# INTRODUCTION

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Oil industry is one of the most important food industries that need great attention during processing, transport, handling and storage. At the same time, consumers all over the world are becoming increasingly conscious of the national value and the safety of their food and its ingredients.

Also, there is an increased preference for natural foods and fooding gradients which are generally believed to be safer, more healthy and less subject to hazards than those containing artificial food additives. Liquid substances are easily deteriorated by oxidative rancidity from the reaction with atmospheric oxygen and hydrolytic reactions catalyzed by lipase from food or from microorganisms as outlined by Allen and Hamilton (1983). Antioxidant as Butylated hydroxy toluene (BHT), Butylated hydroxy anisol (BHA) are widely used in many foods to prevent the oxidative rancidity of fat.

Recently, these synthetic substances have shown to cause the following symptoms: enlargement of the liver size, increament of liver microsomal enzyme activities and conversion of some

investigated materials into toxic or carcinogenic substances, especially if there are present in excessive amounts. Therefore, there is an urgent need for another compound act as an antimicrobial and antioxidant and safer for human being.

Essential oils are used in medicinal drugs and in controlling harmful insects. Also, these oils can be used as a strong fungi toxicant for the control of various plants and some animal fungal diseases. Such oils contain some phenolic compounds which can act as antioxidant.

## Aim of investigation

The present investigation was planned to study the following objectives:

1 - The physical & chemical properties of parsley, dill and laurel essential oils.

2 - The chemical composition of these oils under study.

3 - The antimicrobial activity of essential oils.

4 - The influence of the essential oils under study on keeping quality of refined cottonseed oil.