



## SYNTHESIS & CHARACTERIZATION OF VANILINE USING ORANGE

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### ABSTRACT:

The role of naturally available fruit juice in organic synthesis has attracted the interest of chemists. Particularly from the view of Green Chemistry. This review summarizes the versatile synthetic applications of fruit juice as a biocatalyst in different chemical transformation. Orange juice catalyzed reaction including Biginelli Pyramiding Synthesis respectively. Orange juice was used as a biocatalyst for Reduction of carbonyl Compounds & Hydrolysis of ester, amides & anilines.

Application of fruit juice as a natural & biocatalyst allows mild & highly selective transformation & synthesis in a facile &

environmentally friendly manner. More over fruits are easily available in marloet & the juice can be easily extracted & can be used as a natural catalyst in organic transformation.

**KEYWORDS:-**Biocatalyst, Eco-friendly, Economic.

### INTRODUCTION:

Nowadays Organic research is mainly focused on the development of green & ecofriendly processes which involve in the use of alternative reaction media to replace toxic & expensive catalyst. Recently, many organic transformations have been carried out in expensive, non-toxic & environmentally begin.

Juice is also a naturally occurring which was used as a biocatalyst in organic synthesis. Fruit juice is now a day mostly used in organic synt Fruit hesis as a



homogenous catalyst for various selective transformation of simple & complex molecule.

### Experimental Material & Method:-

#### 1. MATERIAL

Fruit juice of orange

4.0 g Vaniline

2.0 g Thiourea

2.5 ml of Ethyl Acetoacetate

**METHOD:-**

Mix 4.0 g of vaniline, 2.5 ml of ethyl acetoacetate & 2.0 g thiourea with 6-7 drops of orange juice each other in glass round bottom flask fitted with condenser & carry out the reaction in a microwave for about 120 second by using minimum power 180 watts. Cool the reaction mixture at room temperature & recrystallised by using proper solvent ethyl alcohol or hot water & record the yield & melting point of product.

**CONCLUSION:-**

This review focuses the importance of fruit juice as a natural & biocatalyst in organic transformation.

1. The growing interest of fruit juice in organic synthesis is mainly due to their acidic property, enzymatic activity & environmental character, in expensive & commercial availability.
2. It is easily affordable, harmless & ecofriendly.

Therefore, the preset review would serve the real of organic chemists in searching new application of fruit juice for organic synthesis.

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