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Comparison on the Effectiveness of Sesame Oil and Peppermint Oil - A Survey

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ABSTRACT

Introduction:Sesame oil has a variety of culinary , medical and cosmetic uses.Sesame oil is isolated from two different coloured seed varieties white and brown.The brown variety contain more lower amount of carbohydrates and protein when compared to white seeded.It is highly stable against oxidative processes.Sesame oil is economically and agriculturally very important. Peppermint oil has many beneficial uses like GIT discomfort, nausea and alleviating pain. Peppermint oil have been used for digestive disorders. It can cure irritable bowel syndrome. It is used in cosmetic and preparing fragrances

Materials and methods:The study aims to analyze the comparative effect of sesame oil and peppermint oil. A questionnaire was distributed through an online survey planet link to about 100 people. The study population were asked to fill out the online form after reading each question thoroughly.

Results:The results were collected and the data was analysed . From the study population, the whole of 100% of the participants gave a positive response when asked if they were aware about the effect of sesame oil and peppermint oil.

KEYWORDS: Sesame oil;peppermintoil;cosmeticuses;advantage;pain;nausea

INTRODUCTION:

Sesame oil gives synergistic action on the body and acts as an antioxidative and it also acts as a natural antioxidant for food applications. It is used as a cooking oil And acts as a flavour enhancer in many cuisines . It is basically a crop based oil. (1)Sesame oil has an antioxidants and anti inflammatory on body and have cardiovascular effect on body Its composed of oleic acid , palmitic acid , stearic acid , and linoleic acid .It has higher amount of nutrients mainly vitamin K and it is equal to monounsaturated fat and it has high amount of fat content which is saturated (2). It decreases the accumulation of cholesterol and has a higher amount of fatty acid composition It was first cultivated in indus valley civilization and was considered as the main oil crop.African and Asian regions is considered to be the fastest developing sesame oil markets (3). It represses the human colon malignant.It is extracted from edible seeds. The seeds have quality oil , fatty acids , ash and a large amount of proteins. (4It increases the RBC count and other blood cells in our body,it has unsaturated fatty acids and other solutes . Sesame oil seeds have large amount of moisture content which is very beneficial to human skin and eyes Sesame oil can be extracted under low temperature using a cold press. Sesame oil has many varieties in which the most important variety is the pale yellow seed which is very advantageous (5). Heterosis is also performed by sesame oil. Sesame oil is suitable for low temperature and humidity under defined environment.Sesame oil may produce an allergic reaction such as contact dermatitis and hypersensitivity (6). It is known as queen of seeds and it has oxidation and rancidity and sesame seeds have high content of lipid quality and antioxidativecompounds. Peppermint oil is a cross between watermint and spearmint which is mostly grown in Europe and the Middle East. It has more than 25 species . It was first discovered by a botanist Carl Linnaeus and is now referred to as hybrid (7). They cure irritable bowel syndrome and it cures heartburn and it is also a tropical economic crop with high oil yield . Peppermint oil is sterile and spreads as a runner. It generally grows in moist and shaded locations . It produces flavorings mainly for chewing gums and toothpaste. (8)Peppermint oil is used to make fragrances and it relieves irritation and inflammation.It can also diagnose dermatitis

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Peppermint oil have outermost covering which is very useful to treat bowel syndrome and other related bowel syndrome It has a high methanol content.It also contains flavonoids The main composition of peppermint oil ismethone and methanol (9). Peppermint oil makes skin glow and healthy and also moisturizes the skin and it grows in high yield only in high night temperature Peppermint oil and leaves have a cooling effect when used topically for muscle pain , nerve pain , relief from itching or can be used as a fragrance It is used to flavour many eatables like beverages , soaps , skin care products , icecream , candies , alcohols (10). Peppermint oil is useful in esophageal contraction Peppermint oil is harvested twice during the growing season and it acts as a nitrogen fertilizer Peppermint oil should not be overused or else it can lead to skin burn and skin rashes (11). peppermint oil is used for body smoothening and shining Though it acts as a nitrogen fertilizer it increases the oil content in peppermint seeds. It is also added in medicines of heart conditions or high blood pressure to decreases stomach acid (12)

MATERIALS AND METHODS:

An Online survey was conducted with a self-structured questionnaire with a sample size of hundred participants comprising the general population. The questionnaire consists of questions that help in collecting socio-economic data, questions that help in provoking awareness among the participants and questionnaires also related to the awareness and knowledge about the comparison between the effectiveness of sesame oil and peppermint oil. The questionnaire was validated in the standard manner. Measures such as selection of participants randomly, placing restrictions over the participant population and age groups are taken to minimise the bias occurring in sampling. The questionnaire was circulated using the online part from " survey planet" and the link was circulated through social media to the respondents. The results were collected and the data was analyzed . The responses were recorded and the results of the analysis were represented in the form of a pie chart.

RESULTS AND DISCUSSION:

From the current study around 74.3% of the study population responded that sesame oil is better for skin and around 25.7% of them responded that peppermint oil is better for skin (fig 1) . Another pie chart represents that around 82% of the study population responded that sesame oil is good for wrinkles and around 18% responded that it is not good for wrinkles (fig 2). Almost 73.3% of participants responded that peppermint oil have side effects on body and around 26.% of participants do not think that it has side effects in our body (fig 3) It was found that around 72.7% of population thinks that they can consume peppermint oil and around 27.3% think they cannot consume the oil (fig 4) Around 69.7% of study population responded that peppermint oil can regrow hair and around 30.3% of population responded that it cannot regrow hair(fig 5) Around 72.8% of study population responded that sesame oil is good for eyes and around 27.2 % of them responded that it is not good for eyes.(fig 6)Around 71.7% of study population responded that peppermint can burn skin and around 28.3% of study population responded that it does not burn the skin.(fig 7) Around 81.% of study population responded that sesame oil is better than peppermint oil and around 18.4% of them responded that peppermint oil is better(fig 8) According to this article, Sesame oil is better than peppermint oil (16). Sesame oil is good for wrinkles; it tightens our skin and gives moisture (17). According to this article peppermint oil consumption leads to side effects on our body such as burning of skin , skin rashes and many

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other skin related problems(18)Peppermint oil cannot be consumed as it has side effects in our body(19) Peppermint oil work wonders when it comes to regrow of hair it gives moisture to hair and results in regrow and brightness in hair(20) Sesame is said to be beneficial for eyes as it maintains our eye power(13). Peppermint oil can burn our Sesame oil is effective and is easily available on market whereas peppermint oil is expensive and has side effects too (15) if it is overused on skin and leads to skin rashes and other related problems (14).

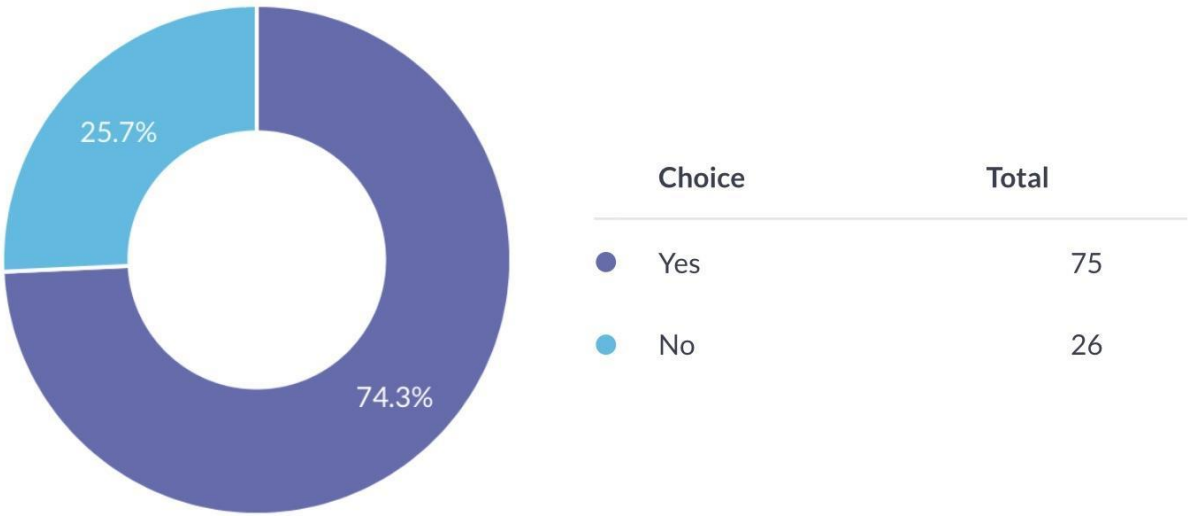

Fig 1.It was found that around 74.3% of the participants believe that sesame oil is good for skin and 25.7% of the population thinks it is not.

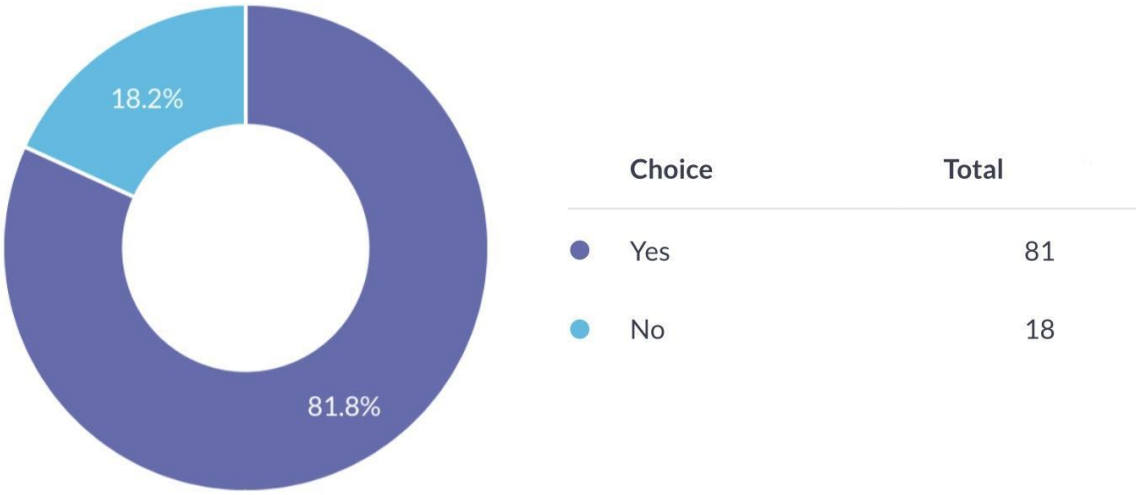

Fig 2. Around 82% of the study population responded that sesame oil is good for wrinkles and around 18% of the study population responded that it is not good for wrinkles.

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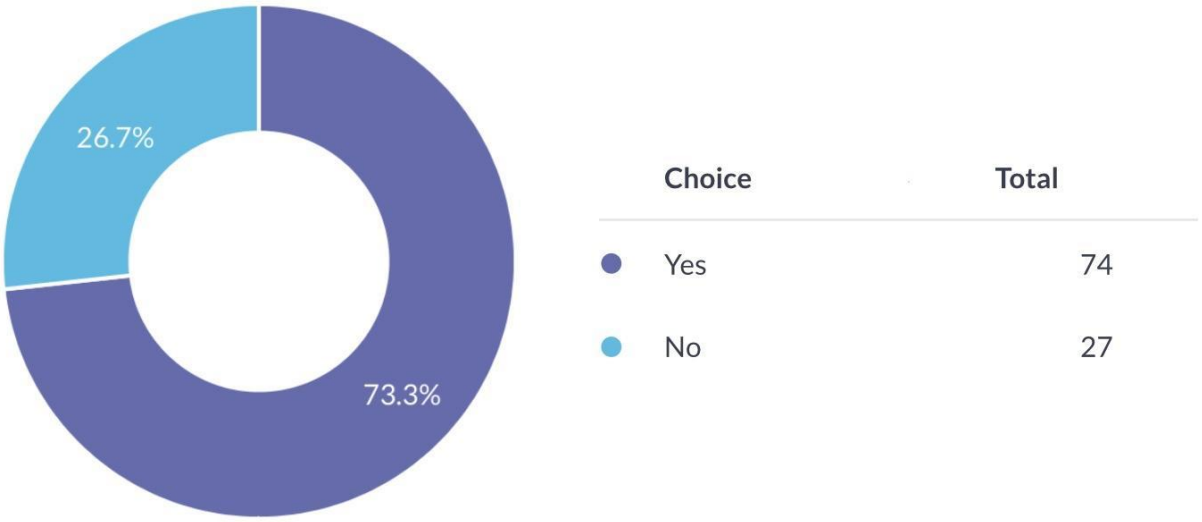

Fig 3.Almost 73.3% of participants think that peppermint oil have side effects on our body and around 26. % of participants do not think in the same way

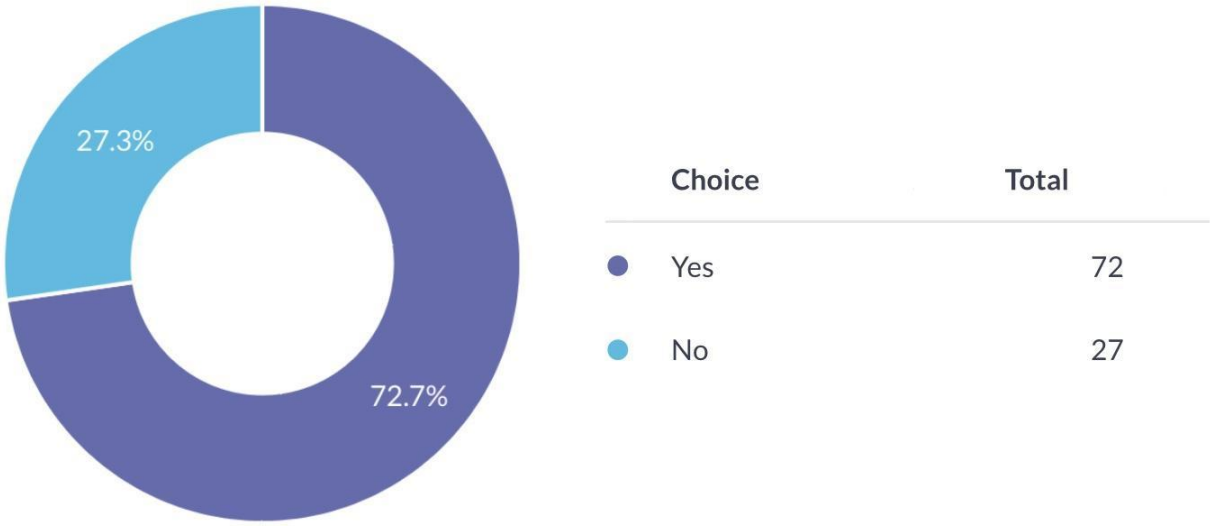

Fig 4.It was found that around 72.7% of population thinks that they can consume peppermint oil and around 27.3% think they cannot

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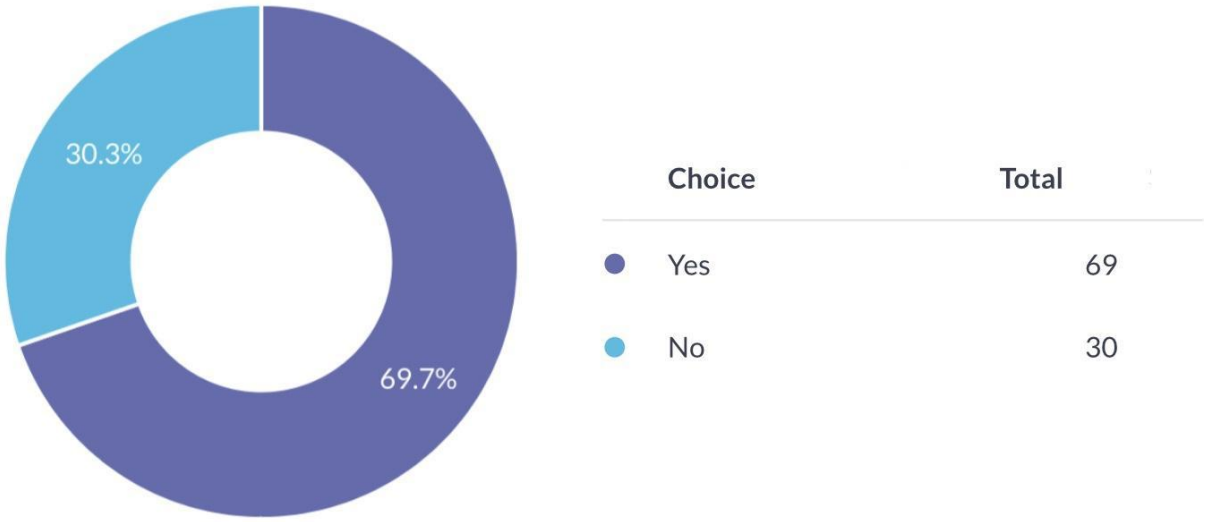

Fig 5. Around 69.7% of study population responded that peppermint oil can regrow hair and around 30.3% of population responded that it cannot regrow hair

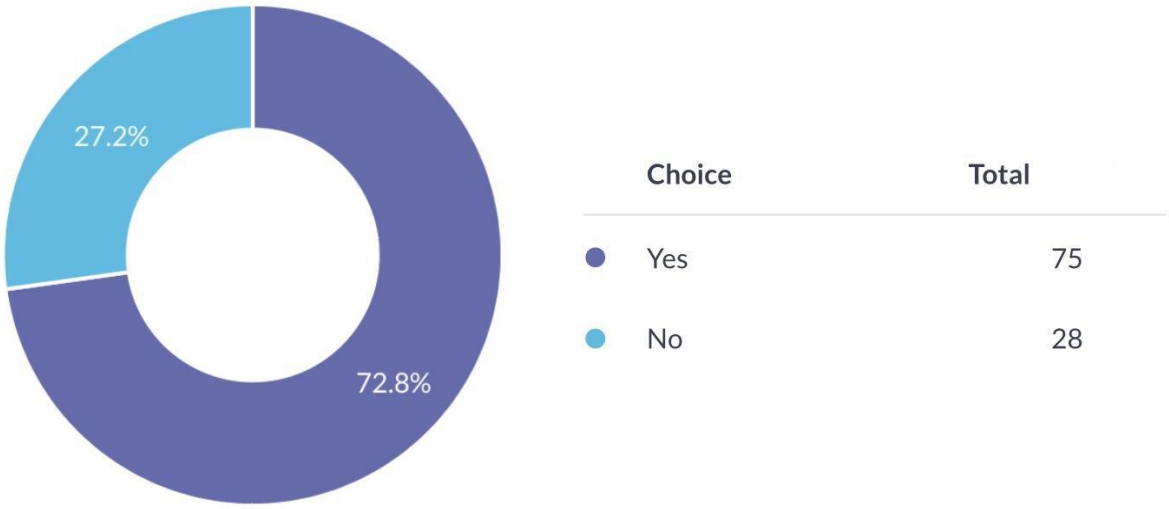

Fig6: Around 72.8% of study population responded that sesame oil is good for eyes and around 27.2 % of them responded that it is not good for eyes.

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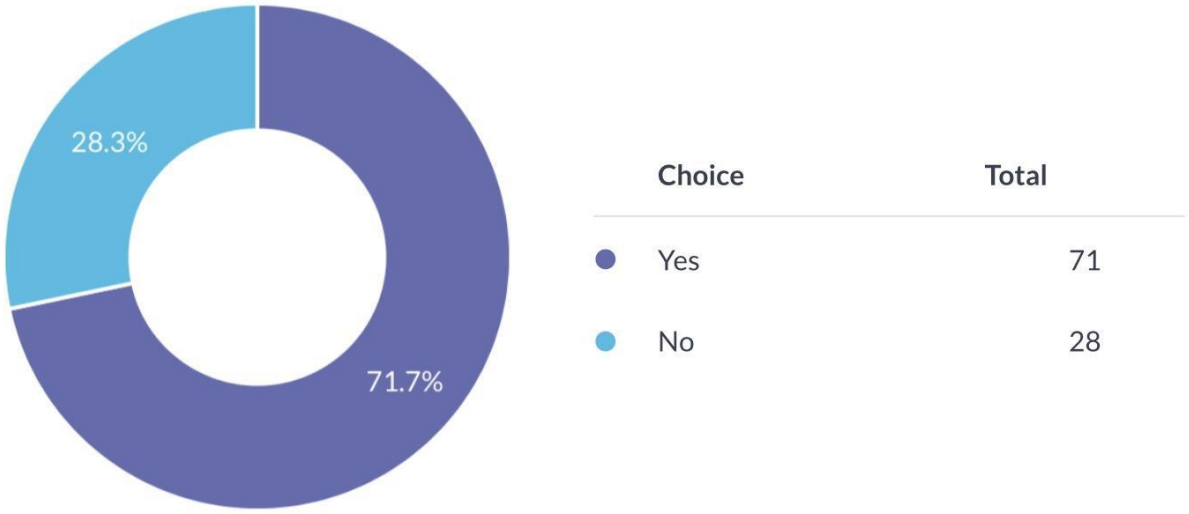

Fig7: Around 71.7% of study population responded that peppermint cab burn skin and around 28.3% of study population responded that it does not burn the skin

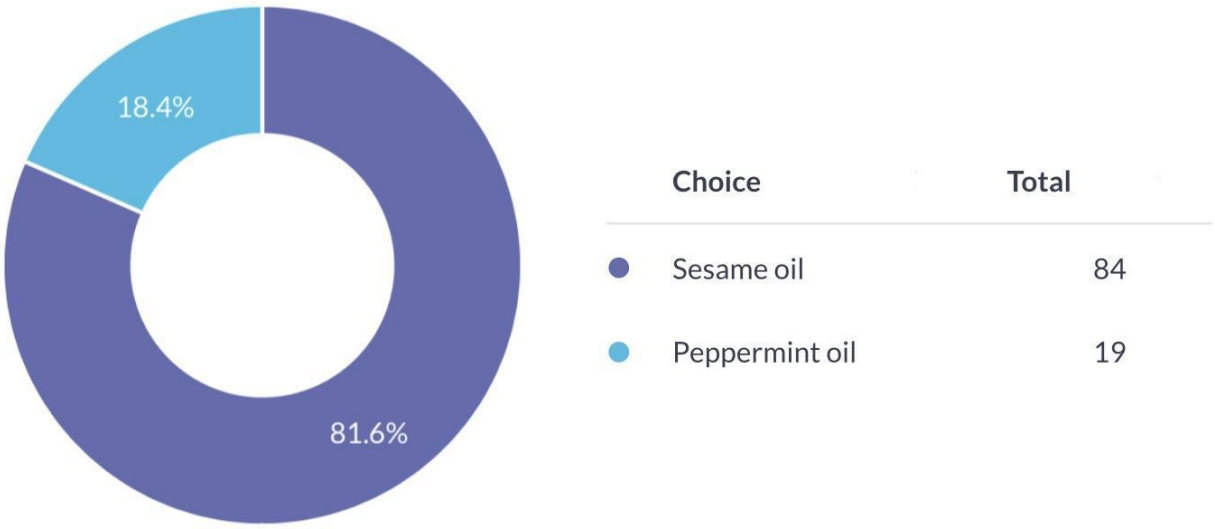

Fig8: Around 81.% of the study population responded that sesame oil is better than peppermint oil and around 18.4% of them responded that peppermint oil is better .

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CONCLUSION:

Sesame oil is edible oil derived from sesame seeds .It is best used for brightening skin and curing acnes and darkens the colour of the hair. Peppermint oil is used to cure nausea, commoncold, headache and muscle disorders.From the survey it is evident that people prefer sesame oil more when compared to peppermint oil

REFERENCES:

1. Yoshida H, Kajimoto G. Microwave Heating Affects Composition and Oxidative Stability of Sesame (Sesamum indicum) Oil [Internet]. Vol. 59, Journal of Food Science. 1994. p. 613–6. Available from: http://dx.doi.org/10.1111/j.1365-2621.1994.tb05575.x

2. Hemmatzadeh A, Ali Jalali SM. Effects of dietary sesame oil on growth performance, chemical composition, lipid oxidation, and sensory characteristics of rainbow trout. Nat Prod Res. 2018 Dec;32(23):2844–7.

3. Dai H-H, Li X-D, Wei A-C, Wang X-D, Wang D-Y. Characterization and Oxidative Stability of Cold-pressed Sesame Oil Microcapsules Prepared by Complex Coacervation. J Oleo Sci [Internet]. 2020 Jun 9; Available from: http://dx.doi.org/10.5650/jos.ess19323

4. Crude sesame oil [Internet]. Available from: http://dx.doi.org/10.3403/30305939u

5. Krist S. Sesame Oil/Sesame Oil from Roasted Seeds [Internet]. Vegetable Fats and Oils. 2020. p. 675–87. Available from: http://dx.doi.org/10.1007/978-3-030-30314-3_106

6. Institute NC, National Cancer Institute. Sesame Oil [Internet]. Definitions. 2020. Available from: http://dx.doi.org/10.32388/nld9en

7. Budowski P. Sesame oil. VII. Optical rotation and the minor components of sesame oil [Internet]. Vol. 28, Journal of the American Oil Chemists' Society. 1951. p. 54–5. Available from: http://dx.doi.org/10.1007/bf02612090

8. Gowton CM, Reut M, Carrillo J. Peppermint essential oil inhibits Drosophila suzukii emergence but reduces Pachycrepoideusvindemmiae parasitism rates. Sci Rep. 2020 Jun 4;10(1):9090.

9. Parvataneni S, Vemuri-Reddy S. Role of Peppermint Oil in Diffuse Esophageal Spasm in the Geriatric Population. Cureus. 2020 Mar 6;12(3):e7192.

10. Black CJ, Moayyedi P, Quigley EMM, Ford AC. Peppermint Oil in Irritable Bowel Syndrome. Gastroenterology [Internet]. 2020 Apr 11; Available from: http://dx.doi.org/10.1053/j.gastro.2019.09.055

11. Mapp CP, Hostetler D, Sable JF, Parker C, Gouge E, Masterson M, et al. Peppermint Oil: Evaluating Efficacy on Nausea in Patients Receiving Chemotherapy in the Ambulatory Setting. Clin J OncolNurs. 2020 Apr 1;24(2):160–4.

12. Fryatt J, Bell P. Effect of Peppermint Oil On Postoperative Urinary Retention. J

PediatrNurs. 2020 Mar;51:116–8.

13. Kumar CM, AppuRao AG, Singh SA. Effect of infrared heating on the formation of sesamol and quality of defatted flours from Sesamumindicum L. J Food Sci. 2009 May;74(4):H105–11.

14. Fryatt J, Bell P. The Effects of Peppermint Oil on Post-Operative Urinary Retention [Internet]. Vol. 49, Journal of Pediatric Nursing. 2019. p. 110. Available from: http://dx.doi.org/10.1016/j.pedn.2019.09.015

15. Hwang LS, Lee M, Su N. Sesame Oil [Internet]. Bailey's Industrial Oil and Fat Products. 2020. p. 1–39. Available from: http://dx.doi.org/10.1002/047167849x.bio031.pub2

16. Bruce RA, Tobin CE. ATHE EFFECTS OF SESAME OIL AND FRACTIONS OF SESAME OIL ON ADRENALECTOMI2ED AND OTHER EXPERIMENTAL RATS [Internet]. Vol. 27, Endocrinology. 1940. p. 956–70. Available from: http://dx.doi.org/10.1210/endo-27-6-956

17. Hsu E, Parthasarathy S. Anti-inflammatory and Antioxidant Effects of Sesame Oil on Atherosclerosis: A Descriptive Literature Review [Internet]. Cureus. 2017. Available from: http://dx.doi.org/10.7759/cureus.1438

18. Akbari M, Torki M. Effects of dietary chromium picolinate and peppermint essential oil on growth performance and blood biochemical parameters of broiler chicks reared under heat stress conditions. Int J Biometeorol. 2014 Aug;58(6):1383–91.

19. Emhoff C-AW. The Effects of Peppermint Oil Ingestion on the Ventilatory Threshold: A Pilot Study [Internet]. Vol. 3, Research & Investigations in Sports Medicine. 2018. Available from: http://dx.doi.org/10.31031/rism.2018.03.000565

20. Synowiec A, Krajewska A. Soil or Vermiculite-Applied Microencapsulated Peppermint Oil Effects on White Mustard Initial Growth and Performance [Internet]. Vol. 9, Plants. 2020. p. 448. Available from: http://dx.doi.org/10.3390/plants9040448

21. Mapp CP, Hostetler D, Sable JF, Parker C, Gouge E, Masterson M, et al. Peppermint Oil: Evaluating Efficacy on Nausea in Patients Receiving Chemotherapy in the Ambulatory Setting. Clin J OncolNurs. 2020 Apr 1;24(2):160–4.