# A SOLVENT CASTING METHOD FOR APHTHOUS ULCER RESEARCH ON THE SELECTION OF NATURAL POLYMER FOR THE DEVELOPMENT OF AMLEXANOX BUCCAL PATCH

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**Abstract**

Natural polymer is environment friendly in nature, and it is mainly taken from the plants and sometimes from animals if needed. Some common examples of it are protein, common rubber and starch. Various types of physio-mechanical variables like absorption of moisture, variation in weight, content regarding drugs. An in vitro drug executed by semi permeable membrane whereas, ex vivo drug executed by buccal mucosa. The component of pharmaceutical formulation is: Active ingredient and recipient is assembling of the dosage and the guidelines regarding it. It plays a major role in the formation of dosages; the magnitude towards the drugs should be harmious, harmless, immovable and fruitful. The broader division of polymers consists of semi synthetic, synthetic and natural polymer, it is used as the envious agents, defensive agents in the delivery system of the oral drug. Nowadays, it has been observed that the use of natural polymer is increasing day by day instead as the side effects caused by the semi synthetic and synthetic polymer is concerned.

**Keywords:** buccal patches, natural polymer, drug, apthous ulcer

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## 1. Introductions

Varieties of source of food we intake like fats, carbohydrates, proteins, vitamins and minerals, each source provide has different function for our body [1]. They not only provide energy but they provide us with the essential nutrients required for our body. Protein is the combination of amino acid to form the structure of macro molecular. They are the polymers, which consists of huge number of tiny units known as monomers [5]. Polymers made up of carbohydrate and protein is taken from the organism and considered a natural polymer.

In the Greek terminology, the meaning of the word means "many parts ", it a huge molecule which is made up of many subunits called as monomers [2]. It is everywhere, it is there in our DNA considering as a natural polymer to the plastic, which we use in our daily life [3]. Hydrophilic polymers consists of carbopol 934 p is used by buccal patches for transporting the atonal. It is mainly used for the failure in heart and large scale of researchers has mainly concentrated on the fact of Lessing the supply of drugs in various parts of the world.

**Objectives**

According to the researchers, the essential objectives are stated below: They are as follows:

- To explain the different types of polymers.
- To analyze the advantages and disadvantages of natural polymer.
- To discover the formulation and evaluation of buccal patches.
- To explain the advantages of buccal patches.
- To critically analyze the risk created by the use of Aphthous Ulcer.
- To illustrate the use of polymers in drug delivery system.

## 2. Methodology

In the research, the researchers have tried various different ways of methodologies, and it has been observed that the primary data collection method is not accurate for this research [4]. It consists of experience and information we get on the field immediately and it had been considered the best research method for any specific topic.

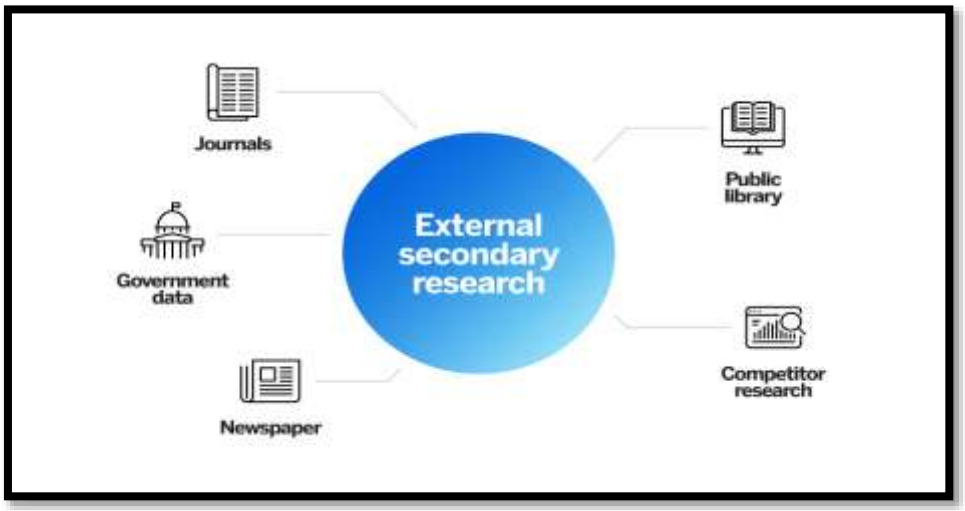


Figure 1: Different ways of secondary data collectio

It is not always possible to use the primary data collection method in the entire topic; it has been observed that for all the research primary method is not helpful [15]. The researchers have gathered information's regarding this topic with the help of secondary data collection method , which comprises of collecting information from the internet, and from government and from non government agencies, from graphical and statically information [6]. It helps the researchers to get the information regarding the advantages and disadvantages of polymer, danger in using the aphthous ulcer.

**Critically Analyzing the Different Types Of Polymers**

The polymer is broadly divided into three types, they are as follows: natural polymer, synthetic polymer and semi synthetic polymer. It is mainly found in the living creature and is made up of natural and manmade units [9]. A polymer of sugar consists of starch and cellulose, amino acid is a polymer of protein, isoprene is a polymer of natural rubber.

Table 1: Represents the different types of polymers

| Types | source | Example |
|---|---|---|
| Natural polymer | Mainly from plants | Silk, wool |
| Synthetic polymer | Petroleum oil | polyester |
| Semi synthetic polymer | Mainly from nature | Rayon and gun cotton |

Some of the common and natural polymer is found in the human body which comprises of nucleic acid and proteins, cellulose is the example of natural polymer as it is mainly found in the plants [13]. Carbohydrate is mainly seen in the living organisms, it provide us with energy to do work in the form of starch.

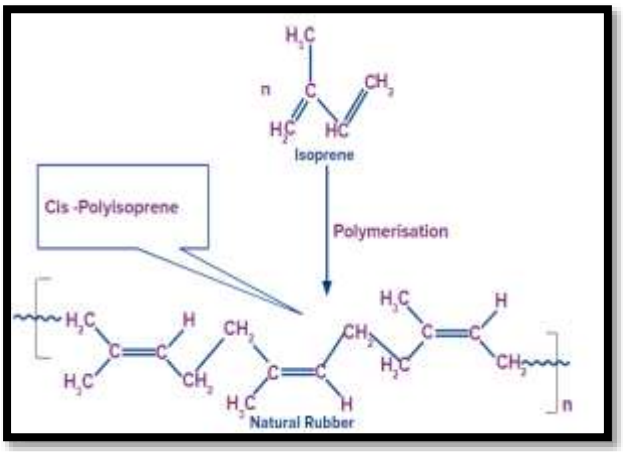


Figure 2: Natural rubber is formed by the isoprene

A synthetic polymer are done in the laboratory, is the consequence and result of the chemical reaction, and cannot be directly used [10]. The naturally form it has to be presented in the integrated form, example: - Polyethylene. Semi synthetic polymers are taken from the natural cello use and are the result of petroleum [11]. It then is unified in the laboratory; common examples of these polymers are rayon and nitrate consisting of cellulose. Some more common examples of natural polymers are carbohydrates, proteins, DNA, RNA [12].

**Crtically Discuss the Advantages Of Buccal Patches**

Buccal patches are the formulation of drugs and have a unique course in management of buccal mucosa for the delivery of drug. From the various drug routes, oral route is considered as the most comfortable for the patient as well as for the clinical requirements [11]. Drugs gets observed from the oral cavity through the mucosa orally and transmitted through facial vein into the circulation in systematic. It directly gets into the vein by passing through the first stage of it [13]. Emptying gastric rate is not determined by the intake of their drugs.

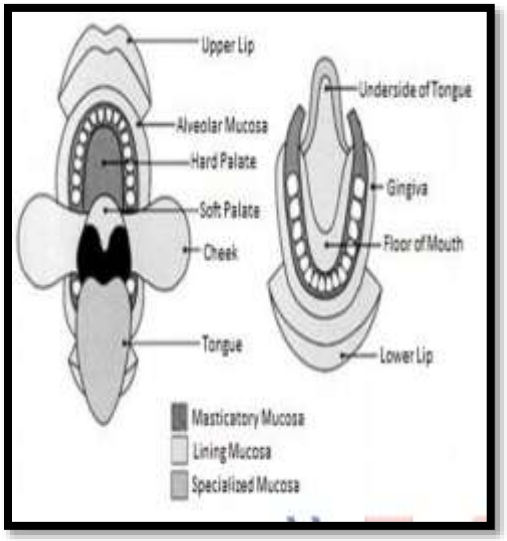


Figure 3: A view of buccal drug delivery

The buccal membranes in the mouth it allows the delivery of the buccal drug, and has been placed in two different areas in mouth [14]. Good availability is the main factor of the buccal patch in the oral cavity which lessens the pain and gives relief [15]. Patients have the power to stop the management in the case of emergencies and have the full right to stop them at any point of time. In the buccal cavity, the managements of the delivery of the buccal drug is easy to manage.

**Analyzing the Advantages and Disadvantages Of Natural Polymer**

The synthetic polymers are mainly formed by the chemical process and have a bad effect on the human being as well as on the living organisms. Whereas, the natural polymer is made up of nature and it does not have any negative impact on the living creature [12]. The costing of synthetic polymer is more than that of natural polymer, and the demand for synthetic polymer is increasing day by day.

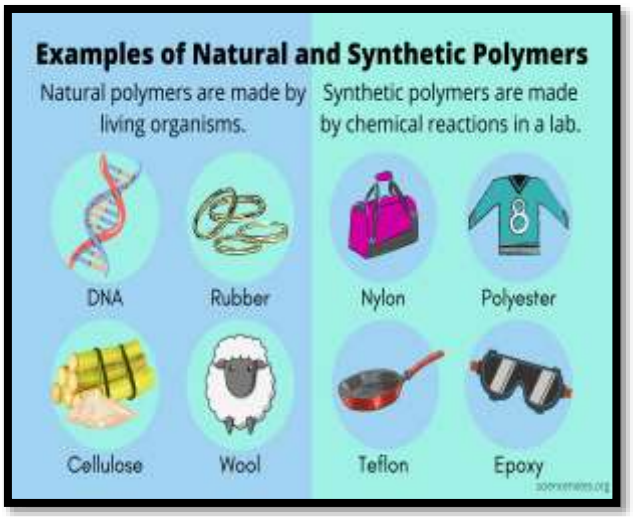


Figure 4: Examples of natural and synthetic polymer

Natural polymer is not harmful for the living creature and it is unharmed for the surroundings as well. Whereas, the synthetic polymer is very dangerous it is made up of chemicals [15]. They are harmful and dangerous as well as for the human being and for the surroundings as weld. There are some disadvantages as well: the pests, which are used to protect the herbs for the natural polymer, they use various kinds of pesticides, which is harmful for both the living organisms.

**Critically Discussing the Risk Created By The Use Of Aphthous Ulcer**

RAU is commonly known as recurrent aphthous ulceration, is a disease of oral mucosal [9]. It causes pain while eating, drinking, speaking and swallowing. It is nothing but a small round with yellow and red patches surrounds it [8]. It mainly can be seen in the teenage and adulthood, as it is considered as the most common disease by which most of the people had been affected before [10]. Some of the factors of RAU is comprises of good sleep, exercise and good diet. It normally lasts from seven to 10 days, it varies from person to person and sometimes it varies from different size-to-size [11]. It is of three types: minor, major, herpetiform aphthous ulcer. The MAU is tiny in size and is generally painless and it can be both in gathered or in single form.

**Problem Stament**

While conducting this research, the researchers have faced many obstacles related to this research [6]. It includes not getting appropriate information related to the study. Exact and informative information related to the study is sometimes problematic as most of the times the gathered information from the secondary data collection method is not fruitful for the researchers.

## 3. Conclusion

The researchers have concluded that the buccal mucosa provides with certain advantages for the delivery of drugs in the upcoming period. For the research purpose study on the delivery of the buccal drug, it has been seen that the safe delivery of the buccal drug is an important factor in it.

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