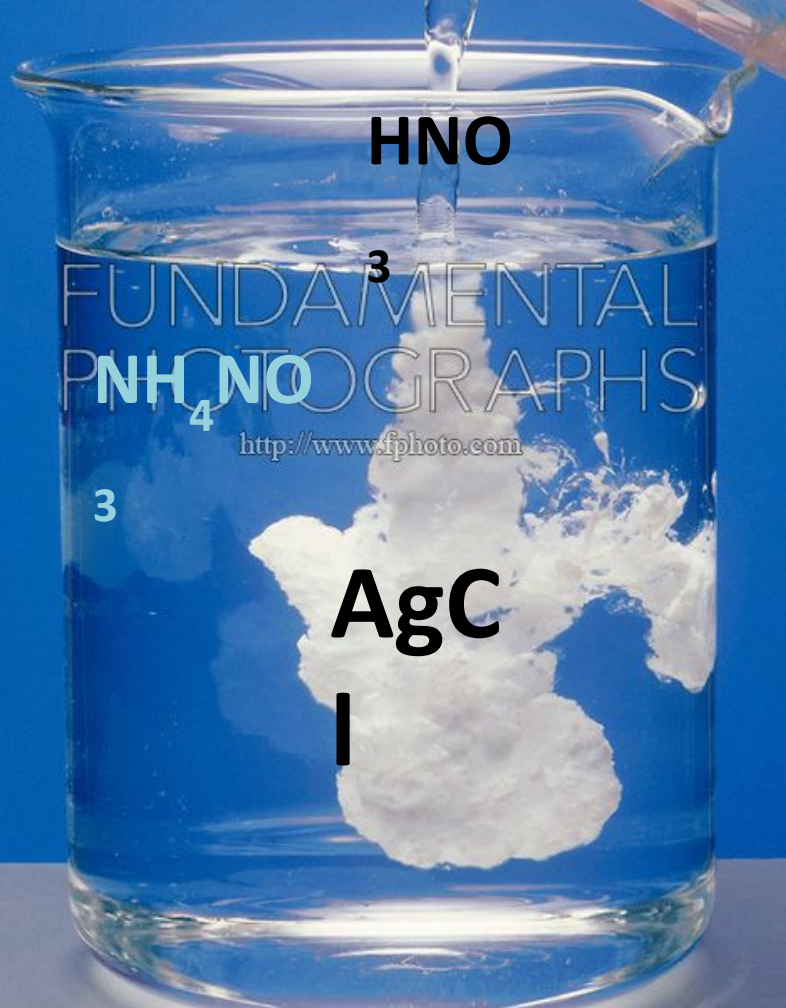
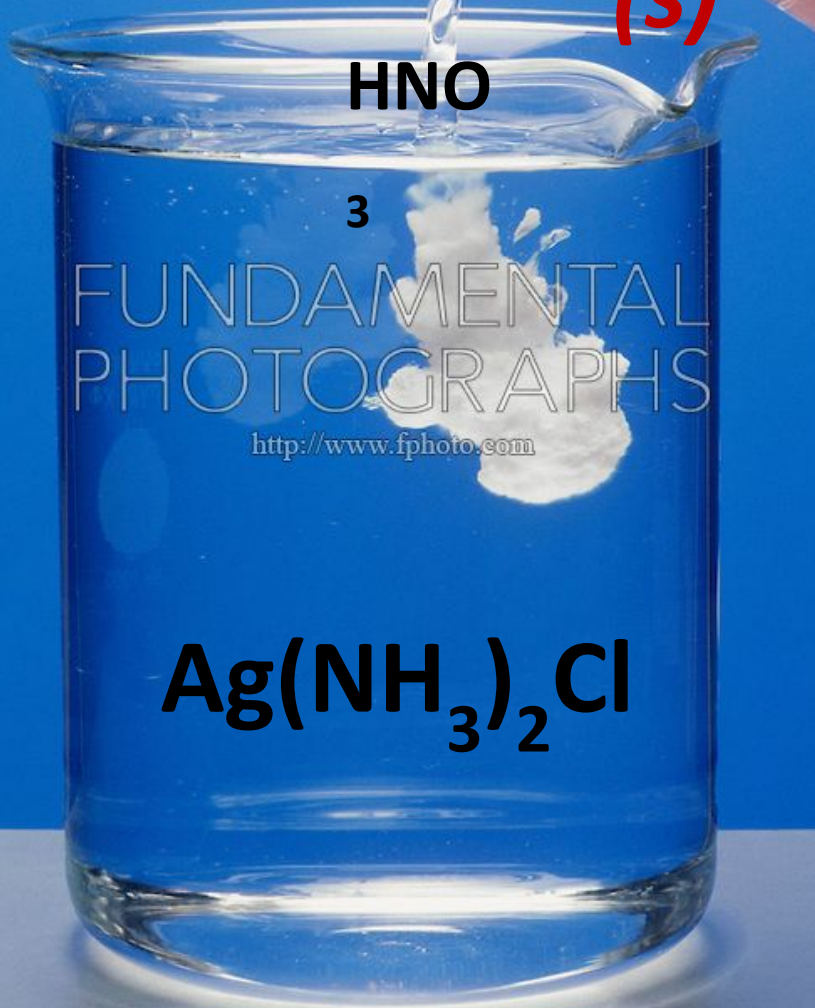
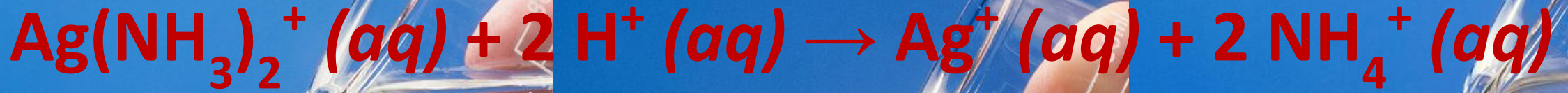
FUNDAMENTAL
PHOTOGRAPHS

<http://www.fphoto.com>

NH
3

3







(a) Precipitation of group 1 cations by adding $\text{HCl}(\text{aq})$:
 $\text{AgCl}(\text{s}) + \text{Hg}_2\text{Cl}_2(\text{s}) + \text{PbCl}_2(\text{s})$



(b) Confirmation test for lead by addition of $\text{Na}_2\text{CrO}_4(\text{aq})$: $\text{PbCrO}_4(\text{s})$



(c) Confirmation test for mercury by adding $\text{NH}_3(\text{aq})$:
 $\text{Hg}(\text{l}) + \text{Hg}(\text{NH}_2)\text{Cl}(\text{s})$



(d) Confirmation test for silver by adding $\text{HCl}(\text{aq})$: $\text{AgCl}(\text{s})$

