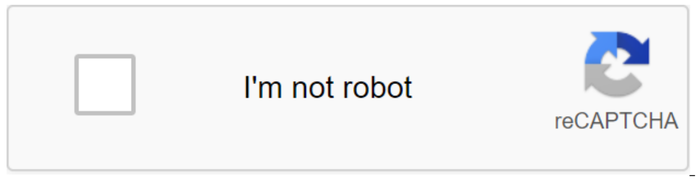

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Friedel crafts alkylation lab report

The official written reports of the laboratory in the first place, the official written reports of the laboratory are the independent works of each person in the laboratory group. Planning, writing, and everything related to a written report is the work of each individual student. While you have done the experiment together and put the data together, every aspect of writing your official report is done by only one student you are. Lab reports require a laptop, or copy, in your lab for every experiment performed during the semester. There are no exceptions to turn into a completed laboratory notebook for each experiment, regardless of whether the official written laboratory report is included. These two types of reports are separate and graded divided (not bonded one to the other). It is important to include in your official written laboratory reports in order to get the maximum number of points possible. Official written reports will cost a maximum of 30 points. For the most part, the score of the official report usually begins with a score of 25 points out of 30 maximum points or 83% of points (which is roughly B- class, which is a typical middle class for the class). If you do better than expected from a good report, you'll have points added to give a higher score. Rarely will anyone get the perfect 30 points on an official written report. If you do less than expected, the points will be deducted from the 25 points of the starting point. If official written reports come true after the day they were to (at the same time your lab notepad was supposed to be) up to one week after the report was due, according to the curriculum, you will be subject to a 10% reduction in your class (you will lose 3 points automatically). If your official written report is included after the first week, but before the end of the second week after its completion, you will lose another 3 points (a total of 20% of the deduction). If your official report is included after this two-week late period, you will lose an additional 3 points or a total of 9 points (30% deduction). It is important to submit reports in time. I do not accept emails under any circumstances. When an official written lab report is required, the format changes for this report, as it is not just the contents of the lab laptop. The format and content of the official report are described here. There are only a few official reports submitted during the semester, and experiments that can be used for an official written report are listed in the curriculum. The official laboratory report should be typewritten and will be evaluated depending on how well it is written, as well as the content. The table below provides some of the information needed for a formal written report. The sample report is also displayed, but may not be completely accurate for the content, so check with your instructor. Use this information as a guide. Your lab report should follow the pattern pattern Below. The report should not be long, but it should cover the experiment, including protocols, observations, results and observations, as well as sections of conclusions. Do not use the sketch format, as everything should be in full sentences and correct grammar and the correct verb is tense throughout. You don't include every detail of the experiment because some methods such as extracting a separator funnel, determining the current of the melt, and reflux, because these methods are known to all (do not include elements such as boiling stones, etc.). Use the right English in full sentences. The experiment data is always described using the past tense (for example, the refractive index of our product was 1.3456; our DNA sequence was 5'-AGCTTGT-3', etc.). The data are currently described (e.g., the refractive index of this chemical is 1.3456; DNA sequence 5'-AGCTTGT-3' etc.). Description of the contents of the report under title A, which describes your experiments. Abstract A brief summary of what you did, why, and your results. No procedures. Introduction Explain why you did the experiment. Describe important background information and key protocols related to your experiment. Mentioning the methods studied is acceptable. Materials and methods describe your experimental protocol and the materials used (reagents). Use the full sentences. Do not use outlines, although tables can be used for reagents if there are more than a few reagents. Don't turn on every little thing, for example, we used a Pasteur pipette; or we have attached the tubes to the reflux capacitor, as these details are clear and expected. You should list the number of important reagents, but only if they are needed to understand how the experiment was performed. Results and discussions describe your results, including appropriate experimental methods that are specific to your experiment. Discuss your data and make predictions. In addition, the report does not have days and no parts in the report, as reported, and it does not matter on what day (day 1, or day 2, or day 3, etc.) the experiment was conducted. Similarly, do not separate the report into part A or Part B because there are no parts, only an experiment. You can highlight sections in the Materials, Results and Discussion section, but no parts or days are acceptable. The findings Are the most important part of the laboratory report - the Conclusions section. Here you include information about why you did the experiment, what you had to learn while doing this experiment, and other information, but you don't include the actual data from your experiment; experimental data is included in the Results and Discussion section. Links Quote links from text and handouts. Link to everything Data. Sample report: Electrophilic aromatic aromatic aromatic Nitration and Friedel-Crafts Acylation Someone Great ABSTRACT Electron Electron Deficiency Reagents (commonly referred to as electrophiles) react with electron-rich aromatic rings. This type of reaction is known as electrophilic aromatic replacement (EAS). While electrophilic aromatic replacement involves a wide range of reactions, they all follow a similar reaction mechanism usually in strong acidic conditions. The nitrate and acilation reactions described here use acid-catalytic nitrate and acillation using Friedel-Craft reactions. These experiments examine the behavior of the aromatic ring when exposed to electrophilic reagents, as well as the preferred orientation of the result product, on the basis of which attached groups of substitutes are already present. In general, these reactions demonstrate one of the most practical methods of synthesis of organic chemistry. INTRODUCTION Characteristic reactions of aromatic compounds, such as benzene and related compounds, include replacement. The benzene ring has a cloud of electrons above and below its plane that are loosely concealed and available for electrophilic reagents that are looking for electrons. Since the benzene ring serves as a source of electrons, it acts as a base for Lewis (the donor of the electronic pair). The electrophilic reagent that reacts with a benzene ring is an electron deficiency - it acts like Lewis's acid (electronic pair). The reaction of the aromatic ring and the electrophile is characterized precisely as the reaction of electrophilic aromatic replacement (EAS). The mechanism of electrophilic aromatic replacement of neither diet and acillation friedel-Kraft includes two important steps. First, it is an attack on the ring by an electrophilic reagent to form a carbocate on the structure of the ring (this is characterized as a speed determination or a slow step). It should be noted that the attack generates carbocus not because of the positive charge on the electrophile, but because a pair of electrons is pulled out of the ring to form a connection with the electrophile, leaving the carbon in the electron ring insufficient. The second step is the abstraction of the proton from the carbocate on the ring by some base (characterized as a quick step). Each of the EAS experiments follows these principles and reaction mechanisms, which offer powerful methods for the synthesis of organic chemistry. MATERIALS AND METHODS Nitrate methylbenzoate. The Erlenmeyer flask 125 ml 6.1 g methyl benzoate were combined with concentrated (18 M) sulphuric acid 12 ml. Reaction mixture was cooled to 0oC before adding 8 ml of ion nitronia production mixture consisting of equal volumes of concentrated sulfuric and nitric acids (these acid mixtures carefully before adding to the reaction of the flask). After adding two acids, the reaction of the flask is slowly heated to room temperature, and then react for about 15 minutes. After a 15-minute incubation, the reaction was stopped by pouring a room temperature reaction mixture of more than 50 grams of crushed ice. Ice was used to cool the reaction mixture and facilitate the product's precipitation. Solid crystals of the product were isolated by vacuum filtration with Buchner's funnel. The collected crystals were rinsed twice with 25 ml cold water, followed by two washes with 10 ml of ice methanol. The collected crystals were dried and then weighted to calculate yields and percentage yields. Synthesis of r-nitroaniline. Three grams of acetanild were mixed with 5 ml of concentrated sulphuric acid in the Erlenmeier flask 125 ml. Acetanilide dissolved by a gentle vortex or mixing. After the dissolution of acetanilid, the flask was cooled in the ice bath. A reactionary mixture consisting of 1.8 ml of concentrated nitric acid and 5 ml of concentrated sulphuric acid, added drip-wise with a disposable pipette, was added to this flask. After every 5-8 drops, the reaction mixture was cooled swirling in the ice bath. After 20 minutes, including the time it takes to add a mixture of nitric acid-sulfuric acid, 25 ml of ice water was added. As a result, the izomers of the anti-nitroacetanilide were suspended. For hydrolysing p-nitroacetanilids to the corresponding p-nitroanilines, the mixture was heated. Diluted sulfuric acid, already present in the flask, served as a hydrolysis. Heating the mixture allowed the solids to dissolve. The flask was cooled in an ice bath and added 30 ml of concentrated ammonium hydroxide. During this step, the sucking of r-nitroaniline is deposited. The beleaguered river-nitroaniline was collected with the help of Buchner's funnel. Solid was washed with a small amount of water (only about 50 ml). The sample was then dried by air. On dry material, calculations of product yield and percentage yield were made. To clean the product, the dry material was added to hot ethanol and dissolved. After the first crystals appeared in the boiling mixture, the flask was allowed to cool to room temperature and then placed in an ice bath to complete the crystallization. R-nitroanilin crystals were collected by vacuum filtration. The crystals were washed with a minimum amount of cold ethanol and allowed to dry. Re-crystallized p-nitroaniline dissolved in ethanol 15 ml for each gram of p-nitroaniline and dissolved heated to dissolve the solid. About 0.5 grams of activated charcoal was added to the solution and swirled within a few minutes. Coal has been removed by gravitational filtration. The filter was concentrated to about 1/3 of its original volume by heating on a hot plate. When the solution cooled down and the first crystals appeared, the flask was placed in an ice bath. Once the crystals were collected, they were dried in the air and Acyllacia: About 2.8 g of anhydrous aluminum chloride were added to 5 ml of methylene chloride in a 100ml round bottom flask and mixed by stirring by stirring the bar. 1.6 g acetyl chloride, mixed with 4 ml dichloromethan, was added to the reaction flask within 15 minutes. Once the addition of the above reagents was completed, 1.4 grams of toluene, which was dissolved in 3 ml of dichloromethan, were added to the reaction flask for more than 20 minutes. Once all the reagents were mixed, the reactions were allowed to continue for 30 minutes stirring constantly. The completed reaction mixture was poured into the mixture of 10 grams of ice and 5 ml of concentrated salt acid (12 m). This decision was carefully mixed for 10-15 minutes. The whole mixture of reaction was added to the separator funnel. The top organic layer has been collected and stored. The aqueous layer was extracted with 6 ml of dichloromethan to return any reaction product found in the amal mixture. The two organic layers were then combined and rinsed with 10 ml of saturated sodium bicarbonate solution, and then dried with sodium sulfate. RESULTS AND DISCUSSION For the first reaction, methyl benzoate nitrate, yield of 7,832 g was achieved and based on the analysis of the melt point, the chemical is likely to be m-nitrobenzoate. While Esther is deactivating the compound, the reaction seems to continue well enough, with good overall yields. The main product is likely to be meta-isomer, because the deactivation of groups (since they remove electrons from the ring, making it more positive and less attractive to a positively charged electrophile) is usually considered a meta-direction. In addition, the mono-replacement product is likely to be for two reasons. First, the experiment was conducted using relatively low temperatures, which means that the reaction will not occur quickly. Second, a newly added nitro group, when attached to a ring, will lead to additional deactivation. In general, this usually prevents or at least slows down further replacement. After collecting vacuum filtration of the product, the meta-isomer will be in very high proportion if any ortho- or para-isomer is present. This particular experiment initially led to some confusion. At first I wondered why I couldn't directly nitrate aniline to make p-nitroaniline (this strongly activating, steam product would seem likely). However, the text showed that because this electrophilic aromatic substitution reaction occurs in acidic media, the main group of amino acids is converted into a cation group of ammonium (-NH3), which is an electron removing and will meta no steam direction. That's why it was necessary to convert the group of amino acids into a group of acetamide, which would reduce the reactivity of amino acid groups with acids. I am Yield 0.74 g Since I knew that the group of acetamido (-NHCOCH3) is heavily activated, I expect that I got predominantly a pair of product with some ortho isomer. But why mostly a couple? According to the text, stertic interference makes an orthopedic replacement much less likely than parainmia (Pavia, 237). Toluene was used as a substrate using acetylat agent acetylchloride. According to the text, I expected to have one product replaced by acetofenone. However, according to the lecture, Friedel-Kraft's reaction has limitations that need to be noted. Namely, these reactions are in contact with permutations and polysubstitution. My refractometer reading was 1.5290, which, according to Dr. Robertson, was well within the range of acceptable values (this value assured me that my product was the desired product, not a rearranged or polysubsitated product). According to the Acros Organics catalog, the melting point and boiling point for 4-methylacetophenone (95%) 22-24oC and 226oC, respectively. The known value of the refractive index is about 1.5330. LITERATURE CITED 1. Introduction to Organic Laboratory Methods, 3rd ed., pgs. 232-247, Pavia, Lampman, Crisis. 2. Acros Organic 95 and 96 Fine Chemicals Catalog, Fisher Scientific. Image copyright © Dr. Donald L. Robertson (Changed: 11/15/2012) 11/15/2012) friedel crafts alkylation lab report introduction. friedel crafts alkylation lab report conclusion. friedel crafts alkylation lab report chegg. friedel crafts alkylation of 1 4 dimethoxybenzene lab report