The first part of the experiment is the preparation of standard solutions.Decant the solution into a 100 mL volumetric flask and complete the volume to the mark with distilled water.Here's how I prepare the standard solutions: sa1: 1 mL of salicylic acid (stock solution) + 9 mL of distilled water sa2: 35 mL of salicylic acid (stock solution) + 65 mL of distilled water sa3: 65 mL of salicylic acid (stock solution) + 35 mL of distilled water sa4: 9 mL of salicylic acid (stock solution) + 1 mL of distilled water To calculate the concentration of the standard solutions, I will use the formula: m1 * v1 = m2 * v2 where: m1 is the stock solution concentration (0.00725 Molar salicylic acid) v1 is the volume of the stock solution used m2 is the unknown concentration of the standard solution v2 is the final volume of the standard solution (10 mL for all solutions) The concentration of the standard solutions can be calculated by changing the value of v1 for each solution.To calculate the concentration of the unknown sample, I will use the formula: m1 * v1 = m2 * v2 where: m1 is the concentration of the standard solution (0.00725 Molar salicylic acid) v1 is the volume of the standard solution used for the titration m2 is the unknown concentration of the unknown sample v2 is the volume of the unknown sample used for the titration The concentration of the unknown sample can be calculated by changing the value of v2 for each titration.Dissolve the tablet in 35 mL of sodium hydroxide and heat it gently to dissolve everything in the tablet.Transfer 2 mL of the concentrated solution into a 50 mLvolumetric flask and complete the volume to the mark with distilled water.I will start preparing the standard solutions sa1, sa2, sa3, and sa4 using a stock salicylic acid solution.Now, let's move on to the preparation of the unknown sample, which is an aspirin tablet.Here's how I prepare the unknown sample: Record the mass of the aspirin tablet by weighing it on a balance.The titration process is used to determine the concentration of the unknown sample.Here's how I perform the titration: Add 2–3 drops of phenolphthalein indicator to the unknown sample.Titrate the unknown sample with the standard solution (sa1) until the endpoint is reached.The endpoint is reached when the solution changes from colorless to pink.Record the volume of the standard solution used for the titration.A standard solution is a solution of known concentration, so you know the concentration of .the standard solution