

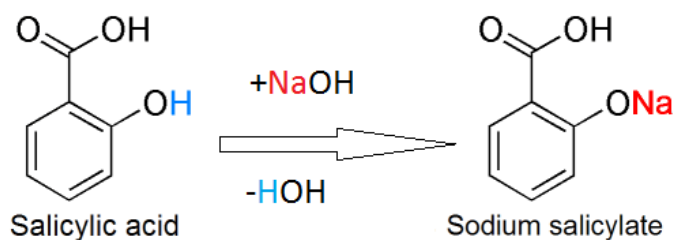
Answer on Question #55869 - Chemistry - Inorganic chemistry

Question:

How to convert salicylic acid to sodium salicylate?

Answer:

One mole of salicylic acid reacts with one mole of sodium hydroxide in aqueous medium to form a mole of sodium salicylate and a mole of water.



Molecular weight of salicylic acid is 138.121 g/mol and molecular weight of sodium hydroxide is 39.997 g/mol, so approx. 10.00 grams of salicylic acid would be reacted with 2.90 grams of NaOH.

Dissolve the NaOH in as little distilled water as required to solubilize it completely. Dissolve the salicylic acid in another beaker, adding a little ethanol if necessary to dissolve it completely.

Mix the two solutions and let stand for at least an hour. Heat carefully at just below the boiling point to evaporate the liquid down until it thickens and becomes pale yellow. Continue heating at 65 to 80 °C, stirring periodically, until crystals precipitate out and eventually become completely dry.

The crystals are sodium salicylate. If the reactants were weighed accurately, there should be no excess NaOH or salicylic acid.