

# “Chemist Paradise”

A solubility rules rap by Abe Leite

# Alkali Metals and Ammonium Salts

If your cation is from the **group one**,  
Then its compounds are **soluble**, bar none  
It's the same with the **salts of ammonium**  
These ions will **dissociate**, each and every one

In every case,  
compounds of alkali  
metals and  
ammonium salts will  
be soluble.

# Sulfites, Carbonates, Chromates, and Phosphates

And if you've got a **sulfite** or a **carbonate**, **chromate** or **phosphate**, you'd better wait

Cause they'll **only dissolve** if paired with one

of the **ever-soluble ions** I've already sung

These anions tend to form insoluble compounds. They will only dissolve if bonded with an alkali metal or ammonium.

# Chlorates, Acetates, Nitrates, and Perchlorates

On the other hand,  
**chlorate** and **acetate**,

Will form soluble  
compounds with  
**everyone**

It's the same with  
**perchlorate** and  
**nitrate**,

Doesn't even matter  
which cation.

These highly soluble  
anions will dissolve  
when paired with any  
cation.

We been spending most our lives living in a  
chemist paradise

You'd better remember these rhymes, cause  
they're the best mnemonic device

You'll know solubilities, the particles are too  
small to be seen

The ions split in front of me, based on the  
rules of solubility

**Don't take notes on this part.**

# The Infamous Three

Now let's look at **the infamous three**

**Silver, lead (II), and mercury (I)**

Unless the other ion's from the previous four

You won't get **no dissolution**, what a bore

Silver, lead (II), and mercury (I) tend to be highly insoluble cations. They will only dissolve when paired with a chlorate, acetate, nitrate, or perchlorate.

# Chlorides, Bromides, and Iodides

A **chloride, bromide,**  
or **iodide**

Is **usually soluble,**  
unless you decide, fool

That you'd rather bond  
it with an **infamous**  
**three**

In that case, you will **do**  
**no chemistry.**

These generally  
soluble ions will not  
dissolve if paired with  
silver, lead (II), or  
mercury (I).

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# Sulfates

All **sulfates** shall be soluble,  
Except with the **infamous three**,  
And with **calcium**,  
**barium**, or **strontium**,  
They too lack solubility.

These frequently soluble ions will not dissolve if paired with silver, lead (II), mercury (I), or calcium, barium, or strontium.

# Hydroxides

**Hydroxides**, well they are a different story  
Here, **calcium**, **barium**, and **strontium** have **glory**

With those three and the **alkalis of group one**

Hydroxides will dissolve until the day is done

These generally insoluble anions will dissolve only if paired with an alkali metal or one of calcium, barium, and strontium.

# Sulfides

And **sulfides** will dissolve with all the same

But they'll also dissolve with the rest of **group 2A**, fool

The **alkali metals**, and the **alkaline earths**

Will show you the sulfide anion's true worth

These often insoluble anions will dissolve if paired with an alkali metal or an alkaline earth metal.

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You'll know solubilities, the particles are too  
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The ions split in front of me, based on the  
rules of solubility

**Don't take notes on this part.**

**...and that's a  
RAPP, folks.**