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A Research on Geographical Indicated Molasses in Türkiye

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ÖZ

Türk mutfağında tatlılar önemli bir yer tutmaktadır. Bu tatlılar içerisinde pekmezler oldukça elzemdir. Pekmezler geçmişte gerek sağlık gerekse beslenme açısından insan yaşamında yerini almış ve günümüzde de hâlâ bu durum devam etmektedir. Araştırmanın amacı, Türkiye'de coğrafi işaretli pekmezlerin içerik analizini yapmak, pekmezlerin özelliklerini ortaya çıkarmak, pekmezlerin hangi meyve ve bitkiden yapıldığını tespit etmektir. Bu amaç doğrultusunda araştırmada nitel araştırma yöntemlerinden olan içerik analizi kullanılmıştır. İlk olarak literatürde pekmez türleri hakkında bilgilere yer verilmiş yapılışları hakkında açıklamalar yapılmıştır. Daha sonra Türkiye'nin coğrafi işaretli pekmezleri belirlenmiş ve pekmezler hakkında detaylı bilgiler verilmiştir. Araştırma sonucuna göre Türkiye'nin 9 adet coğrafi işaretli pekmezinin olduğu saptanmıştır. İlk coğrafi işaretli pekmezin "Karnavas Dut Pekmezi" son coğrafi işaretli pekmezin ise "Andırın Andız Pekmezi" olduğu görülmüştür. Pekmezlerin bileşenlerinde en fazla şekerin ve kuru maddenin olduğu, tescilli pekmezlerin çoğunun Akdeniz Bölgesi'ne ait olduğu ve pekmezlerin en çok üzüm, dut, kozalak ve şeker kamışından yapıldığı, çoğunlukla geleneksel yöntemlerle elde edildiği sonuçlarına ulaşılmıştır. Araştırma sonuçlarına göre ilgili kurumlara ve araştırmacılara öneriler sunulmuştur.

Anahtar Kelimeler: Coğrafi İşaret, Pekmez, Türk Mutfağı

ABSTRACT

Desserts have an important place in Turkish kitchen. Molasses is very it is essential among these desserts. Molasses took their place in human life in terms of both health and nutrition in the past and this situation still continues today. The aim of the study was to analyze the content of geographically indicated molasses, to reveal the characteristics of molasses, and to determine from which fruit and plant molasses were made. For this purpose, content analysis, which is one of the qualitative research methods, was used in the research. First of all, information about the types of molasses was given in the literature and explanations were made about how they were made. Then, Turkey's geographical indication molasses were determined and detailed information about molasses was given. According to the results of the research, it was determined that Turkey has 9 geographical indication molasses. It was seen that the first geographically indicated molasses was "Karnavas Mulberry Molasses" and the last geographically indicated molasses was "Andırın Andız Molasses". It has been concluded that molasses contains the most sugar and dry matter in its components, most of the registered molasses belong to the Mediterranean Region, and molasses is mostly made from grapes, mulberry, cones and sugar cane, mostly obtained by traditional methods. Based on the research results, recommendations were made to relevant institutions and researchers.

Keywords: Geographical Indication, Molasses, Turkish Cuisine

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1. INTRODUCTION

Molasses is one of Turkey's traditional food products and is commonly produced by concentrating the juices of grapes and mulberries with a soluble solids content of up to 70-80. Molasses, which is generally consumed as breakfast, can also be produced from fruits with high sugar content such as apples, watermelons, plums, apricots, sugar beets, and figs. Molasses is defined as a very important food product in human nutrition because it contains high amounts of sugar, minerals, and organic acids. Since most of the carbohydrates in molasses are in the form of monosaccharides such as glucose and fructose, they easily pass into the blood without being digested. This is especially important in terms of nutrition for babies, children, athletes and situations requiring urgent energy (Sengül et al. 2005; Akbulut & Özcan, 2008).

Carbohydrates, minerals and organic acids are known as the main components of molasses and they have the greatest impact on the ripening quality of the fruits used in molasses production. They also contribute to the quality of molasses. It is known that the composition of molasses varies depending on the variety or type of fruit, processing techniques, and conditions used in production. Generally, the main carbohydrates of molasses are glucose and fructose, which are the main source of energy value. For example, grape molasses contains almost equal amounts of glucose and fructose. Monosaccharides require minimal digestion in the body and are easily transported from the small intestine into the blood. For this reason, molasses has been used as the main energy source in cold weather for centuries. The level of glucose in human blood and brain depends on the type of sugar consumed, with glucose having the highest absorption rate, followed by sucrose and fructose (Karababa & Isikli, 2005).

Today, gastronomic products add value to destinations and create an element of attraction. Molasses has an important place among gastronomic products. It is a known fact today that molasses is a beneficial food to consume for both health and nutrition (Batu vd., 2007). In this study, it was aimed to reveal GI molasses in Turkey and to reveal information about the properties, components and physical properties of these molasses. In line with this goal, information about molasses was compiled by conducting a literature review on molasses. As a result of the literature review, molasses were generally studied specifically, but no studies were found on GI molasses. In this respect, this study is important in terms of contributing to the literature. The research questions to be answered to achieve the purpose of the study are as follows:

- ✓ What are Turkey's GI molasses?
- ✓ What are the components of GI molasses and which component is more?
- ✓ Which region has more GI molasses?
- ✓ What is the production method, harvest period, product used and how long does it take to make GI molasses?
- ✓ Which are Turkey's first and last GI molasses?

2. CONCEPTUAL FRAMEWORK

2.1. Grape Molasses

Desserts have an important place in Turkish cuisine. Halva has taken its place at the top of the list of desserts. There is a special halva section for desserts in Topkapı Palace. It is said that there was this section in the palace because Fatih Sultan Mehmet loved halva so much. In the "yog" tradition, which had an important place in social life during the ancient Turks period, sherbet, compote, and halva have an important place among Mevlid dishes. Molasses and honey were used to sweeten Turkish desserts when sugar was not available. Molasses was used as a sweetening element in kavut, millet, mulberry, starch, and flour halvahs made in the halvah of Mehmet the Conqueror. During the Seljuk period, "those who have kavut, add it to molasses, and those who are wise, take advice" states that the place of molasses is important in the production of halvah. (Baysal, 1997). Kavut is defined as wheat flour added to oil or molasses and roasted. (Sürücüoglu & Celik, 2003). Molasses production has a history of thousands of years in Turkey. At the same time, it is carried out by family management and using local production techniques. It is a known fact that molasses has had positive effects on human health since ancient times (Şimşek et al., 2002). Molasses is known as an ancient food dating

back to the vineyard era of Anatolia (Unal, 1991). Molasses was produced to meet the sugar needs in Turkey when the sugar industry was not sufficiently developed (Simsek et al., 2002).

The production of molasses, which is an important value in Turkish culinary culture, has been going on for many years and is known as a product of Anatolia (Sahin, et al., 2018). Molasses, which has a deep-rooted history, is produced mostly in rural areas and with traditional methods (Turkish Information, 2023). Molasses, a traditional food product produced in Turkey, is generally obtained by concentrating mulberry and grapefruit juices until the soluble solids ratio is 70-80% (Sengül et al., 2007). Fruits containing high amounts of sugar, such as apricots, melons, apples, sugar beets, figs, carobs, plums, figs, and grapes, are among the most preferred ones in molasses production. It is stated that molasses is an important food in human nutrition because it contains high amounts of sugar, minerals, and organic acids (Ustun & Tosun, 1997). Molasses, obtained by concentrating fruit juices and extending their shelf life, is produced without adding any food additives or sugar (Yogurtcu & Kamıslı, 2006).

2.2. Other Types of Molasses

In this section, brief information about the preparation of molasses and molasses types obtained as a result of the literature review will be given.

Andız Molasses: Andız molasses is produced from oath (Juniperus drupacea L.) tree cones as a result of processes such as extraction, pressing, evaporation and clarification-deacidification (Ozdemir, et al., 2004; Turhan, et al., 2007). At the end of September and the beginning of October, the unripe oath fruits fall to the ground as they are on the tree, provided that they are shaken by people and the wind. The fruits collected from the tree and the ground are filled into sacks and brought to the place where the dessert will be made. The shells of oath fruits are broken with the help of hand hammers. The broken pieces are placed in basins, bowls, cauldrons, tins and pots, water is added up to the brim, and after waiting for two days, they are taken into a specially made filtering vessel. The mouth hole of the boat is opened, allowing sugar water to accumulate in front of it, and the filled containers are transferred to the cauldrons on the fire. The boiling process continues until the evening. During boiling, as the liquid boils, foams form on the surface of the boiler, and as the foams on the boiler face are removed with a bowl with a handle, stirring continues, and the foams are collected in a container. Molasses is formed as a result of the evaporation of a significant part of the water in the boiler during boiling. The resulting molasses can be consumed as a dessert alongside meals or made into sherbet (İzgi, 2011).

Mulberry Molasses: Fresh mulberries are generally used in the production of mulberry molasses. However, since mulberry is a perishable fruit, it is dried and stored. Mulberry molasses is rich in mineral substances and contains calcium, potassium, phosphorus, iron, sulfur, and magnesium (Akbulut et al., 2007). In the production of mulberry molasses, first, the mulberries are sorted. After this process, the mulberries are taken into the cauldron and 1/2-1/4 water is added to it, the contents of the cauldron are mixed thoroughly and boiled to ensure that the water penetrates the fruit and provides a homogeneous mixture. After the heating process, which lasts for 30-60 minutes, the wort is allowed to cool to 40-50 ºC. Pressing mechanisms made of concrete or wood are used to perform the pressing process. The pressing process is carried out for at least 20 and at most 40 minutes. The must taken from the press is filtered with the help of cheesecloth and taken into thickening tanks. This process is terminated by looking at the consistency of the molasses obtained. Finally, molasses is mixed, allowed to cool, and stored (Gungor, 2007; Aksu & Nas 1996; Tosun & Keles, 2005).

Grape Molasses: Grape molasses has many features that distinguish it from other foods. It has its special juice, meat, and shell. Each grape type has its unique taste, flavor, and character. It is known as a type of grapevine and is a perennial plant variety. Grape molasses varies depending on its taste. According to taste; sweet and sour, depending on its consistency; They are divided into two groups: liquid and solid (Batu, 2020). Grapes are harvested when the sugar content of grapes increases for molasses production. After the harvested grapes are cleaned, spoiled and moldy grapes are separated and microorganisms are minimized. The cleaned grapes are filled into a sack and the must is extracted by chewing them in a boat with the help of boots. The extracted must be kept overnight, allowing the sediment to settle to the bottom of the container. The resulting must is boiled in copper pots until it thickens. In this process, the wort is mixed and prevented from sticking

to the bottom of the boiler. After the darkening process is completed, the molasses is taken from the stove and left to cool (Sarıtepe, 2018).

Apple Molasses: It is known as a fruit belonging to the Malus genus of the Rosaceae family (Boyacı, 2019). Due to its favorable climatic conditions and consumption diversity, it has been consumed in every region of Turkey from ancient times to the present day. Apple is the fruit with the largest cultivation area after grapes (Bulantekin & Kuscu, 2017). Apples are washed and cleaned to make molasses. After washing, the apples are subjected to the shredding process. Turbid fruit juice is obtained from apples that are shredded for the extraction process. It is stated that the hot pressing process during this stage will increase fruit juice yield (Koca and Karadeniz, 2009). The cloudy juice obtained after extraction is boiled with molasses soil containing 75–95% CaCO3 or with commercial CaCO3. Afterward, malic and tartaric acid, naturally found in apples, are precipitated as calcium malate and calcium tartrate. Pectolytic substances, which give the fruit juice its cloudiness through the depectinization process, are broken down with the help of enzymes (Bulantekin, 2014). The fruit juice, whose acidity is clarified and reduced, is filtered to obtain clear apple juice. Generally, boiled apple juice is concentrated in the 68-80% dry matter range by mixing in open boilers (Kuscu & Bulantekin, 2016).

Watermelon Molasses: To make molasses, after watermelons are harvested, they are washed by removing the dirt and soil on them. In molasses production, microorganisms are required to be at a minimum level on the raw material. After the cleaning process is completed, the watermelons are cut, their insides are filled into sacks and the juice is extracted by squeezing them by hand. The resulting must be in a cloudy state. Due to the low acidity of watermelon, acid removal is not done. The thickening process of the resulting must is carried out in copper vessels with a depth of 15 cm and a width of 70 cm. After 45 liters of the must is taken, it is transferred to a copper container and placed on the stove. The wort is constantly stirred while it is boiling. During cooking, the foams called kef are removed with the help of a tool and the wort is left alone to thicken. The molasses must be stirred constantly to prevent it from caramelizing. Finally, a wooden spoon is used to understand whether the molasses is cooked. It is understood that the molasses taken with a wooden spoon is cooked if it drips onto two adjacent points rather than a single point (Eren, 2011).

Apricot Molasses: One of the most important fruits produced in Turkey is apricot. Must is obtained from both dried apricots and fresh apricots. Fresh apricots that are intended to be used for the table are cleaned in the first stage. The seeds of the washed apricots are also removed. Afterward, the apricots are crushed and pressed to obtain the must. 80-90 degree hot water is added to the fruit pulp separated from the must to ensure its extraction again. First, dried apricots are poured into a boat, soaked, and left to sit for 12 hours. Humidification is achieved with this process. As a result of the process, the dried apricots become soft and some of the sugar is transferred to the water. At the end of 12 hours, the preliminary must be separated from the fruits. The fruits separated from the must are taken into boiling cauldrons, water is added and they are left for heat treatment at 100 degrees. Fruit pulps are taken into packaged presses and subjected to the compression process. As a result of this process, the sugar in the dried apricots is extracted (Batu et al., 2007).

Carob Molasses: Carob (Ceratonia siliqua L.), a perennial plant, belongs to the Ceasalpinaceae subfamily of the Leguminoseae family (Tetik et al., 2010; Yıldırım & Kargıoglu, 2015) and is grown in regions where the Mediterranean climate is dominant. Carob is naturally not processed. It is obtained by extracting it with water, and the extract is directly concentrated and processed into molasses. To produce molasses, crushed carob seeds, separated from their seeds, are generally used to produce carob gum. Afterwards, the extraction process is carried out by mixing it with water at a ratio of 1/5 to 1/10. To increase the diffusion rate during extraction, fruit pieces are moistened beforehand and the ambient temperature is heated to 80-90 degrees. After being extracted with a traditional batch method, the extract containing 10-12% MSM is evaporated up to 70 degrees brix. As a final process, molasses is filled into glass jars or larger metal cans (Turhan et al., 2007).

Beet Molasses: Sugar beet (Beta vulgaris L.), a biennial industrial plant, belongs to the Beta genus from the Chenopodiaceae family (Akca & Isik, 2016). Thanks to the suitability of Turkey's soil and climate structure, beet cultivation is carried out in all regions except high areas (Yıldırım, 2008). The main production area of sugar beet is sugar production. 30% of world sugar production is obtained from sugar beets. It is also used for

molasses, ethyl alcohol, and animal feed (Fedai, 2016). To make sugar beet molasses, the beets obtained after harvesting must first be washed. After the cleaning process, the beets are peeled and placed in small slices into the cauldrons. Water is added to the cauldrons and allowed to boil for 5 to 10 hours. During this process, mixing is done continuously and any foam is removed. After the boiling process is completed, the beets in the boiler are placed in sacks and filtered by pressing. After filtering, it is put back into the boilers and boiled until it reaches the desired consistency (Dundar, 2017).

Table 1. Images of Molasses Types

	
Andız Molasses	Mulberry Molasses
	
Grape Molasses	Apple Molasses
	
Watermelon Molasses	Apricot Molasses

	
Carob Molasses	Beet Molasses

Source: Url-1

2.3. Health Benefits of Molasses

Molasses is a food with high nutritional value in terms of the protein, phenolic substances, organic acids, vitamins, minerals, carbohydrates, and flavonoids it contains. In addition, it is expressed as a very important nutrient for human health (Aliyazıcıoglu et al., 2009; Tounsi et al., 2019; Akkaya et al., 2012; Tounsi et al., 2017). All types of molasses are blood-building and energizing because they contain high amounts of iron. Its benefits have been known in society since ancient times. Molasses varieties have been used as a traditional method in the treatment of many diseases (Yılmaz, 2012). For example, oath molasses is used for jaundice, cough, bronchitis, nausea, and eczema; mulberry molasses, for ulcers, throat and mouth diseases, stomach diseases; carob molasses, regulates blood pressure, ensures healthy dental bones, and relieves shortness of breath; Grape molasses is consumed as a preservative because it is good for the intestines, stomach, kidneys and arteriosclerosis (Karaca, 2009).

The mineral content in molasses is as important as its energy value and sugar composition. Experts recommend that individuals with anemia consume molasses, especially due to its high iron content. In a study conducted by Kayısoglu & Demirci (2006), it was found that the phosphorus, manganese, and sodium contents of molasses produced by the vacuum method were much higher, the calcium content was lower, and the minerals iron, zinc, and potassium were the same in both methods. It was found to contain. In traditional production methods, some minerals may be lost. An increase in the number of some minerals can be observed due to the addition of molasses soil and boiling at high temperatures for a long time in copper, iron, and metal containers (Ozdemir et al., 2004).

3. METHOD

In this study, the content analysis technique, one of the qualitative research methods, was used. Content analysis used in qualitative research is a research method based on interpreting the data in the text with a subjective attitude to identify patterns and themes, as well as to systematically classify the codes (Hsieh & Shannon, 2005). The main purpose of the research is to analyze the content of geographically indicated molasses in Turkey, reveal the properties of molasses, and determine which fruits and plants the molasses are made from. For this purpose, geographically indicated molasses were determined by scanning the word molasses in the search engine of the "Türkpatent" institution. After giving general information about molasses within the conceptual framework of the research, information about molasses types and their preparation is included. Information about making molasses from different fruits and plants is also mentioned. It has been observed that there are a total of 7 molasses with origin and 2 origin names in Turkey. The research was compiled between 05.01.2023-28.02.2023. While the population of the research consists of molasses, the sample consists of geographically indicated molasses. The lack of detailed information about geographically indicated molasses on registered official websites constitutes a limitation of the research.

4. FINDINGS

When the data in Table 2 is examined, it is seen that geographically indicated molasses are made from oath, sugar cane, mulberry and grape. It has been determined that there are a total of 9 registered molasses in Turkey, including 7 origin names and 2 names of origin. When examined by region, it was determined that there were 3 geographically indicated molasses in the Mediterranean Region, 2 in the Central Anatolia Region and Eastern Anatolia Region, and 1 in the Marmara Region and Southeastern Anatolia Region, respectively. It is seen that the first molasses registered was "Karnavas Mulberry Molasses" and the last molasses was "Andırın Andız Molasses".

Table 2. Geographically Indicated Molasses of Turkey

Order	Name of the Geographical Indication	Registration Date	Type	Applicant Province	Registrant Institution
1	Andırın Andız Molasses	11.11.2022	Geographic Sign	Kahramanmaras	Kahramanmaras Metropolitan Municipality
2	Antep Molasses	24.07.2020	Geographic Sign	Gaziantep	Gaziantep Commodity Exchange
3	Belen Komurcukuru Molasses	28.07.2021	Geographic Sign	Hatay	Iskenderun Chamber of Commerce and Industry
4	Duzce Sugarcane Molasses	24.05.2021	Geographic Sign	Duzce	Duzce Provincial Directorate of Agriculture and Forestry
5	Gurun Mulberry Molasses	30.09.2021	Name of Origin	Sivas	Gurun District Governorship
6	Carnival Mulberry Molasses	09.06.2009	Name of Origin	Erzurum	Ormanagzı Village Headman's Office
7	Senykent Grape Molasses	17.03.2022	Geographic Sign	Isparta	Senykent Municipality
8	Sivan Mulberry Molasses	27.01.2021	Geographic Sign	Bingöl	Bingöl Provincial Directorate of Agriculture and Forestry
9	Zile Molasses	17.11.2009	Geographic Sign	Tokat	Zile Commodity Exchange

Source: Turkpatent, 2023.

According to Table 3, it was determined that 33% of geographically indicated molasses was produced with modern methods. The fruits and plants used in molasses are; It has been determined that it is made of 45% grapes, 33% mulberry, and 11% cones and sugar cane. When the consistency of molasses was examined, it was determined that 22% was in solid form. It is seen that the majority of their colors (56%) are dark brown.

Table 3. Information about Molasses with Geographical Indications

Molasses	Production Method	Product Used	Harvest Period	Construction Time	Consistency	Color
Andırın Andız Molasses	Traditional	Cone	September October	10-12 Hours	Liquid	Brown
Antep Molasses	Traditional and Modern	Grape	Perennial	1-2 Hours	Solid	Cream
Belen Komurcukuru Molasses	Traditional	Solid Grape	Perennial	40-45 minute	Liquid	Cream Brown
Duzce Sugarcane Molasses	Modern	Sugarcane	October	-	Liquid	Dark Brown

Gurun Mulberry Molasses	Traditional	White Mulberry	June-August	1 Night	Liquid	Dark Brown
Carnival Mulberry Molasses	Traditional	Mulberry	June	15-40 Minute	Liquid	Dark Brown
Senykent Grape Molasses	Traditional	Purple Grape	Perennial	-	Liquid	Dark Brown
Sivan Mulberry Molasses	Traditional	White Mulberry	June- July	20-30 Minute	Liquid	Dark Brown
Zile Molasses	Traditional and Modern	Sweet Grape	Perennial	5-6 Hours	Solid	White

Source: Turkpatent, 2023.

Some components of geographically indicated molasses are mentioned in Table 4. Numerical data obtained as a result of detailed research are stated in the table. The components of molasses could not be found in the places indicated as dashes.

Table 4. Some Properties of Geographically Indicated Molasses

Molasses	pH	Acid (%)	Moisture (%)	Dry Matter (%)	Sugar (%)	Ash (%)	Source
Andırın Andız Molasses	5,31	-	-	-	73,8	3,93	Ozdemir and Bal, (2014). Turkpatent, (2023).
Antep Molasses	5-6	1	-	-	-	3	Turkpatent, (2023).
Belen Komurcukuru Molasses	5-6	0,30-0,40	-	80	0,66 1,06 10,55	3	Akaydın, (2009).
Duzce Sugarcane Molasses	6,48	1,24	-	72,50	49,90	-	Erbil, (2020). Akdeniz, (2019). Yıldırım, (2008).
Gurun Mulberry Molasses	5,15	0,52	-	74,33	60,22	2,5	Turkpatent, (2023). Yigit, (2016)
Carnival Mulberry Molasses	5,49	-	20,33	-	65,12	2,07	Cakmakcı and Salık, (2022).
Senykent Grape Molasses	4,5-5	0,3-0,4	-	70-80	30-40	1,2-1,3	Turkpatent, (2023).
Sivan Mulberry Molasses	4,77	-	12	63	55	1,84	Turkpatent, (2023).
Zile Molasses	5,05	4,80	28,0	41	82	1,8	Karakaya, (1990).

When Figure 2 is examined, it is determined that the components of molasses include 67% dry matter, 78% sugar, 33% moisture, 44% ash and 33% acid.

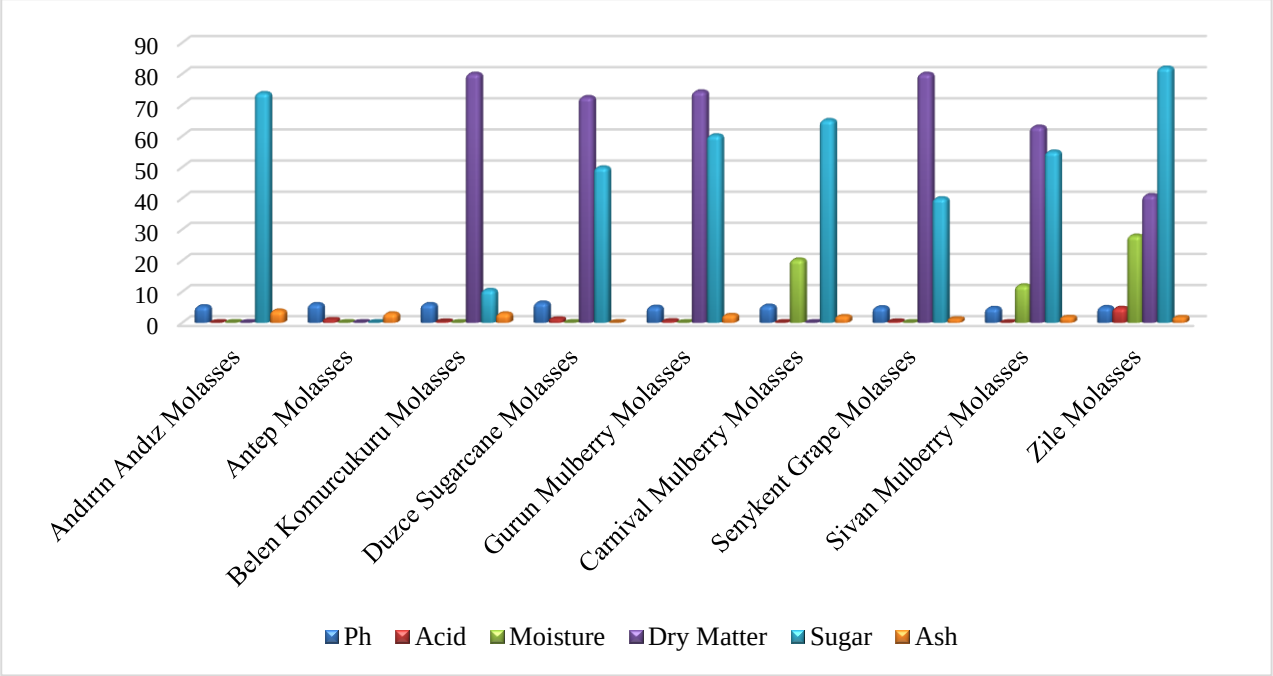

Figure 2. Percentage Values of Components of Geographically Indicated Molasses

5. CONCLUSION AND RECOMMENDATIONS

Molasses has taken its place as a valuable food ingredient in the diet of individuals. Since 2006, molasses is still produced according to old methods in many destinations. The production technologies of molasses have not been changed and have continued to be improved. The dissemination of these technologies is very important in terms of helping people who have forgotten to consume molasses and residing in big city centers regain the habit of eating molasses. It is also important to conduct many studies on this subject (Batu, 2006). Turkish written sources related to molasses began to develop in the 1940s. In 1940, research titled "Technical Research on Grape Molasses" was carried out and traditional molasses production techniques were specified and research was conducted on the components of molasses samples obtained from different regions. After the 1940s, there were studies on sugar beet, watermelon, sugar millet, and grape molasses. In addition, the importance of molasses in nutritional culture has been understood and the number of studies conducted on this subject has increased (Donmez, 2015).

In this study, it is aimed to reveal the geographically indicated molasses in Turkey and to provide information about the properties and components of molasses. As a result of a detailed literature review, it was determined that there are 9 geographically indicated molasses in Turkey. It has been concluded that these molasses are obtained mostly from grapes, mulberries, sugar cane and conifer plants and fruits. In addition, it was determined in the research that the majority of geographically indicated molasses were obtained by traditional methods, when the components of molasses were examined, the highest proportion of molasses was sugar (78%), and when the consistency of molasses was investigated, it was found that 78% of the molasses were consumed as liquid. It was determined that 33% of the molasses researched were produced using modern methods. The fruits and plants used in molasses are; It has been determined that it is made of 45% grapes, 33% mulberry, and 11% cones and sugar cane. When the consistency of molasses was examined, it was determined that 22% was in solid form. It was observed that the first geographically indicated molasses was "Karnavas Mulberry Molasses" and the last geographically indicated molasses was "Andırın Andız Molasses". It was also concluded that the components of molasses contain the most sugar and dry matter, and most of the registered molasses belong to the Mediterranean Region. Based on the research results, the following recommendations have been developed:

- Detailed information about molasses should be included on the relevant websites where molasses are available.

- Research can be done on molasses consumption with a quantitative study. In this way, consumers' knowledge levels about molasses can be measured.
- Studies can also be conducted on geographically indicated molasses using the interview technique. By meeting with relevant people, the process of making molasses and its tips can be determined.
- The health benefits of molasses can also be directly investigated. In this way, it can be revealed which diseases it is good for and what its benefits are.
- There are more engineering studies about molasses. It is important to study molasses as a gastronomic value.

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