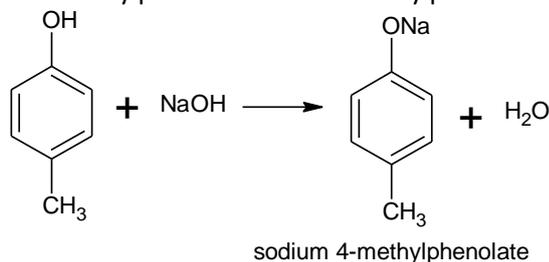


Answer on Question#37335 - Chemistry - Organic Chemistry

When mixing water solution of NaOH and ethyl acetate solution of 4-methylphenol two phases are formed: upper – ethyl acetate and lower – water.

When NaOH interacts with 4-methylphenol sodium-4-methylphenolate is formed:



Sodium-4-methylphenolate is highly soluble in water and poorly soluble in ethyl acetate. So it passes from the ethyl acetate phase into the water phase. To get sodium-4-methylphenolate the lower layer should be kept (to transform it back into 4-methylphenol it should be treated by an acid).

By definition extraction is a separation method based on relative solubilities of a substance in two different immiscible liquids, usually water and an organic solvent. So there is no chemical transformation in case of extraction.

In case of alkaline washing a dissolved substance reacts with an alkali, and the product formed is removed from the solution with water phase. From this point of view the considered process is more likely to be washing than extraction.

However, washing is normally used to remove some undesired substances from the mixture, and target substance remains in organic phase. Extraction is used to isolate a target substance from the mixture by selective dissolution of the substance. From this point of view the considered process is more likely to be extraction than washing.