

Immiscible liquids and carbonatite formation

For the purposes of this demo, we will replace $\text{Al}_2\text{O}_3 + \text{SiO}_2$ with ethanol, CaO with water, and Na_2O with carbonate salts on the diagram.

1. What happens when we mix water and ethanol? Where would that mixture plot on the ternary below?
2. The Searles Lake water is a brine rich in chlorides, carbonates, sulfates... Where does it plot on the diagram below?
3. What do you predict will happen when we mix some ethanol into the Searles Lake water? How is this process an analogy to carbonatite formation? How is it different?

