OPEN ACCESS
Scholars Bulletin
Abbreviated Key Title: Sch Bull
ISSN 2412-9771 (Print) |ISSN 2412-897X (Online)
Scholars Middle East Publishers, Dubai, United Arab Emirates
Journal homepage: https://saudijournals.com

Subject Category: Organic Chemistry

Potential Role, Recent Advances in Chemical Technology for Synthesis of Chemical Compounds

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DOI: 10.36348/sb.2021.v07i10.004 | **Received:** 17.09.2021 | **Accepted:** 26.10.2021 | **Published:** 30.10.2021

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Abstract

Acidity of α-aryl protons leads to organolithium substitution which actually effects the carbon linked covalently compounds, oxygen, hydrogen, Benz organic compounds and other carbon containing compounds which have carbides, cyanides and carbonates. Chemical solvents are necessary for initialization of chemical reaction in the industry when they react with one another. Organic chemicals are basically manufactured from coal and alcohol in the fermentation industry and they can also be originated from petroleum and natural gas source. Quinones are chemical compounds with aromatic rings and have two ketone substitutions. These compounds are highly reactive and ubiquitous in nature. Removal of hydrogen from hydrocarbon containing hydroxyl group produces an alcohol and it is represented by ROH simply it is called as methanol or methyl alcohol. Nitrogen containing heterocyclic compounds have major role in medicinal chemistry and they play a vital role in the formation of medicines. Silver fluoride reaction such as C-H fluorination reaction produces vicinal position for pyrinides and pyridines which is substitute for nitrogen containing heterocyclic compounds. Sulfinate esters are valuable products and have significant role in structure of medicinal chemistry.

Keywords: Chemical compounds, organic solvents, pyridines, alcohol and heterocyclic compounds.

INTRODUCTION

The natural products obtained from plants and microbial source are known over years and these plants are very essential for drug composition. There are different diseases which can be treated through diverse group of ancient plants part like cancer, malaria, heart diseases and many types of fungal and bacterial infections [1, 2]. Plants have different components like alkaloids, flavonoids, tannins and glycosides which have different medicinal uses due to which medicinal plants have great importance in pharmaceutical industries as revealed by phytochemical studies.

Current study opinion derives which reveals that propolis getting from resins of trees and it can be classified as name of plant source [3-7]. It can be identified on the basis of collection from plant material and activities of organism which actually causes pollination like bees and other insects. It can also be identified from plant material with different fragrance [8, 9]. It is concluded from research that honeybees collect material from cutting part of vegetative tissues which actually confirmed the anatomical hint from plant material and also be considered as origin of propolis. There are some products which obtained from condensation reaction and considered as fluorescent markers due to presence of di methyl sulfide oxide which reflux for 1 hour and pointed to be fluorescent markers [10-12].

Advances in Chemical technology for synthesis of chemical compounds

Acidity of α-aryl protons leads to organolithium substitution which actually effects the carbon linked covalently compounds, oxygen, hydrogen, Benz organic compounds and other carbon containing compounds which have carbides, cyanides

and carbonates [3, 4]. Removal of hydrogen from hydrocarbon containing hydroxyl group produces an alcohol and it is represented by ROH simply it is called as methanol or methyl alcohol. Methanol have different uses like it can be used as windshield washer fluids in antifreeze automobile and it also have useful purpose as fuel for racing cars mostly used by Indian cars. Rather than methanol, ethanol has different uses like fermented alcohol which is actually ethanol and also used in beverage industries as vine beer and whiskey. Ethanol can also be considered as gasoline additive. Simplest form of alcohol derived from aromatic hydrocarbons compounds is phenol which is used as disinfectant in throat medication and mouthwashes [5, 6].

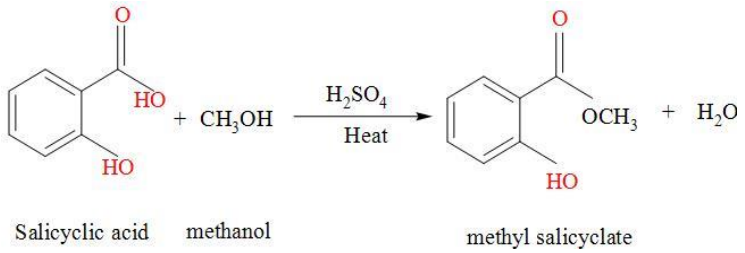

Fig-1: Shows the synthesis of methyl salicylate from methanol in the presence of heat

Heterocyclic compounds are versatile group of compounds which are used in natural products since many years ago. Nitrogen containing heterocyclic compounds have major role in medicinal chemistry and they play a vital role in the formation of medicines. Nitrogen containing compounds also have significance due to their presence in amino acids, proteins, drugs and bioactive alkaloids [7, 8]. Heterocyclic compounds with fluorinated compounds have important role in pharmaceutical and agrochemical industries. These compounds have limited use in industry and used as substrate and these compounds are called as hazardous compounds as suggested by traditional approaches. Silver fluoride reaction such as C-H fluorination reaction produces vicinal position for pyrinides and diazines which is substitute for nitrogen containing heterocyclic compounds [9, 10].

Sulfinate esters are valuable products and have significant role in structure of medicinal chemistry. Rather than medicinal use these compounds are also important in biochemical application as intermediate in synthesis purpose. These compounds are commercially available in the market for medicinal and biological applications. Sulfinate esters are also used as reagent in sulfur synthesis [13, 14]. Microanalysis contribution towards recent achievements cannot be ignored and it has recent advances in viability of micro methods. Determination and isolation of hormones and vitamins is structurally based on absorption spectroscopy and this method have great economic importance which actually diagnoses the compositions of hormones and vitamins through this absorbance system. This method has vital importance in medicinal chemistry and botany due to which isolation of vitamins and hormones make possible suggestions in the field of recent advances through absorption spectroscopy [15, 16].

Chemistry is a vast field and it has different uses in our daily routine life like industrial products soaps and cleanser which we use twice in a day for washing purposes. Soaps are formed from animal's fat and vegetative oil through process called saponification. There are many other industrial products with chemical importance have major use in our homes to remain safe from germs in the environment. There are different germ additive compounds which effects sanitation and causes harmful reaction with body which can prevents from chemical products which produces through application of chemistry [17, 20].

Drug development process have specific connectivity in the field of analytical chemistry and high-performance liquid chromatography. Analytical procedure which has great importance for professionals in the field of high-performance liquid chromatography for managing and testing experiments in the field of medicinal chemistry. Pharmaceuticals structures assist through different ways and it has different method to find capability and stability of structure. Lipinski's rule of five focus on the number of hydrogen bond donors and acceptors, number of rotatable bonds, surface area, and lipophilicity [18, 19].

Excipients are the products with natural and chemical compounds which are derived from pharmacological aspects. These products have different application in the field of chemistry and used as carrier of active substance and emulsifier in the industry. Excipients are the products which maintained the efficiency of drugs for prolong period so these are beneficial in the market and have valuable importance for commercial purposes. The distinction among an excipient and an active ingredient is less defined than it appears. Some excipients are also employed as active ingredients. Castor oil, for example, is plasticizer, solvent, and oleaginous vehicle. However, it is often used as a laxative [20, 21].

The purpose of excipient is to ensure that the pharmaceutical product has the appropriate physico-chemical and biological qualities. Some excipients are

multifunctional, which signifies they can be used in multiple applications. A cellulose precursor called Hypromellose, for instance, can be employed as an emulsifying-agent, coating agent, viscosity raising agent, tablet binder or suspending agent. Excipients are essential components of pharmaceutical formulations, therefore testing their functioning and controlling the features that may affect their appropriateness, and thus the characteristics of pharmaceutical formulations made from them, has become a standard requirement [22-24].

Chemical engineers used different methods for chemical processes in chemical industry like chemical reactions and refining methods to forms products in the form of liquid, solids and gaseous materials. These products have different values for different purposes in the market and these products are easily available in the market with commercial importance. Oxygen which is necessary for human beings in the nature as like it is also useful for breaking complex hydrocarbons into simple hydrocarbons which produces products like ethylene, propylene, and acetylene, which are in turn used to produce plastics, paints, and other products [25, 26].

Industrialized organic compounds are necessary for chemical industries and these produces are millions in quantities in USA with cost ranges from million dollars to billions of dollars per year. Majority of the products derived from petroleum or natural gas materials and organic compounds which emerges into different forms like plastics, synthetic fibers, elastomers, drugs, surface coatings, solvents, detergents, insecticides, herbicides, explosives, gasoline additives, and countless specialty chemicals [27, 28].

Chemical solvents are necessary for initialization of chemical reaction in the industry when they react with one another. These chemical act as catalyst and they don't take part in a chemical reaction they just promote the reaction and don't change the characteristics of products and these solvents have vital role in products such as paint, medicine, and pesticide. Solvents are necessary to carry out chemical reaction in for the formation of different commercial products in the market such as paints, drugs, pesticides and plastic materials [29, 30].

Organic chemicals are basically manufactured from coal and alcohol in the fermentation industry and they can also be originated from petroleum and natural gas source. Approximately 90% of the organic chemicals are synthesized from petroleum and natural gas source. But due to a huge increase in the price of petroleum and natural gas species on the earth have adopted alternative methods to fulfil these requirements in the form of substances like coal, biomass, coal bed methane, shale gas, and sand oil as an alternate source of fuel and chemical feedstock [31].

Mainly used processes in the field of industrial organic chemistry are being focus on industrial manufacturing technologies and their reaction with chemical in organic chemistry which especially includes petroleum and refining products. Chemists are introducing different classes of organic compounds to forms fractions and polymers in the industrial chemistry to brings reforms in the organic chemical compounds [1, 8, 10].

Quinones are chemical compounds with aromatic rings and have two ketone substitutions. These compounds are highly reactive and ubiquitous in nature. These organic compounds have different uses by their color and responsible for browning reaction in injuries of fruits and vegetables. Also plays vital role in the melanin synthesis pathway in human skin. Quinones are powerful oxidizing chemicals that are used in photography systems and can cause the necrosis of skin if exposed to them for an extended period of time. Skin, ocular, and respiratory system discomforts are the most typical adverse reactions to quinones. Acute exposure can lead in corneal ulcers, while prolonged exposure can result in corneal opacities. Vision disturbances are among the neurotoxic consequences. It's thought to be a germ cell mutagen. Epidemiological evidence suggests that 1,4-benzoquinone is not carcinogenic in humans or experimental animals. Quinones' processes for causing these effects can be rather complicated [31-33].

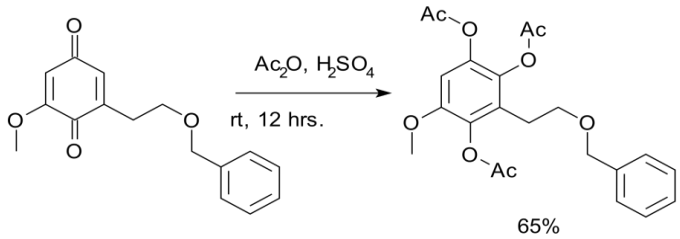

Fig 2: Shows the advances in Thiele reaction with a benzoquinone derivative

Volatile liquids are present in different forms in the nature like nickel carbonyl (Ni (CO)4), many other metal carbonyls and organic compounds contains carbon bonded to transition metals and oxygen to form carbon monoxides. Nickel carbonyl usually involved in different processes in organometallic compounds and

these compounds have carbon group with covalently bonded substitution with metal covalent bonds and these compounds are involved in in the formation of subsets of organic compounds. Volatile substance usage differs from most other types of drugs use in that it includes a lot of compounds found in easily available commercial or domestic products. When their vapors are purposely concentrated and inhaled, these substances, which are safe when used for their intended purposes, can cause intoxication and, in some circumstances, death [22, 25, 24, 34].

CONCLUSION

Alkyl nitrites, a subtype of volatile chemicals, are utilized in the dancing club scenes to stimulate vascular smooth muscle relaxation and induce a "rush" or to improve an experience of sex. They are commonly referred to as 'poppers,' and can be found in pubs and clubs on the ‘street' market. They are sold in sex shops and 'head' shops in some countries.

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