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Necessity of Paying Attention to Sesame Oil Production Safety

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Sesame oil, known as Queen Oil, is one of the most nutritious sources. Raw sesame oil contains compounds, such as waxes, free fatty acids, and unsaturated fatty acids. It also contains antioxidants such as vitamin E, gum, small particles, etc. (1, 2). Given the presence of anticancer compounds, such as antioxidants and unsaturated fatty acids, this foodstuff is recommended to patients with cardiovascular diseases (3). However, it should be considered that this oil, similar to all other liquid oils, has high potential for chemical and microbial spoilage due to factors, such as light, exposure to air, temperature, humidity of the environment, and microbial agents. Furthermore, Sesame oil causes hydrolysis and oxidation processes, which increases the necessity of observing the essential points during the production and maintenance. Generally, production of free radicals during the hydrolysis process is very harmful and causes diseases like cancer (4, 5). It should be noted that this oil is produced industrially and manually (in the presence of the customer). Regarding the industrial production, a large proportion of the factors involved in the process of corruption are eliminated or controlled in the purification process. Moreover, some natural antioxidants, such as vitamin E and A, reduced during purification, are added as antioxidants to prevent from corruption. However, in manual or so-called traditional methods that are performed in the presence of the customer, exposure to risk factors increases during the oil production and sometimes oil is packed in non-standard containers. Elimination or reduction of the harmful agents is not possible and ultimately endangers the consumers' health (6-10). Therefore, it is very important to monitor and pay attention to the traditional production centers and consumers regarding the safety of sesame oil production.

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