

Determining the pH of the contents of your dish: SEVEN SCENARIOS

When asked to determine the pH of the contents of a dish, there are essentially seven scenarios. Knowing which one you are dealing with will dictate how to go about solving the problem.

What's in your dish?

The most important thing to keep clear in your mind when solving chemistry problems is: what chemicals are actually present **now** – not what chemicals are on paper in the balanced equation, or what you *put* in the dish, but what is actually there *at this moment*. How you “got there” doesn't really matter; what **IS** there is what is important.

Remember: when considering reactions between acids and bases, if either are considered “strong”, the reaction will essentially go to completion. In other words, they will continue to react in the forward direction until one (or both) of the reactants are gone. This situation should be solved stoichiometrically, and is (potentially) a limiting reagent situation. The products of such a reaction, along with any remaining excess reagents, are what determines the pH of the dish contents.

Scenario	“What's in your dish?” <i>(besides water)</i>	What type of problem is this?
1		
2		
3		
4		
5		
6		
7		