

## Review

# Nutritional properties of probiotic and dairy culture milk products: A mini review

Javad Taghipour Sani<sup>1</sup>, Seyyedeh Omolbanin Sharifi Gharibi<sup>2</sup>, Mohammad Ali Shariati<sup>\*3</sup>

<sup>1</sup>Department of Biotechnology, Tonekabon Branch, Islamic Azad University, Tonekabon, Iran,

<sup>2</sup>Young Researchers and Elite Clubs, Tonekabon Branch, Islamic Azad University, Tonekabon, Iran

<sup>3</sup>Head of Research Department, LLC «Science & Education», Russia

\*Corresponding author. Email: shariatymohammadali@gmail.com

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From the nutritional viewpoint, fermented foods have been taken into account recently. Microorganism of milk is indigenously available and involves a process of biochemical reactions in which aroma and other desirable products are produced. Scientifically any concepts which show potentials of a group of food materials in enhancement of community health will be undergoing of numerous studies where their publicizing can lead to reduce the risk of some diseases. In this group of food products, biochemical reactions play the most important roles in production of aroma and antibacterial components and other functional products. In recent years, there has been an increasing interest in probiotic foods, which has fueled the role of novel probiotic products as a global interest. Regarding the increasing the level of public health, a growingly applications of incorporating of probiotic bacteria is occurring. To date, the best source respect to producing probiotic products refers to dairy and dairy derivative sources. This article shortly reviews present nutritional aspects of dairy fermented products.

**Keywords:** Dairy fermented product, biotechnology, nutritional compounds

## INTRODUCTION

Fermenting defined as the process of subjecting food to a specialized micro flora or their produced enzymes in order to create valuable nutritionally. Pasteur was the first person who started working on microscopic study on yeast fermentation where he showed that the role of microorganisms in fermentation (Barnett, 2003). For some few decades modifying food products in order to have new functional properties in them have been given and scientist are following different kind of modification in the food products such as starch. Fermentation is also a biotechnological modifying food in which microorganism are involving with biochemistry reactions of enzymatic products. a group of lactic acid bacteria alone or in combination with each other are responded to be cultured in milk and milk products and create aroma, anti-bacterial compounds etc.

From the ancient time of human creation, milk has been a critical constituent of human diet. The milk components, it can be said that this foodstuff has a culture in which newborns can be supported via its special symbiotic micro flora, nutritional affects (Ebringer *et al.*, 2008). **Figure 1** shows the diversity of fermented dairy products in different countries. Therapeutic affection of milk has been taken into account recently and currently it is applied to diminish the range of disorders occurrence in animals and human. commonly fermented milk or fermented dairy products defines as cultured skimmed milk in which the mother culture initial flora will be alive until the products to be sale. Fermented dairy products classifying into three groups as below;

- Moderately sour type with pleasant aroma e.g. cultured

- milk, Sour and very high sour types e.g. curd, yoghurt.
- Acid-cum alcohol in addition to lactic acid e.g. kumiss and kefir.

Being high protein content of milk may diminish the rate amount of fat deposition in vessels. (Dunshea *et al.*, 2007). In addition, some of the produced peptide can play anti-bacterial roles in destroying gram positive bacteria (Vegarud *et al.*, 2000).

### Fermented Dairy Products

Since milk is full of nutritious products, its fermented products are also having their popularity among consumers (Gonfa *et al.*, 2001). The fermentation process is also barricading the bacteria affections (Parvez *et al.*, 2006). It must be noted that a group of useful bacteria are involving in production of milk products where a unique ration of each of them lead to produce a special products with aroma and antibacterial compounds etc.

Varying the micro flora of fermented dairy products from region to region is arising from climatic environment and being eminent of healthy products. Nutritionally, milks contain properties by which plays important role in the controls of diseases (Shortt *et al.*, 2004)

In fermentation process, microorganisms change organic compounds and convert them into desirable products such as lactic acid, ethanol, and CO<sub>2</sub>. In this

regards fermentation caused to create more delicious beverage and food. Acidity of milk activates enzymes with ability of curdling and culturing milk to produce butter and cheese so findings showed that fermented foods and drinks has a long history.

### Nutritional Benefits

Probiotic foods enhance health after consumption and contain microorganisms which are viable, specific and effective on main systems of nutritional physiology. It can be mentioned that a low cost and energy process of changing food materials to a superior products from the viewpoint of sensory and organoleptic properties is fermentation. (Mothershaw and Guizani, 2007; Battcock and Azam-Ali, 1998). The milieu of micro flora living of many fermented products is taking advantages of all compounds which prevents contaminants and increase shelf life (Boekel *et al.*, 2010). Reduction of phytic acid which is a scavenging factor is also a good point in increasing nutritious value of fermented dairy products along with B complex vitamins (Burgess, Smid, and van Sinderen, 2009). Reduced lactose in dairy and increased lactase enzyme for improved digestibility (Smith *et al.*, 1985). Organic acid and other natural products may positively effects on gut change its micro flora and nutritionally viewpoints alleviates the risk of cancer and some other risky disease (Selhub *et al.*, 2014).

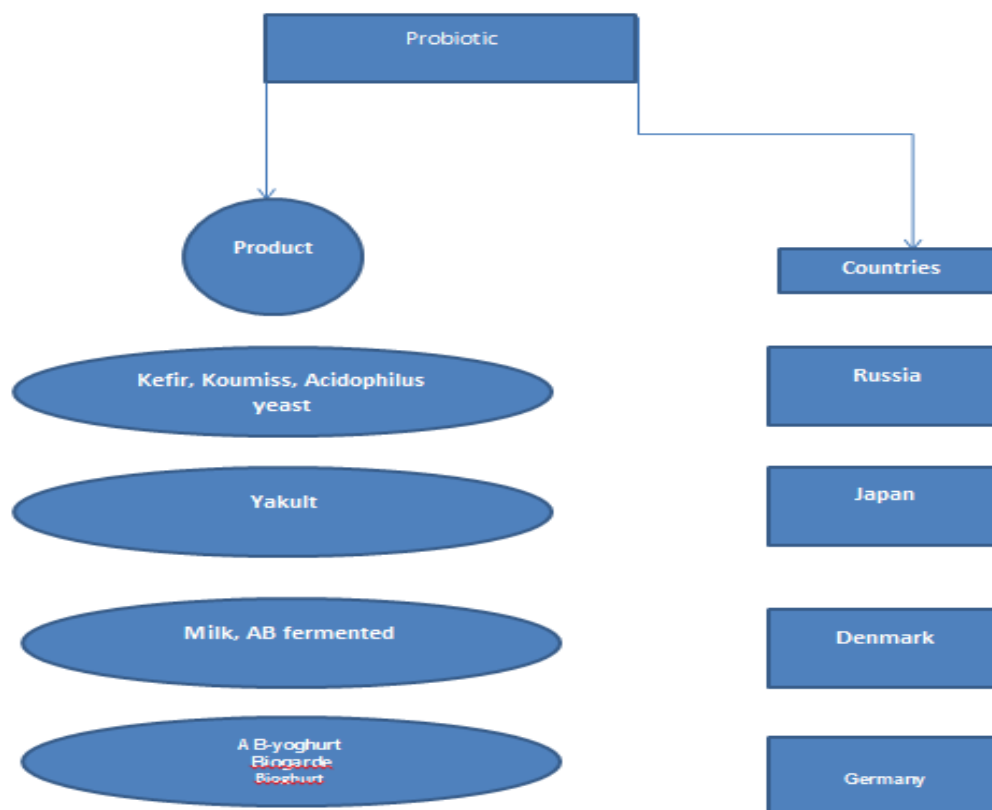


Figure 1: The variety of different dairy products of some producer countries

## CONCLUSION

Today, the most important thing in human diet is applying as much as possible natural product such as probiotic. Regarding the real therapeutic affections of probiotic in body it needs to be studied not only from the viewpoint of micro flora which will be in the body milieu but also their nutritional value, ant carcinogenic and anti-bacterial properties as well as their possible potentials in creating disorders also must studied.

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