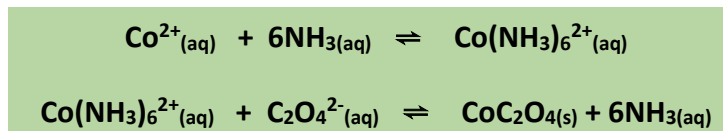


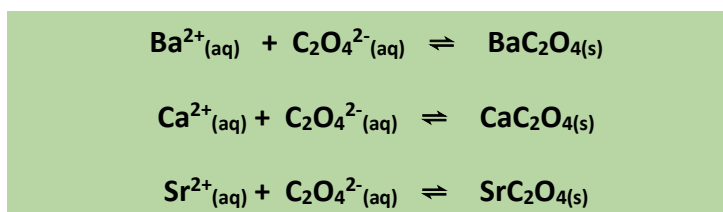
## GROUP C CATIONS

$\text{Ba}^{2+}$	$\text{Ca}^{2+}$	$\text{Co}^{2+}$	$\text{Sr}^{2+}$
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Before precipitating out the Group C cations, pretreatment is done for  $\text{Co}^{2+}$  to prevent the precipitation of  $\text{Co}(\text{OH})_2$  when ammonium oxalate is added:



The other group C cations are precipitated out from the solution using 0.5 M  $(\text{NH})_2\text{C}_2\text{O}_4$ :



$\text{Co}^{2+}$	<ul style="list-style-type: none"> <li>➤ <b>Confirmatory reagent:</b> 6 M <math>\text{KNO}_2</math></li> <li>- <math>\text{Co}^{2+}</math> is oxidized to <math>\text{Co}^{3+}</math> to form <b>yellow</b> precipitates</li> </ul>
$\text{Ba}^{2+}$	<ul style="list-style-type: none"> <li>➤ <b>Confirmatory reagent:</b> 0.1 M <math>\text{K}_2\text{CrO}_4</math></li> <li>- <math>\text{BaCrO}_4</math> is less soluble compared to the chromate compounds formed by the rest of the Group C cations, thus it will readily precipitate out</li> <li>- Production of <b>yellow</b> precipitates</li> </ul>
$\text{Sr}^{2+}$	<ul style="list-style-type: none"> <li>➤ <b>Confirmatory reagent:</b> 11 M <math>(\text{NH}_4)_2\text{SO}_4</math></li> <li>- Production of <b>white</b> precipitates</li> </ul>
$\text{Ca}^{2+}$	<ul style="list-style-type: none"> <li>➤ <b>Confirmatory reagent:</b> 0.5 M <math>(\text{NH}_4)_2\text{C}_2\text{O}_4</math></li> <li>- Production of <b>white</b> precipitates</li> </ul>