RESEARCH ARTICLE

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Extraction of oleoresins from ginger and its utilization in RTS beverage

R.V. SALVE AND B.M. KAJALWAD

ABSTRACT

Ginger (*Zingier officinale*) containing the oleoresins having both volatile and non volatile compound which can be extracted with the distillation method by using acetone as solvent .The percentage of oleoresins from the fresh ginger and dried ginger was 8.3 and 6.7 per 100 g, respectively. The total soluble solids of different ginger products like ginger oleoresins, ginger concentrate, ginger drink, and sugar syrup was 87.0, 30.0, 10.0, 61.0, respectively. This ginger beverage having the good quality, commercial and potential for exploitation in beverage industry.

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Key Words : Ginger, Oleoresin, Beverage, Sensory quality

INTRODUCTION

Ginger (*zingier officinale*) which belongs to family zingiberaceae in the order zingiberals which is a monocotyledons.

Medicinal uses:

Ginger and its constituents have antiemetic, cardiotonic, antithrombotic, antibacterial, antioxidant, antitussive, antihepatotoxic, anti-inflammatory, antimutagenic, stimulant, diaphoretic, diuretic, spasmolytic, immunostimulant, carminative, and cholagogue actions. Ginger is used to promote gastric secretions, increase intestinal peristalsis, lower cholesterol levels, raise blood glucose, and stimulate peripheral circulation. Traditionally used to stimulate digestion, its modern uses include prophylaxis for nausea and vomiting (associated with motion sickness, hypermesis gravidarum, and anesthesia), dyspepsia, lack of appetite, anorexia, colic, bronchitis, and rheumatic complaints.

Ginger oleoresin:

The oleoresin fraction of ginger rhizomes contains both volatile oils and nonvolatile pungent compounds which can be extracted with solvents such as acetone or alcohol.

Volatile oils:

The volatile oil components in ginger consist mainly of sesquiterpene hydrocarbons, predominantly zingeberene (35%), curcumene (18%) and farnesene (10%), with lesser amounts of bisabolene and b-sesquiphellandrene.. A sesquiterpene alcohol known as zingiberol has also been isolated. Many of these volatile oil constituents contribute to the distinctive aroma and taste of ginger, but most are not unique to ginger.

Nonvolatile pungent compounds:

Several nonvolatile constituents give ginger its characteristic pungent flavour as well as being responsible for many of its pharmacological actions..

METHODOLOGY

The details of material and methods adopted during the present investigation are presented below:

Materials:

Ginger:

local variety of ginger is obtained from the local market of Parbhani.

Chemicals:

The chemical used for extraction of oleoresins and for preparation of ginger beverage are

- Acetone
- Citric acid
- Sodium metabisulphate
- Lecithin
- CMC (Carboxy methyl cellulose)