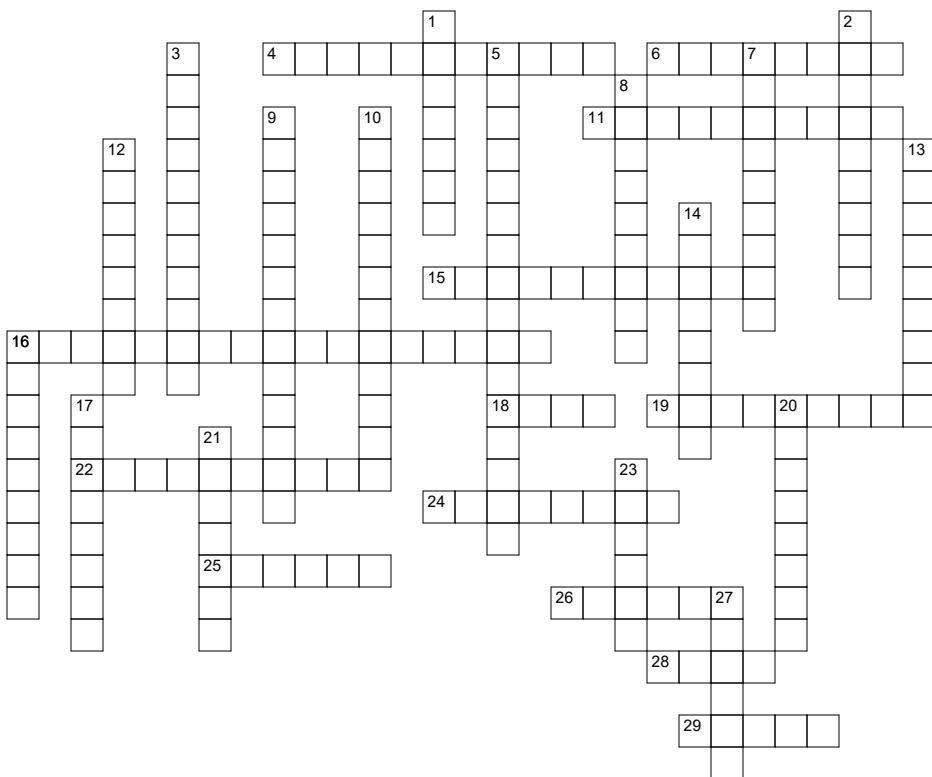


# Aqueous Equilibria



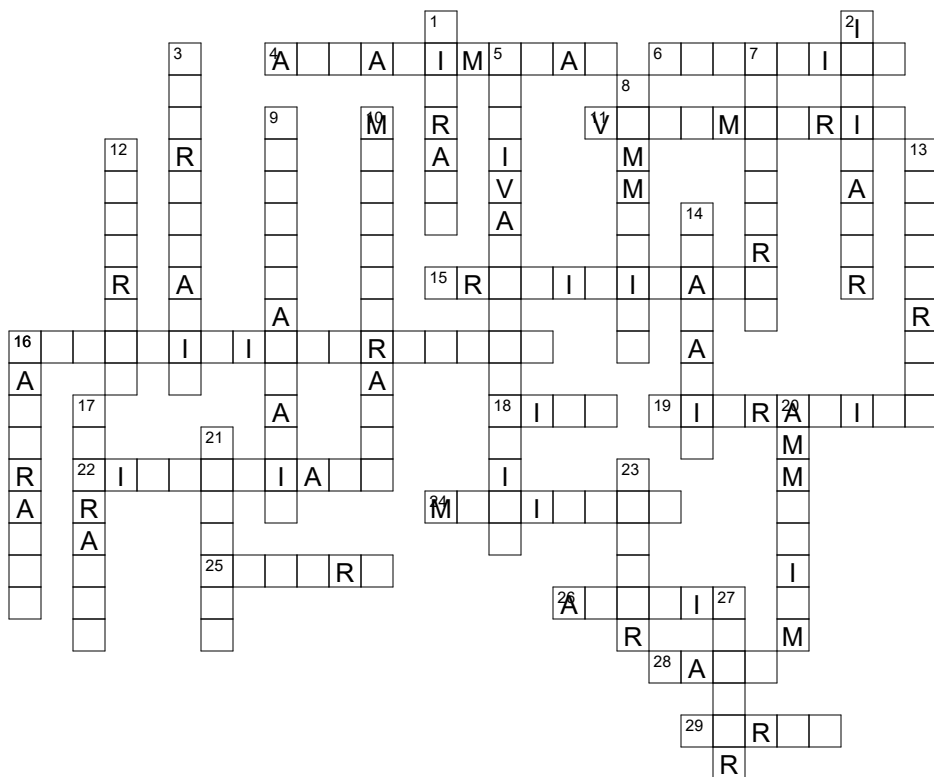
## Down

1. Salts that contain the \_\_\_ anion are generally very soluble in water
2. An acid-base \_\_\_ is a weak acid where the acid is a different colour than its conjugate base
3. \_\_\_ acid would be a good choice to prepare a buffer at pH 9
5. This is where you SHOULD stop a acid-base titration because the acid and base are exactly neutralized
7. \_\_\_ is an indicator that is yellow at low pH values up to about 7.5
8. The solubility of solid  $\text{Cu}(\text{OH})_2$  in 0.10-M NaOH solution is less than it is in pure water, due to the \_\_\_ effect
9. A buffer solution may contain a weak base and the salt of its \_\_\_
10. \_\_\_ is an indicator that changes to yellow at any pH above 5.5 to 6
12. \_\_\_ acid would be a good choice to prepare a buffer solution at pH 2
13. The pH of a buffer solution can be calculated using the \_\_\_ - Hasselbalch equation
14. A buffer solution may contain a \_\_\_ and the salt of its conjugate base
16. When dissolving a salt, the solution is \_\_\_ when  $Q_{sp} = K_{sp}$
17. Cations and anions become \_\_\_ in water. The water molecules surround each ion due to ion-dipole forces.
20. Salts that contain the \_\_\_ cation are generally very soluble in water
21. A salt with a small  $K_{sp}$  value is not very \_\_\_ in water
23. A \_\_\_ solution is one that resists a change in pH
27. When choosing an indicator for a titration, be sure it changes \_\_\_ at a pH close to the pH of the equivalence point (English spelling)

## Across

- |  |  |
|--|--|
| <ol style="list-style-type: none"> <li>4. Salts that contain an ___ cation are generally very soluble in water</li> <li>6. This is where you stop a titration due to the colour change by an indicator</li> <li>11. A ___ pipet has a bulb in the middle, and has only one graduation on it.</li> <li>15. When two salt solutions are mixed, a ___ can form if <math>Q_{sp} &gt; K_{sp}</math></li> <li>16. <math>K_{sp}</math>: The ___ constant</li> <li>18. What colour would you expect for phenolphthalein at pH 10?</li> <li>19. A volumetric analytic technique that relies on stoichiometry of a reaction in solution</li> <li>22. When ionic compounds (salts) dissolve in water, their ions ___ from their crystal lattice structures</li> <li>24. When reading a volume accurately, look at eye-level, and read the bottom of the liquid's ___</li> </ol> | <ol style="list-style-type: none"> <li>25. In a weak acid - strong base (or a weak base - strong acid) titration, a buffer solution is created ___ the equivalence point</li> <li>26. ___ acid is a good choice to prepare a buffer solution at pH 5</li> <li>28. The pH at the equivalence point in an acid-base titration is determined by the ___ produced in the neutralization reaction</li> <li>29. A ___ is specialized glassware used in titrations</li> </ol> |
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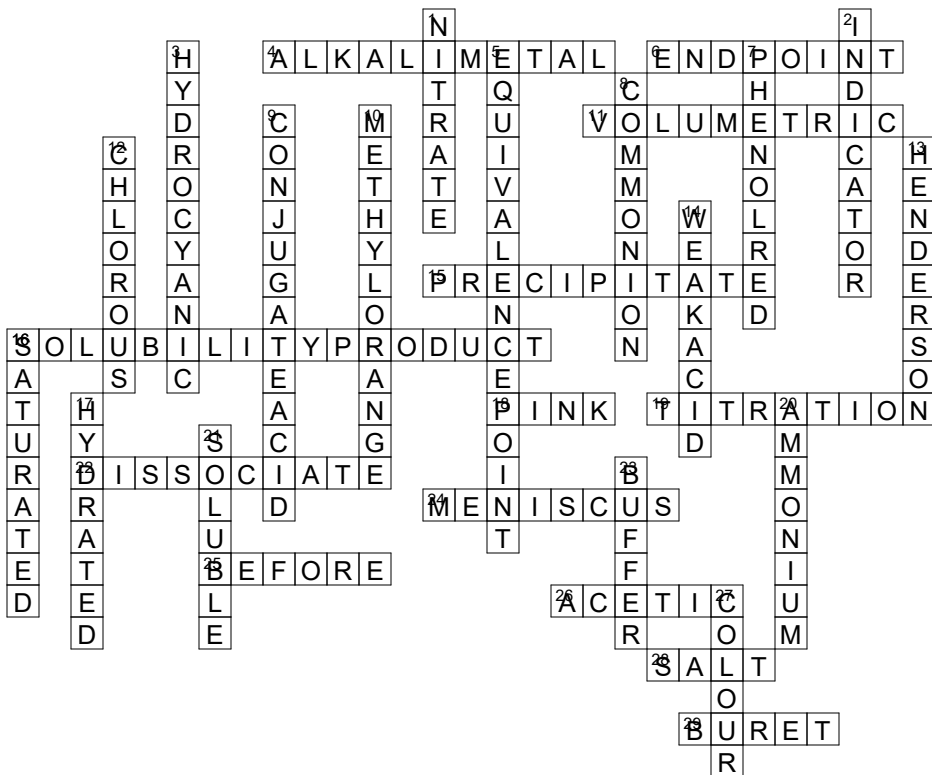
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