CONCORSO PUBBLICO, PER ESAMI, A N. 1 POSTO DI CATEGORIA D, POSIZIONE ECONOMICA D1, AREA TECNICA, TECNICO-SCIENTIFICA ED ELABORAZIONE DATI, PER LE ESIGENZE DEL DIPARTIMENTO DI AGRARIA DELL'UNIVERSITÀ DEGLI STUDI DI NAPOLI FEDERICO II (COD. RIF. 2223), INDETTO CON DECRETO DEL DIRETTORE GENERALE N. 992 DEL 12.10.2022

GRUPPI QUESITI ESTRATTI PROVA ORALE DEL 10.01.2023

GRUPPO QUESITI 2

1. ILLUSTRARE BREVEMENTE LA PROCEDURA PER LA DETERMINAZIONE DELLA CARICA MICROBICA TOTALE IN UNA MATRICE ALIMENTARE A SCELTA
2. LA MATRICE DI DATI RIPORTA IL VALORE DI UNA VARIABILE DI RISPOSTA IN FUNZIONE DELLA TIPOLOGIA DI CAMPIONE ANALIZZATO. CREA UN GRAFICO A SCATOLA E BAFFI E CONFRONTA I RISULTATI OTTENUTI PER I DIVERSI CAMPIONI:

Campione	Variabile di risposta
1	152
1	133
1	115
1	107
2	75
2	73
2	71
2	68
2	67
2	65
2	61
2	60
3	53
3	53
3	52
3	52
3	51
3	50
3	49
3	49
3	48

QUESITO IN LINGUA INGLESE DA LEGGERE E TRADURRE

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Review

Beneficial effects and potential risks of tomato consumption for human health: An overview

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ABSTRACT

Tomato and its derived products have a very interesting nutritional value in addition to prominent antioxidant, anti-inflammatory, and anticancer activities. Tomatoes are generally quite safe to eat. However, overall consumption varies from individual to individual. Indeed, either beneficial or harmful effects of plants or their derived products are closely related to quality, including the presence of biologically active compounds. On the other hand, the synthesis and accumulation of these bioactive molecules depends on many other factors, such as environmental conditions. In this sense, this review briefly highlights the relationship between the chemistry of tomato and its derived products and their beneficial or harmful effects on human health, such as gastro-esophageal reflux disease or heartburn, allergies, kidney and cardiovascular disorders, prostate cancer, irritable bowel syndrome, lycopenodermia, body aches, arthritis, and urinary problems.

Introduction

Tomato, a member of an important plant family called Solanaceae, is one of the most-produced vegetables around the world and also is considered a favorite vegetable in many different nations [1]. Potato, pepper, aubergine (eggplant), belladonna, tobacco, and even velvet tongue, are other favorable and widely popular members of this plant family with distinct food, pharmaceutical, and ornamental applications [2–4]. Potatoes are a good sources of iron, phosphorous, calcium, magnesium, and zinc, which help in the body to build and maintain bone structure and strength. The fiber content in potatoes helps lower the total amount of cholesterol in the blood, thereby decreasing the risk of heart disease. Choline is an important nutrient that helps with muscle movement, mood, learning, and memory. Potatoes also contain folate, which plays a role in DNA synthesis and repair, and so it prevents many types of cancer cells from forming as a result of mutations in the DNA. Vitamin C and quercetin also function as antioxidants, protecting cells against damage from free radicals [5]. Aubergines are an excellent source of dietary fiber and vitamins B1 and B6 and potassium. They are also high in the minerals copper, magnesium, and manganese. Aubergines are rich in antioxidants, specifically nasunin, found in aubergine skin, which gives it its purple color [6]. Tomatoes' availability, good taste, low price, and distinct health benefits are unique features that make it a popular and in-demand vegetable among adults and children [7]. In terms of nutritional composition, tomatoes contain interesting amounts of moisture (95%), carbohydrates (3%), protein (1.2%), total lipids (1%), minerals (calcium [Ca], magnesium [Mg], phosphorus [P], potassium [K], sodium [Na], zinc [Zn], manganese [Mn] and others), and vitamins (vitamins A and C, thiamin, riboflavin, niacin, pantothenic acid, and pyridoxine) [8–11]. In addition, they are a good

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GRUPPO QUESITI 4

1. PRINCIPI DI FUNZIONAMENTO DI UN'APPARECCHIATURA PER LA MISURA DI PROPRIETÀ FISICHE DI UN ALIMENTO.

2. LA MATRICE DI DATI RIPORTA COME VARIA L'ASSORBANZA IN FUNZIONE DELLA CONCENTRAZIONE DI VITAMINA C IN UNA SOLUZIONE ACQUOSA. STIMARE LA RETTA DI CALIBRAZIONE UTILIZZANDO LA FUNZIONE REGRESSIONE LINEARE INCLUDENDO I DATI RELATIVI ALLE STATISTICHE AGGIUNTIVE DI REGRESSIONE.

Concentrazione mg/ml	Abs
0,0003	0,0104
0,003	0,1873
0,00375	0,28355
0,005	0,317225
0,0075	0,434775
0,015	0,777525
0,03	1,521825

QUESITO IN LINGUA INGLESE DA LEGGERE E TRADURRE

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Scientific Research

The Need for a Legal Distinction of Nutraceuticals

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Abstract

The nutraceutical and botanical terms are often used by the lay press or for marketing purposes to describe health beneficial food, food supplements or herbs. However, there is no common definition of nutraceuticals or botanicals and moreover a lack of regulation that classifies this category. Concerning their health value, it is unclear if they belong to drugs or food. Currently, they fall into a legal limbo between both. This regulatory lack can lead to misuse of claims indicating a health benefit or the misleading of the consumer. This review will focus on current definitions of nutraceutical, botanical, functional food and food supplements with special emphasis on the differences between the US and European legislation. Some special considerations will be given for Germany, one of the main markets for food supplements in Europe.

Keywords

Nutraceutical, Botanical, Food Supplement, Definition, Legislation

1. Introduction

In recent years, the interest in a healthy lifestyle by prevention (with aid of nutrition) or self-medication with aid of natural products increased [1]. Nevertheless, the number of diseases like coronary heart disease, diabetes or adiposity increased [2]. In this respect, so called nutraceuticals and botanicals have one of the highest market potential in the food sector. This aspect has been recently summarized by an excellent review of Nicoletti [3]. The name nutraceutical is a composition of the terms nutrient and pharmaceutical [4]. Botanicals were often used as a synonym for herbs or herbal products with medicinal potency. Nutraceuticals as well as botanicals can be legally bought in pharmacies, supermarkets or online shops and sold as part of a normal diet. They contain substances, which could be beneficial for health by preventing or treating one or more diseases [5]. In that way,

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GRUPPO QUESITI 5

1. INDICARE I PRINCIPI DEL D.LGS 81/2008 IN MERITO ALL'USO DELLE ATTREZZATURE DI LAVORO E DEI DISPOSITIVI DI PROTEZIONE INDIVIDUALE
2. LA MATRICE DI DATI RIPORTA OTTO VARIABILI DI UN CAMPIONE DI POPOLAZIONE. ESEGUIRE UN'ANALISI DESCRITTIVA DEI DATI E RIPORTARE I VALORI MEDI IN UN GRAFICO A TORTA CON EVIDENZIATI I CONTRIBUTI PERCENTUALI DI OGNI VARIABILE:

y1	y2	y3	y4	y5	y6	y7	y8
0,00	70,39	-3,74	44,61	0,00	5,29	11,50	0,16
0,00	74,41	-4,99	44,32	0,00	5,29	13,60	0,16
0,00	78,11	-2,11	49,58	0,00	5,25	11,93	0,17
0,28	65,22	0,74	37,98	9,78	5,05	13,30	0,13
0,25	65,62	-0,21	38,58	11,00	5,21	11,60	0,12
0,25	65,42	0,27	38,28	10,39	4,98	12,40	0,09
1,84	67,56	-0,85	48,65	10,34	4,79	13,30	0,08
1,77	67,74	-2,62	49,12	10,04	4,74	11,60	0,07
1,85	67,65	-1,73	48,89	10,19	5,05	12,40	0,11
1,77	65,14	4,19	47,15	9,98	4,63	12,70	0,08
2,25	68,18	4,63	49,61	12,91	4,56	13,90	0,08
1,83	77,29	4,32	55,89	9,36	4,42	13,50	0,08
3,82	60,55	6,17	46,59	14,22	4,87	12,30	0,08
3,63	69,08	1,99	51,61	12,56	4,66	13,80	0,08
3,63	66,72	4,39	46,83	13,91	4,73	13,50	0,08
3,99	60,55	6,17	46,59	14,22	5,07	14,40	0,09
4,05	69,08	1,99	51,61	12,56	4,75	14,40	0,12
4,05	66,72	4,39	46,83	13,91	4,95	14,00	0,08
3,58	65,71	-0,32	47,10	11,44	5,05	13,30	0,10
4,35	65,72	1,80	49,35	13,14	4,78	13,60	0,10

QUESITO IN LINGUA INGLESE DA LEGGERE E TRADURRE

OXFORD

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Review

Review

The safety perspective of probiotic and non-probiotic yoghurts: a review

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Abstract

Objectives: Milk and dairy products could be contaminated via various bacteria and fungi. Investigations have demonstrated that the contamination in traditionally yoghurt was higher than industrially processed one. Raw milk with neutral pH and high water activity, serves as an excellent growth medium for different microorganisms, Therefore, the prepared yoghurts may be contaminated. The greatest and most widespread concern of yoghurt safety is microbial contamination, the presence of infectious bacteria and viruses.
Materials and Methods: "Probiotic yoghurt" was uses as key word in PubMed and science direct search engines during 1998-2018 and 70 papers were found and forty of them were used in this study.
Results: Existence of yeasts and molds in industrial yoghurt is an indicative of poor hygienic practices in manufacturing and packaging. Aflatoxins are a group of very toxic metabolites of fungi produced by toxicogenic strains of *Aspergillus flavus, Aspergillus parasiticus* and *Aspergillus nomius* in milk and dairy products. Aflatoxin B1 is the most frequent produced mycotoxin in contaminated yoghurt. There is a direct relationship between the AFM$_1$ presences in yoghurt the risk of illnesses in consumers.
Conclusions: In conclusion, it is important to notify producers and consumers about the safety and contamination of yoghurt in order to reduce their potential health hazard and economic issues. With respect to the safety and health effects of probiotics, it is recommended to consume the probiotic yoghurt.

Key words: safety; probiotic; non-probiotic; yoghurt.

Introduction

Yogurt is one of the most specific dairy product, still a universal one (Tarakçi and Kucukoner, 2003). Yoghurt receives this reputation by providing many of the nutrients vital for health (Tamime and Robinson, 2007; Makut *et al*., 2014). Pathogenic microorganisms in dairy products such as yoghurt have been a public health concern. As a result, many diseases like tuberculosis, brucellosis, diphtheria, scarlet fever, and gastroenteritis may be spread by unhygienic milk products (Oliver *et al*., 2005; Makut *et al*., 2014). The microbial quality of yoghurt represents the quality of the raw milk. Due to unsanitary conditions, there is possibility of microbial contamination, which may have serious effects on the consumer's health (Ghajarbeygi *et al*., 2016). Health complications related to consumption of inadequately pasteurized milk products include serious infections. Adverse bacteria that can contaminate dairy products include gram-negative psychrotrophs, coliforms, and lactic acid bacteria. In addition, *Salmonella* sp., *Listeria monocytogenes*,

GRUPPO QUESITI 6

1. INDICARE IN QUANTI GRUPPI IL D.LGS 81/2008 CLASSIFICA GLI AGENTI BIOLOGICI E RIPORTARNE LE CARATTERISTICHE

2. IN TABELLA SONO RIPORTATI I VALORI PERCENTUALE DEL PARAMETRO Y PER DUE CAMPIONI (1, 2). ESEGUIRE UN'ANALISI T-TEST PER VERIFICARE L'UGUAGLIANZA DELLE MEDIE DELLA POPOLAZIONE SOTTOSTANTE OGNI CAMPIONE ASSUMENDO VARIANZE DIVERSE:

Tabella: Valore Y per i campioni 1 e 2		
misure/campione	1	2
1	5,60%	5,60%
2	5,80%	5,80%
3	7,30%	7,30%
4	7,00%	7,30%
5	7,30%	6,50%
6	6,20%	6,00%
7	5,30%	6,20%
8	6,30%	8,20%
9	6,20%	6,70%

QUESITO IN LINGUA INGLESE DA LEGGERE E TRADURRE

Health Claims and Functional Food: The Future of Functional Foods under FDA and EFSA Regulation

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ABSTRACT

With the emergence of functional foods, it is vital to explore how the United States and its regulations on health claims affect the functional food industry. According to the Functional Food Center, the modern definition that classifies a functional food is as follows: **"Natural or processed foods that contain known or unknown biologically-active compounds; which in defined, effective non-toxic amounts, provide a clinically proven and documented health benefit for the prevention, management, or treatment of chronic disease"** [1-2]. Given the transparency of the definition, it provides a standardized perspective on the qualifications of a functional food, thus highlighting the nuances between the functional food definition and the regulations brought forth by the Food and Drug Administration (FDA). Recently, both U.S. and European authorities have been examined for their strict policies on food labeling for health and nutrient claims. Food labels that promote nutrition and health claims have been heavily scrutinized in order for legislation to protect consumers from misleading information. Therefore, more scientific, research must provide empirical evidence prior to approving bold statements. More importantly, the FDA and the European Food Safety Authority (EFSA) have similar regulations, but their differences create an interesting perspective for functional food products. At a glance, the future of functional foods appears to be at an advantage with the European Commission, mainly due to the interpretation of the regulations. It is important to note that the interpretation of regulations allows for functional food products to have a semblance of credibility. The biggest concern with the FDA regulations is how it limits the claims to solely mention the correlation to the reduction of diseases. This is a problem because functional foods have a higher capacity for disease treatment than what the regulation of health claims allow. Adding on to that issue, it compounds into an unfair situation of skepticism because this puts functional food products in an oversaturated market filled with less qualified products. A solution for the proper integration of functional food products is to have separate sections of regulations for both governing formats. This will allow consumers to be more educated and aware of the differences between functional food products and products with proposed health claims.

IL SEGRETARIO DELLA COMMISSIONE
F.TO GIANNIELLO NICOLA