

essentielles: la liberté, l'égalité, la fraternité qui sont devenues la devise de la République française.

Cette révolution a joué un rôle important dans l'histoire de la France car elle a créé la liberté de la parole, de la presse et de la croyance. Elle a non seulement changé le régime politique, mais elle a également modifié la société.

La cause de la Grande Révolution d'Octobre en Russie c'est la décomposition du régime tsariste, accélérée par la guerre. Plusieurs tentatives de réformes agraires n'ont pas donné de résultat politique décisif.

Comme les côtés positifs il faut noter que la Révolution et l'établissement du nouveau régime entraînent de profondes transformations sociales. Les paysans ont obtenu le partage des terres. Le fait négatif c'est que le premier résultat de cette révolution, le renversement du régime tsariste, a laissé le champ libre pour la prise du pouvoir par les bolcheviks.

Ayant étudié les deux révolutions on peut faire la conclusion qu'elles ont modifié la société. D'un côté positif les révolutions ont conduit à une forte poussée vers l'avant, ont annulé des privilèges de la noblesse et ont introduit des possibilités sociales pour tous les citoyens. Mais d'un autre côté, ces révolutions ont conduit à la crise dont les problèmes économiques et sociaux n'ont pas été absolument résolus.

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CARBOXYLIC ACID METHYLATION

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Carboxylic acids are the organic acids the molecules of which are a combination of the carbonyl group, the hydrocarbonic radical and the hydroxyl group. Starting with butyric acid, the carboxylic acids are considered to be fatty acids. Due to extensive use of fatty acids in our daily life I think it worth to make an analysis of these organic compounds with the aim to find out the concentration of these ingredients in different concoctions to figure out in which concoctions fatty acids contains more. I decided to use the gas chromatographic method for this analysis.

Before using the gas chromatography, these acids have to be transformed to methyl ethers through methylation. Methylation is a reaction of creation of ethers because of interaction between acids and methyl alcohol. Methyl ethers of fatty acids are given the priority over pure fatty

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acids in the gas chromatographic method. Methyl ethers have significantly lower boiling point, which shortens the gas chromatographic method in time; flame ionization detector (FID) is more sensitive to methyl ethers.

Methylation takes long time if normal conditions are used. That is why temperature, time and catalyst had to be used as the parameters that accelerate reaction and ensure best product yield. Sulphuric acid was used as a catalyst, because the speed of reaction in which ethers are created rises dramatically with acid field. Also, there were 3 different values picked up for the temperature (60, 80, 100) and for the time (40 min, 60 min, 80 min).

My experimental part consisted of 3 steps:

1. Preparation for analysis
 - a. The methylation
 - b. The extraction
 - c. Boiling down.
2. The analysis
3. Making and analyzing the graphs

The methylation. For each temperature there were 3 values of time which means the methylation lasted 40 min at temperature 60°C in the first serum vial, 60 min at temperature 60°C in the second serum vial, etc. I added 2 ml. of methyl alcohol and 100 µl of dipping acid to every serum vial with fatty acids. Then the serum vial was placed into the oven heated to desired temperature.

The extraction was carried out 3 times. 1 ml of water and 3 ml of hexane were added to serum vial. Unreacted methanol and unreacted fatty acids dissolve in water better than in hexane. Derived methyl ethers keep themselves in hexane. Then 2 times 3 ml of hexane were added to serum vial. After every time the hexane which contained the kept methyl ethers was bled off in another test-tube.

Every analysis was performed at least 3 times. After each analysis the results were recorded in a table.

To figure out which of the parameters were the best, the dependency graphs were made up as a result. There were 3 values of temperature and 3 values of time so all in all 6 graphs were obtained. After analyzing the graphs, I understood that methylation should not be carried out at 100°C because peak square results are less than at 60°C and 80°C and the graphs with independent time as parameter show that time has no effect on methylation.