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ABSTRACT

Antimicrobial property of Cinnamomum Zeylanicum has been studied against different diseases causing organism. Its leaf as well as the bark has antimicrobial properties in their oils. In the research study bark oil was found to be more effective.

KEYWORDS: Cinnamomum zeylanicum, aromatic oil, antimicrobial properties.

INTRODUCTION

Cinnamon (Dalchini) is a herb traditionally used by many ancient cultures. It is indicated for a variety of ailments including gastrointestinal problems, urinary infections, relieving symptoms of colds and flu and has remarkable anti-fungal and anti-bacterial properties. Some studies have shown that Cinnamon helps people with diabetes metabolise sugar better. The increased interest in herbal medicine has thus been a distinct trend in developed as well as developing countries. The World Health Organization (WHO) estimated that 80% of the total population use herbal medicine in one or the other form (Farnsworth *et al.* 1985). About a quarter of prescription drugs dispensed by community bed pharmacists in United States contains at least one active ingredient derived from the plant material. In more developed Asian countries like Japan and China and also in India, patent herbal remedies are composed of dried and powdered whole herbs extract in liquid and tablet form. Liquid herb extract are used directly in form of medicinal syrup, tinctures and wines. Herbal medicines are the major components in all indigenous people traditional medicine is a common element in Ayurvedic, Homeopathic, Naturopathic and Traditional oriental medicine.

Aromatherapy is one of the most actively growing forms of alternative medicine, combining message together with counseling and nice odour. The actual mode of action of essential oil is still far from being known although there is strong in vitro evidence, that essential oil act as anti microbial or anti-oxidant agent or have pharmacological effect on various tissues. Studies have shown that essential oil have an effect on various tissues studied have shown that essential oils have effect on brain waves and can also alter behaviours (Lis-Balchin-M, 1997).

Role of C. zeylanicum oil has been examined in reference to large no of bacteria. This work presumes forms of Cinnamomum oil against some important pathogenic organisms.

MATERIALS AND METHODS

Fresh sample of Cinnamomum zeylanicum leaf and bark was taken washed and air dried in shade for 5-7 days. They were crushed and weighed before being loaded for calculating the yields. Clevenger apparatus was being used for the extraction of the essential oil.

Oil starts coming 5-10 mins after the water starts boiling. Emulsion was allowed to cool at room temperature, separated by separating funnel with ether. Ether mixed oil was separated by filtration by separating funnel and ether was subsequently evaporated on water bath. Tween 20 was used for preparation of different dilutions. Different dilutions were 25%, 50% and 75% oil at the rate of 35ml each, with control i.e. distilled water with 0.1% tween. The experiments were carried on in replication. The organisms were, *Vibrio cholera*, *Salmonella senftenberg*, *Bacillus cereus*, *Klebsiella pneumoniae*, *Proteus vulgaris* and *Shigella dysenteriae*. These all microorganism causes diseases related to digestive system.

RESULT AND DISCUSSION

Alcaligenes xylosoxidans: All concentrations of *Cinnamomum zylanicum* bark oil(25%,50%,75%)proved potent against,Alcaligene exhibition zone ranging from 37mm-42mm.*Cinnamomum zeylanicum* leaf oil gave overwhelming response at all concentration, showing plate clearance.

Streptococcus pyogenes : Oil of *C.zeylanicum* barks shwn promising inhibitory response on streptococcus sp. At all concentrations giving a zone ranging from 37mm- 42mm. On the contrary *C.zeylanicum* leaf oil showed moderate response showing a zone of 20mm at 75% concentration and 10mm at 25% concentration.

Staphylococcys aureus : All concentrations of *C. zeylanicum* of bark oil(25%,50% and 75%) proved inhibitory for *S.aureus* giving zones 21mm ,25mm and 28mm respectively.on the other hand leaf oil *C.zeylanicum* showed moderate response giving a zone 17mm at 25% concentration.

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