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Organic Chemistry II
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Lab Report 2

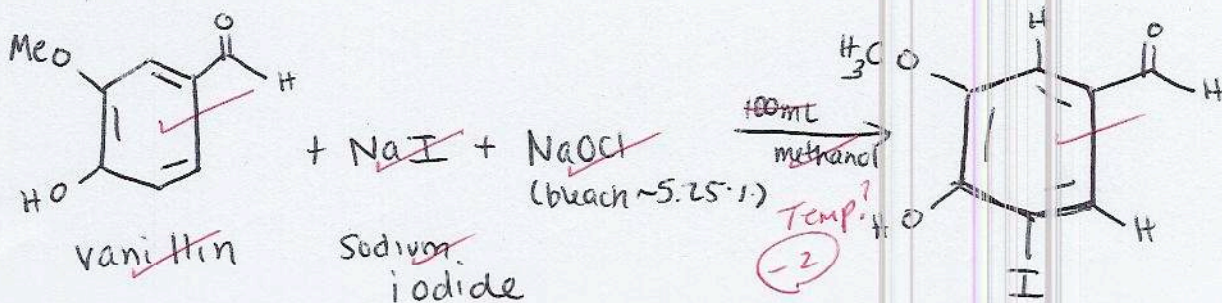
Title: When Vanillin Attacks! (Electrophilic Aromatic Substitution)

Abstract:

good! { In this experiment, an electrophilic aromatic substitution was carried out using vanillin and a combination of NaI and bleach (5.25%). 1.98 g of vanillin was added to a round bottom flask along with 4.87g (2.5 eq) of NaI and 100 mL of methanol. After placing in an ice bath for the appropriate amount of time, 45 mL of bleach was added slowly via a separatory funnel and the solution was stirred for approximately 1 hour. The solution was then filtered of impurities and a drying agent was added to rid the product of excess bleach and I₂. After the solution was pH to 4, it was placed in an ice bath again and the resulting crystal product was collected using vacuum filtration. The structure of the product was characterized using H NMR data and physical properties such as melting point and mass (% yield). *good!* }

This is an experiment!

Reaction Equation:



Experimental:

To begin this experiment, 1.98 grams (0.013 mol, 1 eq) of vanillin, 4.87g (2.5 eq) NaI, and 100 mL of methanol were added to a 250 mL round bottom flask. Once the mixture was dissolved in solution, it was cooled for approximately 8 minutes in an ice bath. A 125 mL separatory funnel was placed above the opening of the round bottom flask, and 45 mL of bleach (5.25%) was added to the funnel. When the solution was cooled, the bleach was added to the round bottom flask slowly (about 3 drops per 30 seconds) for over a 20 minute period of time. After the bleach has been added, the solution was left to stir for approximately 45 minutes. After stirring, the brown solid created is filter off using vacuum filtration. The filtrate was poured into a 250 mL Erlenmeyer flask and 5 mL of

or became homogeneous.

too long at time period!

was reaction mixture