

# KIWI FRUIT: EXPLORING ITS NUTRITION, HEALTH BENEFITS AND POTENTIAL

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## INTRODUCTION

Kiwi fruit, scientifically known as Actinidia, is a remarkable member of the Actinidiaceae family. While you might know it as the tiny, fuzzy fruit, it goes by several other names, including Macaque peach, Mihoutau, and Chinese gooseberry. Within the genus Actinidia, there are a total of 76 species, with *Actinidia chinensis* (golden kiwifruit) and *Actinidia deliciosa* (fuzzy kiwifruit) being the main commercial varieties. Other less common species include *Actinidia arguta* (baby kiwifruit), *Actinidia purpurea* (purple kiwifruit), *Actinidia kolomikta* (arctic kiwifruit), *Actinidia eriantha* (velvet vine), *Actinidia polygama* (silver kiwifruit) and *Actinidia melanandra* (red kiwi). Kiwifruit is known for its brown, hairy peel, vibrant green flesh, and tiny black edible seeds at the center. China leads the world in kiwi production, followed by Italy, with New Zealand also being a significant exporter of this delectable fruit. Despite its widespread consumption, kiwifruit has gained international commercial importance only in the past few decades.

## COMPOSITION AND NUTRITIVE VALUE OF KIWI FRUIT

The nutritional value of kiwi fruit is a key driver behind its growing popularity. This fruit contains a wealth of essential vitamins, including A, B, C, E, and K, along with significant levels of dietary fiber, folate, potassium, and other essential minerals. Kiwi fruit also contains various phytochemicals, such as carotenoids, flavonoids, anthocyanins, and lutein. These phytochemicals are believed to contribute to the fruit's potential health benefits.



## PHARMACOLOGICAL PROFILE AND HEALTH BENEFITS OF KIWI FRUIT

The numerous pharmacological properties of kiwifruit make it a superfood. Some studies suggest that it possesses anti-cancer, anti-diabetic, anti-fertility, hepatoprotective, and anti-ulcer properties, and it may also help prevent cataracts and macular degeneration.

The health benefits of kiwifruit are making it increasingly popular around the world. One of the standout features of kiwifruit is its high vitamin C content, which acts as a potent antioxidant, improving skin texture and promoting collagen synthesis. It also contains actinidin, a proteolytic enzyme that aids in the digestion of complex proteins, contributing to overall gut health.

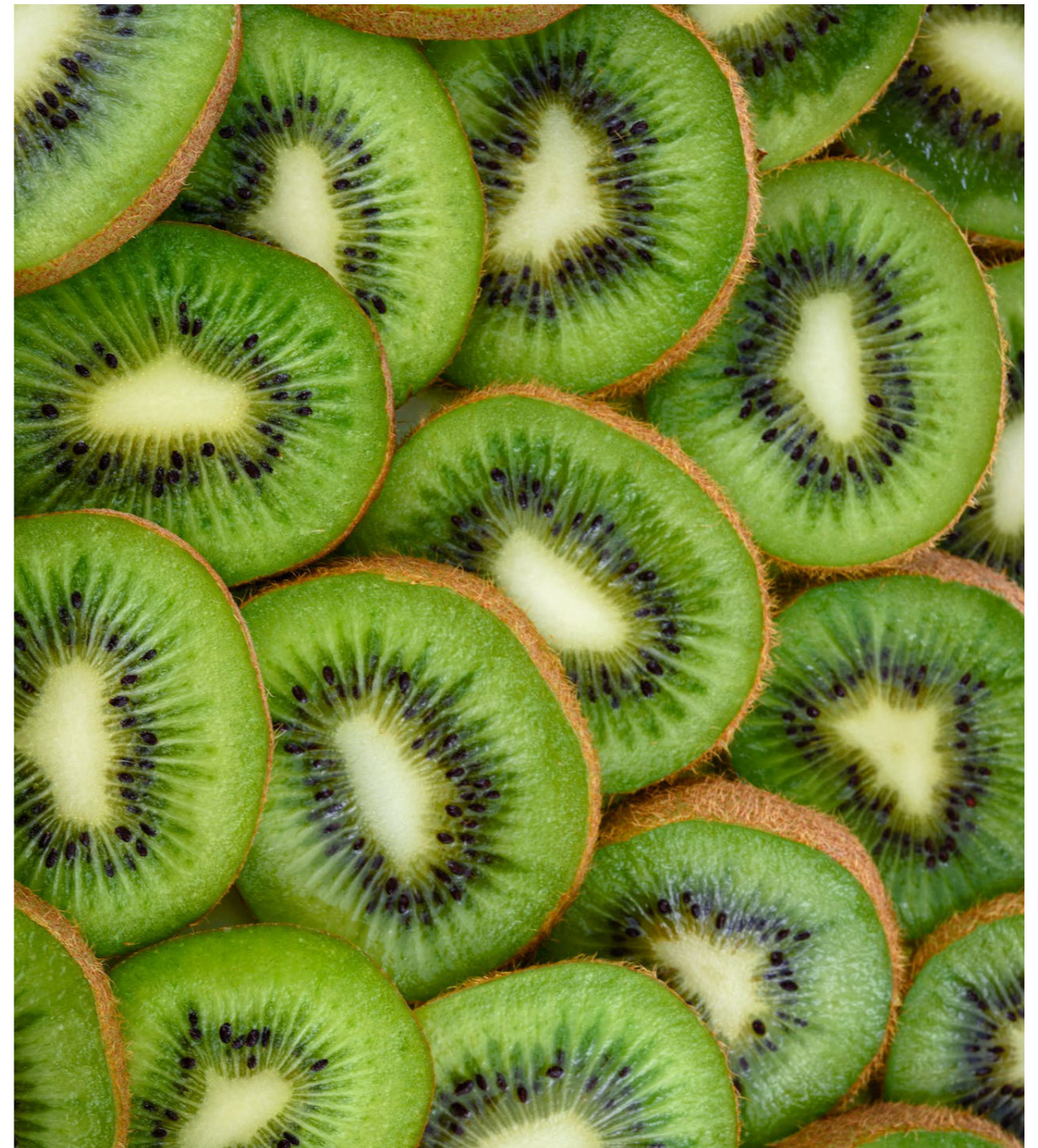
The unique combination of bioactive compounds in kiwifruit can bring about positive changes in the human colonic microbes, improve fecal consistency, reduce abdominal discomfort, and relieve symptoms of constipation by decreasing intestinal transit time. The phytochemicals present in kiwi, such as xanthophylls and lutein, support eye health and prevent macular degeneration. Moreover, kiwi consumption has been linked to a variety of other health benefits.

It supports cardiovascular health, promotes better sleep, aids blood clotting, enhances vitamin D and iron absorption, and may even reduce kidney stone formation. Some studies suggest it might have anti-cancer properties, particularly against stomach, lung, and liver cancers. Kiwi fruit, despite its many health benefits, does contain oxalates that could potentially cause oral mucosal irritation in some individuals. People with nephrolithiasis and urolithiasis should avoid consuming kiwi fruit because of its high oxalate content. Oxalates can also reduce the bioavailability of calcium, magnesium, and iron in the body when consumed in high concentrations.



## KIWI'S ANTIMICROBIAL POTENTIAL

The antimicrobial research carried out in the same study demonstrated that ethanol (80%) and acetone (80%) extracts of kiwi fruit peel exhibited substantial antimicrobial activity. These extracts showcased a broad spectrum of antimicrobial properties, effectively inhibiting the growth of both gram-positive and gram-negative bacterial strains, fungi, and yeast. This suggests that kiwi fruit's natural compounds could serve as an essential ingredient in the production of functional food products. Interestingly, the acetone extract displayed higher efficacy against these microorganisms compared to the ethanolic extract.



## TRADITIONAL USE OF KIWI FRUIT

Kiwi fruit has not only made its mark in modern scientific research but has also been traditionally utilized for its health benefits. In traditional Chinese medicine, kiwi extracts have been employed to alleviate the symptoms of skin diseases, manage high blood lipid levels, and improve gastrointestinal health. Its bioactive phytochemicals have prompted investigations into its anti-inflammatory and antioxidant properties, which could contribute to the prevention of lifestyle-related disorders and degenerative diseases.

## COMMERCIALIZATION OF KIWI FRUIT

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## CONCLUSION

While kiwi fruit is not available year-round, it has the potential to become a vital ingredient in processed foods. This development and preservation of kiwi-based products can also create new employment opportunities for rural populations. Extensive research has unearthed kiwi's impressive pharmacological profile, and further exploration in this area could attract food industry players to develop kiwi-based food products. This may lead to the creation of remarkable pharmacological products and nutritional supplements for the betterment of human health and well-being. The future of kiwi fruit as a nutritional powerhouse seems incredibly promising. Whether you're enjoying it for its delightful taste or its myriad health benefits, kiwi is a fruit that continues to amaze and inspire.

