

Quality Control in Flavor Industry

Komal Parmar and Jayvadan Patel

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Flavor Manufacturing and Selection Criteria for Functional Food and Nutraceuticals Industries

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Natural Flavors in Various Nutraceutical Product Applications

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Introduction

Among the components that are frequently thought to be significant to the consumer in his/her utilization of healthy supplements are the taste of the supplement and the health benefit associated with it. However, taste remains the fundamental component of oral products including food, beverages and nutritive supplements. Flavor is comprehended as an amalgamation of taste, smell, and chemical sensibility of the skin and mucus membranes, such as raciness. Both volatile and non-volatile food components can actuate the real food recognition process (**Figure 7.1**). Various factors affect perception of taste by sensory organs of living beings (Ulla et al. 2016). It is found that consumers have complex and sophisticated choices about what they consume orally. Many parameters add up in the criteria of selection, for instance flavor, color, other additives, exterior look, brand, perception, mood, end cost, serving size, accessibility, nutritional values and others. Regardless of how sound and critical the nutrition product is, it doesn't achieve its objective if the individuals stay away from it. Gone are the days where consumers associated poor taste as an indicator of health benefits to be obtained. Now consumers' believe that healthy eating must be associated with acceptable taste.

Recent Trends Used in Functional Food and Nutraceuticals Industries for Modulation of Flavors for Improving Sensory Perception

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10.1 Introduction

Sensory perception is the capability of performing neurophysiological processing of the stimuli by the living being. This process is executed by the organs using senses like hearing, vision, taste, odor, and contact. From the sensory perspective, humans will not consume food—whether it is regular diet or dietary supplements—unless it tastes good. Understanding the need for flavor acceptance in human flavor perception, various new flavors are developed and modulated to improve the sensory perception for taste. Thus, the elementary purpose of the flavors is to impart taste to the product to be consumed orally, as they do not possess nutritional properties. Flavors may be classified as natural and synthetic. Synthetic flavors are chosen more cautiously to render diversity in taste. On the other hand, natural flavors are derived from fruits, spices and vegetables to attain a broad range of diversity in taste.

Global food flavor market is expected to witness a massive rise because of the increasing call from food and dietary supplement industry. The worldwide taste modulators market is anticipated to grow at a CAGR (compound annual

The Bad Taste of Nutraceuticals

Overview of Basic Research on Bitter Taste

Bhoomika Patel, Ankita Mehta, Jayvadan Patel, and Mayur M. Patel

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4 Nutraceutical's Role in Proliferation and Prevention of Colorectal Cancer

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4.1 INTRODUCTION

Cancer rates are tolling high constantly worldwide. High life expectancy, environmental changes, urbanization, and changing lifestyles have been vital contributive factors for the hike in carcinogenesis. Carcinogenesis is a complex process that involves numerous pathways that bring on genetic transformation in the normal

6 Nutraceutical's Role in Proliferation and Prevention of Gynecological Cancers

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7 Mechanism and Role of Probiotics in Suppressing Bowel Cancer

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9 Nutrigenomics and Nutrigenetics in Cancer Prevention

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9.1 INTRODUCTION

As an undeniably predominant malady and the main cause of death in recent times, malignancy is a noteworthily risk to human well-being. Cancer occurrence is anticipated to increase later on and an efficacious preventive methodology is required to confront this challenge. Although cancer examination has rendered us with a superior comprehension of growth science, we still confront various difficulties in disease treatment and counteractive action. Current treatments are to a great extent constrained to medical procedure, radiation treatment, and chemotherapy, which remain unacceptable. Specifically, there are numerous issues with such therapies such as low response rate, poor specificity, drug resistance, and serious side effects. Cancer is at a very basic level a genetic malady in which alteration of the DNA of single cell occurs. These changes in the DNA might be

12 Efficacy, Safety, and Toxicological Aspects of Nutraceuticals

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15 Dietary Isoflavones- Mechanism and Efficacy in Cancer Prevention and Treatment

Richa Dayaramani and Jayvadan K. Patel

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