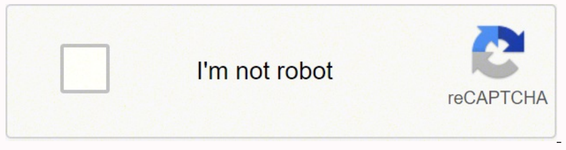

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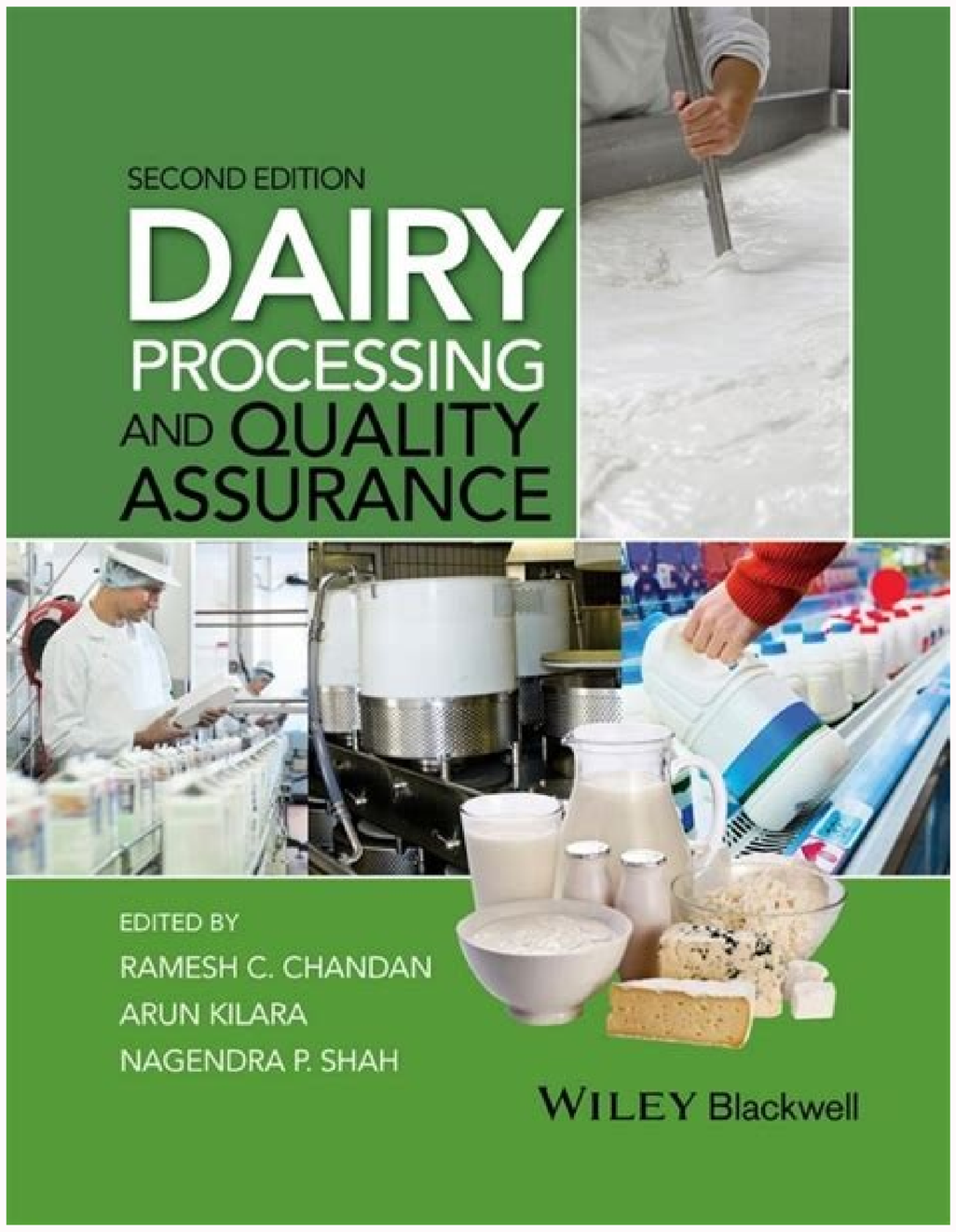

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An overview of food adulteration: Concept, sources, impact, challenges and detection

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Abstract
Food is any substance composed of carbohydrates, water, fats and proteins, which can be eaten or drunk by human being in order to maintain life and growth. Food adulteration is a major problem in the present era(CHOWDHURY, 2005) [3]. Food commodities have always been vulnerable to fraudulent admixture or adulteration with cheaper inferior materials. In India, food safety is a growing concern. Consumers are exposed to various contaminants and adulterants in food products which can be a potential source of disease infection or toxic poisoning. Food spoilage occurs mainly because of microbial growth and enzymatic activity. Food adulteration is a major problem and the existence of consumers plays important role in preventing food adulteration. Unawareness and ignorance of consumers about adulteration is also responsible for its widespread in food processing. Therefore, here screening tests should be known to common people (consumers) which can be used to detect the adulteration in food products. Adulteration is not a concern only for foodstuff cooked or processed as well from India as it could be understood from the fact that in 1954 the Supreme Court of India had to intervene in a case of adulteration in the food segments of it's manual of its own time period. Human lives have cost low value in India but it just paved off as another tragedy.

Milk is adulterated with water, chalk, starch and detergent powder that could cause irreparable damage. It is another flourishing business. In the trade, it is known as synthetic milk. Synthetic milk is a white liquid emulsion prepared by mixing vegetable oil and water, similar to the taste of Mother Dairy mix by the prestigious National Dairy Development Board (NDDB). Synthetic milk is a mixture of water, refined oil, urea, detergent and caustic soda and is sold harmful chemicals to vitiate and thicken the thin liquid. When you move about in the market and see the attractively decorated sweets and other edible items your appetite becomes uncontrollable. Do you know that the colour in the sweets is not always what it looks like? In the process you may be eating "Metanil yellow" a non-permitted coal tar dye. Similarly, the colour in the green vegetables you buy may be "Malachite green" and not "Harmless Bhaji". These are all non-permissible and banned colours and they cause serious health hazards. Some of the common adulterants in food are: Rice with stone chips, pulses with dangerous dye, sawdust, soap stone, industrial waste, Aluminum foil and below it, even your "loved dresses rather than good health (Ghosh, 2012).

Keywords: Food adulteration, concept, sources, impact, challenges, detection

Introduction
Food is one of the basic needs for every living being and is composed of carbohydrates, water, fats and proteins, which can be eaten or drunk by human being in order to maintain life and growth (Sharma, 2017) [6]. Food commodities have always been vulnerable to fraudulent admixture or adulteration with cheaper inferior materials. In India, food safety is a growing concern. Consumers are exposed to various contaminants and adulterants in food products which can be a potential source of disease infection or toxic poisoning. Food spoilage occurs mainly because of microbial growth and enzymatic activity. Food adulteration is a major problem and the existence of consumers plays important role in preventing food adulteration. Unawareness and ignorance of consumers about adulteration is also responsible for its widespread in food processing. Therefore, here screening tests should be known to common people (consumers) which can be used to detect the adulteration in food products. Adulteration is not a concern only for foodstuff cooked or processed as well from India as it could be understood from the fact that in 1954 the Supreme Court of India had to intervene in a case of adulteration in the food segments of it's manual of its own time period. Human lives have cost low value in India but it just paved off as another tragedy.

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CHILI POWDER

Chili powder (also powdered chili or chile powder) is the ground, dried fruit of one or more varieties of chili pepper, sometimes with the addition of other spices (when it may be known as chili powder blend). It is used as a spice to add piquance and flavor to dishes. In American English the name is usually spelled "chili", or, less commonly, "chile". In British English the spelling "chilli" (with two "l"s) is used consistently.

Chili powder is sometimes known by the specific type of chili pepper used (such as cayenne pepper). It is used in many different cuisines, including Tex-Mex,Indian, Chinese, and Thai.

Chili powder blend is composed chiefly of chili peppers and blended with other spices including cumin, oregano, garlic powder, and salt.[1][2] The chilis are most commonly either red chili peppers or cayenne peppers, which are both of the species Capsicum annuum; many types of hot pepper may be used, including ancho, Jalapeño, New Mexico, and pasilla chilis. As a result of the various potential additives, the spiciness of any given chili powder is variable.

Chili powder blends are especially popular in American cuisine, where they are the primary flavor ingredient in chili con carne. The first commercial blends of chili powder in the U.S. were created by D.C. Pendery and William Gebhardt for this dish.[3] Gebhardt opened Miller's Saloon in New Braunfels, Texas. Chili was the town's favorite dish. However, chili peppers could only be found at certain times of the year. Gebhardt imported some ancho peppers from Mexico and ran the peppers through a small meat grinder three times and created the first commercial chili powder, which became available in 1894.

Food

Chili pepper, the spicy fruit of plants in the genus Capsicum
Chili powder, dried, ground red chili peppers, sometimes with cumin and other spices
Chili con carne, often referred to simply as "chili" a stew-like dish
Cincinnati chili, a stew resembling chili con carne, usually served over pasta and hot dogs
Chili's, a restaurant chain
Fictional characters
Chili Palmer, a character in Get Shorty and Be Cool
Chili (Pokémon), a character of the Pokémon universe
Chili Storm, a Marvel Comics character who appeared in Millie the Model stories and was spun off into her own title, Chili

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