

>> Salts made from a weak base and a strong acid will form an acidic solution when put into water. In other words, once it's in water, that water then takes on a pH of less than 7. Let's take a look at an example. If we take iron 3 hydroxide, the iron will be part of the salt. If we take hydrochloric acid, the chlorine will be part of the salt. So we'll end up having FeCl_3 , which is the iron 3 chloride, or iron 3 chloride. And this will result in an acidic solution because this is a weak base, this is a strong acid. So now let's go ahead and take a look at one you might be asked to work with. Aluminum nitrate. Okay? Aluminum nitrate, if we take the aluminum and add the hydroxide to it, we end up with aluminum hydroxide. Now we've said before that group 1A and group 2A hydroxides are strong base. This is a group 3A hydroxide, and that's not a strong base, that's a weak base. And so this will end up being our weak base, this is part of from my weak base, that cation, take a look at this anion, add the hydrogen to it. We get nitric acid. According to our chart, nitric acid is one of our strongest acids. So we have now a salt that comes from the ions of a weak base and a strong acid, we know strong acid, think strong acid, okay, it's going to make an acidic solution.