

Botanical Aspects of the *Zingiber officinale* and Its Aroma

Jeanne Biniáz*

Department of Pharmacology, University of British Columbia, Vancouver, Canada

DESCRIPTION

The essential fragrance components that contribute to the flavour of baby ginger paocai by analyzing the volatile compounds in fresh baby ginger and baby ginger paocai. The two baby ginger samples were used to quantify 86 volatile components, which were extracted using Headspace Solid-Phase Microextraction (HS-SPME) and examined using Gas Chromatography-Mass Spectrometry (GC-MS). Compared to fresh baby ginger, baby ginger paocai has a different fragrance composition. Aroma-active chemicals, which ranged in concentration from 0.03 to 28.14%, were present in baby ginger paocai. The fragrance compound in baby ginger paocai with the highest relative proportion was geranyl acetate. The aroma of the baby ginger paocai product after a mild fermentation procedure included-myrcene, eucalyptol, trans-ocimene, Z-ocimene, linalool, decanal, cis-citral, geraniol, geranyl acetate, curcumene, and bisabolene.

Baby ginger, a type of ginger rhizome (*Zingiber officinale*), is also known as "baby ginger," "tender ginger," and "immature ginger." More and more people across the world are consuming baby ginger as a type of vegetable because of its pleasant flavour, nice texture, and health benefits. Under normal conditions, baby ginger wilts in two days. The proposed measure could increase the commodity rate of fresh baby ginger to 95% and 80% after 24 and 30 days, respectively. Although intermittent microwave and convective drying was a very promising technique for ginger, dried ginger products had a limited range of applications. Novel baby ginger products, such as baby ginger paocai (also known as "pickled baby ginger" or "pao zi jiang" in Chinese), frozen baby ginger, and instant baby ginger slices, have been produced to satisfy customer demand for the product during non-harvesting seasons. Aroma is one of the most valued qualities in quality indices

that supports customers' first impressions. Numerous studies on the fragrance composition of food have been conducted recently, and the specialists who conducted these studies thought that the flavour of each type of food varied. Furthermore, due to their thresholds and interactions with other chemicals, some volatile compounds in some food products are not noticed by consumers. Ginger's volatile components were extracted using Headspace Solid-Phase Microextraction (HS-SPME) under ideal conditions. At various growth stages, the active components of the *Curcuma domestica* rhizome were examined by Chavalittumrong and Jirawattanapong. Analyses of the impact of various drying techniques on ginger's volatile components were conducted.

The quality of infant ginger paocai has not yet been the subject of many investigations. In order to investigate the relationship between micro ecology and quality changes of baby ginger during its fermentation process, the main objectives were to analyse the volatile compounds obtained by Headspace Solid-Phase Microextraction (SPME) from fresh baby ginger and baby ginger paocai, compared their flavour composition, and identify the key aroma components that truly contribute to the flavour of this pickle product. The raw ingredient for baby ginger paocai, fresh baby ginger, was of good quality and free of significant mechanical deterioration. Stableflex 50/30 m DVB/CAR/PDMS fibre (1 cm, Supelco, Bellefonte, PA, USA) for the extraction and concentration of volatile compounds from baby ginger after comparing the extraction properties of various types of SPME fibres (such as PDMS, PDMS/DVB, Carboxen/PDMS, and DVB/CAR/PDMS). Ginger paocai production could be not only a solution to improving the flavor of raw ginger, but also a solution to helping to increase the consumption of this functional food. However, the quality of baby ginger paocai will be affected by the fermentation conditions.

Correspondence to: Jeanne Biniáz, Department of Pharmacology, The University of British Columbia, Vancouver, Canada, E-mail: jeannebiniaz@gmail.com

Received: 03-Jan-2023, Manuscript No. MAP-22-21253; **Editor assigned:** 06-Jan-2023, Pre QC No. MAP-22-21253 (PQ); **Reviewed:** 20-Jan-2023, QC No. MAP-22-21253; **Revised:** 30-Jan-2023, Manuscript No. MAP-22-21253 (R); **Published:** 06-Feb-2023, DOI: 10.35284/2167-0412.23.12.443

Citation: Biniáz J (2023) Botanical Aspects of the *Zingiber officinale* and Its Aroma. Med Aromat Plant. 12:443.

Copyright: © 2023 Biniáz J. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.