

## CADERNO DE QUESTÕES

# Exame de Suficiência em Língua Inglesa 2ª Etapa

### ATENÇÃO!

**Não abra este caderno antes de ser autorizado pelo fiscal.**

Você está recebendo um **CADERNO DE QUESTÕES** e um **CADERNO DE RESPOSTAS**.

O **CADERNO DE QUESTÕES** consta de **6 (seis) páginas**, numeradas sequencialmente, incluindo espaço para rascunho.

O **CADERNO DE RESPOSTAS** consta de **3 (três) páginas** numeradas sequencialmente.

A resposta deverá ser escrita na folha destinada a cada questão.

Esta é uma prova dissertativa contendo **5 (cinco) questões**, com o valor total de **10 (dez) pontos**.

### INSTRUÇÕES

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- 1 Ao receber autorização para abrir este caderno, verifique se a impressão, a paginação e a numeração das questões estão corretas. Caso ocorra qualquer erro, notifique o fiscal.
- 2 Para qualquer tipo de rascunho, somente será permitida a utilização das folhas constantes do CADERNO DE QUESTÕES. Não é permitido ao candidato destacar qualquer folha deste caderno.
- 3 O desenvolvimento das questões só será considerado se transcrito a caneta esferográfica de tinta azul ou preta, para o espaço destinado à resposta de cada questão no CADERNO DE RESPOSTAS.
- 4 **NÃO** será permitido ao candidato nenhum tipo de consulta.
- 5 Evite rasuras no CADERNO DE RESPOSTAS.
- 6 Será eliminado do Processo Seletivo o candidato que efetuar qualquer registro que possa identificá-lo no Caderno de Respostas.
- 7 Você dispõe de 2 (duas) horas para fazer esta prova.
- 8 Você só poderá sair do local de realização da prova decorridos 60 (sessenta) minutos do seu início.
- 9 Os 3 (três) últimos candidatos permanecerão sentados até que todos concluem a prova ou que termine o seu tempo de duração, devendo retirar-se juntos.
- 10 Ao término da prova, entregue ao fiscal o CADERNO DE RESPOSTAS e o CADERNO DE QUESTÕES.
- 11 Será eliminado do Processo Seletivo o candidato que dispensar tratamento inadequado, incorreto ou descortês a qualquer pessoa envolvida no Processo Seletivo, bem como perturbar, de qualquer modo, a ordem dos trabalhos relativos ao referido processo.
- 12 Você só poderá levar o CADERNO DE QUESTÕES se sair do local de realização da prova nos 30 minutos que antecedem o seu término.



## TEXTO A

O artigo a seguir é uma minirevisão acerca dos benefícios do leite e laticínios funcionais. Leia seus elementos pré-textuais abaixo e responda às questões propostas em português:

### Health benefits of milk and functional dairy products

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#### ABSTRACT

Dairy products have so far been in the front line in the development of functional foods. Fermented dairy products have traditionally been considered to have health benefits and thus broadening the product range to other types of health-promoting products is quite natural for the dairy industry. Functional dairy products have recently been increasingly available in the daily-life which has gained increasing popularity in the past few years. Consumer's interest about personal health is reasons in establishing markets for functional dairy products. In the near future we will definitely see more products targeted for special consumer groups. This mini-review provides the reader with a brief overview of the field. It consists of two parts giving state-of-truth information about the following topics: Milk and its health benefits and functional dairy products. This article should be of benefit to everyone involved with food science and nutrition, research on functional dairy product, and food product development.

**Keywords:** milk, yogurt, health benefit, probiotics, dairy, functional products

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#### Questão 01 (2 pontos)

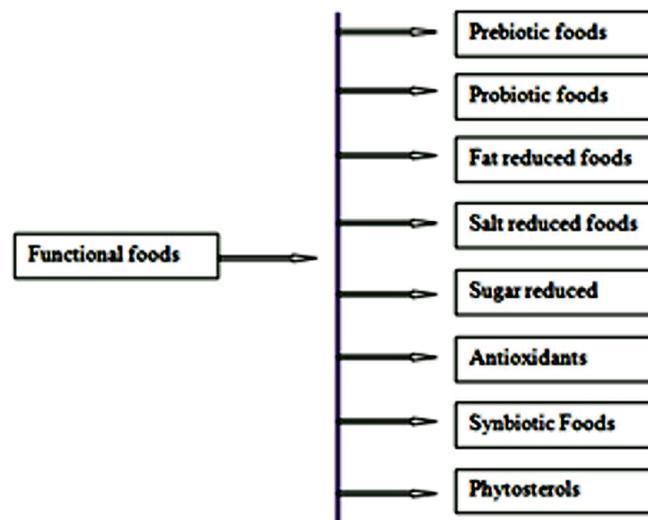
Ilustrando com informações traduzidas do resumo, explique os quatro argumentos motivadores da escrita dessa minirevisão.

## TEXTO B

Agora leia o restante do artigo e responda às questões propostas em português:

### INTRODUCTION

Milk is considered as a nearly complete food since it is a good source of protein, fat and major minerals. Also, milk and milk products are main constituents of the daily diet, especially for vulnerable groups such as infant's school age children and old age.<sup>1,2</sup> Several studies have reported the distribution and occurrence of the essential components in various animal milks.<sup>3</sup> Milk is one of the most important nutrition food sources besides breast milk for infants and babies. In fact, consumption of dairy products has recently been linked to health benefits that are the direct antitheses of diseases and complexity that related to overweight and obesity. For example, individuals that consume dairy products are more likely to have lower weight,<sup>4</sup> lower blood pressure,<sup>5,6</sup> and decreased risk of stroke, colon cancer<sup>7-9</sup> and osteoporosis.<sup>10,11</sup> There is a wide range of functional foods that were developed recently and many of them are being produced in all over the world including probiotic, prebiotic and synbiotic foods as well as foods enriched with fat-reduced, salt-reduced foods or sugar-reduced foods, antioxidants and phytosterols as shown in (Figure 1).



**Figure 1** Most of the functional foods that being produced in all over the world.

Among these foods, probiotic functional food has exerted positive effects on the overall health. We can divide it in both probiotic dairy foods and probiotic non-dairy foods. The market of probiotic dairy foods is increasing annually. An increased demand for dairy probiotic products comes from health promotion effects of probiotic bacteria which are originally initiated from milk products, bioactive compounds of fermented dairy products and prevention of lactose intolerance. Therefore, development of these products is a key research priority for food design and a challenge for both industry and science sectors.<sup>12</sup> This mini-review is an attempt to show some advances that have been made connecting milk and functional dairy product.

### MILK AND ITS HEALTH BENEFITS

Milk is a composite physiological fluid that facilitates postnatal adaptation of baby through digestive maturation simultaneously by providing the bioactive components and nutrients. It supports lymphoid tissues development and establishment of symbiotic micro flora. The importance, potency and the quantity of milk bioactive compounds are possibly more than old consideration.<sup>2,11</sup> They comprise certain specific organic acids, vitamin A, B12, D, riboflavin, calcium, carbohydrates, phosphorous, selenium, magnesium, zinc, proteins, bioactive peptides and oligosaccharides. They

30 mostly emerge during fermentation or digestive processes while in some cases these are components  
of fresh milk. The possible mechanisms for cholesterol decreasing or removal by probiotic bacteria  
and fermented dairy products include inhibition of intestinal cholesterol absorption. FAs having  
medium chain whey proteins and other minerals may add positive result of dairy products on body  
mass. The dairy proteins play a vital role in food intake regulation, satiety and metabolic distracts  
35 relating to obesity. Blood pressure may be affected by lactic acid bacteria, milk proteins, peptides and  
calcium. Milk fat contains certain components having the functional significance. Antimicrobial  
effects are exerted by sphingolipids and their active metabolites either directly or upon their  
digestion. Whey was studied as a medicine as well as an aphrodisiac and skin balm during the Middle  
Age. Whey proteins, i.e.  $\alpha$ -lactalbumin, lactoferrin, lactoperoxidase, serum albumin and  $\beta$ -  
lactoglobulin acquire important biological and nutritional properties particularly regarding disease  
40 prevention. Immunostimulatory, anticarcinogenic and antimicrobial are other whey protein  
activities that promote health. Milk products and their components take part in regulating the body  
mass through satiety signals. Therefore, whey proteins include physiological milk components for  
individuals with metabolic syndrome and obesity. Whey protein in high protein milk products may  
improve insulin sensitivity and reduce fat deposition. The bioavailability of trace elements and  
45 minerals i.e. manganese, calcium, magnesium, iron, selenium and zinc is also improved by milk  
proteins and peptides.<sup>13</sup>

The health benefits of milk and dairy products are known to humanity and may be attributed to  
the biologically active compounds that are existing in milk. Beside the modification of several milk  
components, proboscis may also act directly as preventive agents, or in therapy of some sever disease.  
50 The functional role of fermented dairy products is either directly through interaction with consumed  
microorganisms or, indirectly, as a result of action of microbial metabolites like nutrients, generated  
during the fermentation process. The health promoting mechanisms of probiotic action are mostly  
based on the positive effect they exert on the immunity response.<sup>14</sup>

Milk facilitates the maturation of digestive tube and cell growth of a baby in gastrointestinal  
tract (GIT). Donovan<sup>15</sup> reported that milk is a complex combination of nutrients such as particular  
bioactive saccharides, lipids and proteins content which assist to regulate the development of GIT by  
representing the important signals. On the other hand, Morrow et al.<sup>16</sup> and Newburg et al.<sup>17</sup> concluded  
that milk is a source of communication in case of mother and the newborn child that influences the role  
of mucosal immunity and minimizes the risk of infection. Milk has a wide various biologically active  
60 substances for instance, enzymes, immunoglobulins, oligosaccharides, antimicrobial peptides,  
hormones, cytokines, and the growth factors besides the basic saccharides, proteins and lipids as  
reported by.<sup>18</sup> Milk components are particular parts of immune system of newborn and they assist to  
stimulate and sustain the baby immune homeostasis. Neutrophiles, macrophages and T-lymphocytes  
as the heterogeneous population of milk cells play an important role in the defense against pathogenic  
65 bacteria.

So far, more than 60 different enzymes are recognized in milk and during the heat treatment the  
most of those enzymes will destroy and become inactive. The heat processing at high level of  
temperatures causes not only digestion enzymes denaturation (amylases, proteinases, phosphatases,  
lipases) but also digestion those enzymes having antioxidant and antimicrobial characteristics. These  
70 special characteristics are essential in milk stability as well as in the defense against pathogens;  
catalase, oxidoreductase, xanthine, lysozyme, dismutase, superoxide, lactoperoxidase, ribonuclease  
and myeloperoxidase. Milk antimicrobial agents have been shown bactericidal and even  
bacteriostatic behavior. They are transmitted to progeny where they protect the progeny from highly  
contagious disorders. Lactoperoxidase, xanthine, oxidoreductase and lysozyme are the other best  
75 protecting factors in additions to immunoglobulin<sup>19,20</sup> Lactoperoxidase assists in milk storage as well  
as it inhibits the propagation of psychrotropic bacteria. According to<sup>21</sup> it positively affects the Gram  
negative catalyzed coliform bacteria, pseudomonads, shigella and salmonella. Seifu et al.<sup>22</sup> has  
reported that lactoperoxidase assembly is utilized as a natural preservation agent in dairy  
manufacturing in different regions especially tropical areas. The xanthine oxidoreductase has

80 bactericidal effects and reduces the rate of NO<sub>2</sub> and results in cytotoxic nitric oxide production. It results in the production of hydrogen peroxide that acts as substrate for NADPH oxidase, and lactoperoxidase (component of proficient anti microbial systems).

### FUNCTIONAL DAIRY PRODUCTS

85 Dairy products are prominent as natural healthy products that contain the most crucial elements of the balanced diet. In additions to nutritional benefits milk plays a significant role in the control of chronic diseases, example blood pressure was being 'treated' with dairy products. It may not seem obvious to discuss blood pressure in relation to weight management, but the link between dairy components and weight management was initially derived from blood pressure studies.

90 In Europe, dairy products are the major contributors in the functional food market by contributing approximately 60% of the total functional food spellings.<sup>23</sup> They are the second well-liked class of functional foodstuff in the US and the consumers spend almost \$5.0 billion on dairy functional products in 2004.<sup>24</sup> The Australian functional foods market is in its early life and is presently expected at \$57.0 million where probiotic yogurt is being the head in this zone that is growing at 22% and the soy yogurt resides at second. FAO/WHO standards describe the yogurt as 'lactic acid fermentation by the activity of *Lactobacillus delbrueckii* and *Streptococcus thermophilus* (*St. thermophilus*)  
95 to produce a coagulated milk.<sup>25</sup> Food Standards Australia and New Zealand (2006) defined low fat yogurt as 'the yogurt synthesized by culturing low fat or skim cow's milk that results in a thickened yogurt and does not have flavoring or fruit. It has 0.3% fat and 6.6% protein on average. Dairy probiotic products can be produced by incorporation of probiotic bacteria in both of fermented and unfermented mix as reported by.<sup>12</sup> The work done on the diary probiotic products is summarized in  
100 (Table 1).

Dairy Probiotic Foods	Probiotic Strains	Characteristics	References
Probiotic ice cream	<i>Lactobacillus casei</i> (Lc01) and <i>Bifidobacterium lactis</i> (Bb12)	Highest resistance to simulated acidic, alkaline and ice cream conditions	26,27
Petit-suisse cheese	<i>Bifidobacteria</i> and <i>lactobacilli</i>	The presence of the prebiotics inulin and oligofructose can promote growth rates besides increased lactate and short chain fatty acids production	28
Conventional yoghurt	<i>L. acidophilus</i> and <i>B. bifidum</i>	Add extra nutritional and physiological values	12
Bio-yoghurt	<i>L. acidophilus</i> and <i>B. bifidum</i>	Have to retain viability and activity in yoghurt as a probiotic at consumption time.	29
Probiotic milk	<i>Lactobacillus acidophilus</i>	Remained viable in sweet acidophilus milk over 28 days at 7°C	30

**Table 1** A summary table for diary probiotic products

Shah<sup>31</sup> quoted that fermented milk is a prepared through mixed starter fermentation by using a culture comprising of *St. thermophilus* and *L. delbrueckii*. In Australia, lactic acid bacteria are allowed to employ as a starter cultures. Consequently, some yoghurt manufacturer use *L. jugurti* and *L. helveticus* for producing of yoghurt. Conversely, the standards in US do not allow any starter culture to be used  
105 other than *St. thermophilus* and *Lactobacillus delbrueckii*. The supplementation of different fruit provision in fermented milk products further endorse the healthy image of fermented milk that incorporate the fruits benefits. They provide antioxidants and fibre as described by.<sup>32</sup> Recently, corn

milk,<sup>33</sup> soy milk<sup>34-36</sup> and peanut milk<sup>37</sup> depending on fermented milk products are being synthesized as an alternate of vegetarian bovine milk fermented products that also overcome the allergenicity of milk protein. Furthermore, to enhance functionality of fermented milk that by addition of plant extracts such as antioxidative and tea catechin is also significantly considered.<sup>38</sup> Various essential nutrients and different components are provided by fermented milk that regulates various body functions in an optimistic way. It is confirmed by various scientific evidences that chronic disorders i.e. coronary heart disease, osteoporosis, hypertension and cancer can be controlled by the ordinary utilization of probiotic or prebiotic supplemented fermented milk. Therefore the fermented milks meet with the functional food standards.

## CONCLUSION

This paper reviewed and discussed some of the findings regarding the role of milk health and dairy products as functional foods. In general, dairy products provide a solid nutritional base for losing weight. Dairy's dietary minerals may play an important role by influences adipocyte metabolism through calcitrophic hormone, and decrease the energy available from fat in food products by forming undigestible complexes. The functional dairy components significantly contribute to the prevention of several diseases like hypertension, obesity, cancer, diabetes, and some transmissible diseases. On another hand, there is much kind of applications of these bioactive dairy components such as phosphopeptides are currently used as both dietary and pharmaceutical supplements. Many of the components found in milk may have a protective effect against the onset of disease that occurs as a result of overweight, As well as several components found in milk could be sort and use in especial applications for individuals that do not consume dairy or may be lactose intolerant.

*Obs: as referências deste artigo foram propositalmente omitidas por motivo de espaço. As mesmas, juntamente com o artigo, encontram-se disponível em: <https://medcraiveonline.com/MOJFPT/MOJFPT-04-00099.php>. Acesso em: 07 ago. 2019.*

### Questão 02 (2 pontos)

Na introdução, os autores defendem o desenvolvimento de um dos produtos funcionais como prioridade para pesquisa (l. 20-21). A qual alimento os autores se referem? Qual caminho argumentativo utilizam para chegar à defesa desse alimento? Explique e ilustre com trechos traduzidos da referida seção.

### Questão 03 (2 pontos)

Com base na seção *Milk and its health benefits* (l. 24-89), explicita a relação entre os componentes do alimento tema do artigo e o sistema imunológico de um recém-nascido. Quais os benefícios desse alimento para seres humanos nessa fase do desenvolvimento?

### Questão 04 (2 pontos)

Na seção *Functional Dairy Products* (l. 90-128), encontramos o desenvolvimento do argumento central do artigo. Que argumento é esse e de que modo ele é desenvolvido nesta seção? Explique e ilustre com trechos traduzidos da referida seção.

### Questão 05 (2 pontos)

A que se referem os seguintes números?

(a) 60 (b) 60% (c) \$5.0 (d) 0.3% e 6.6%

## RASCUNHO