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# Spatial distribution of Türkiye's local Turkish coffee kinds

Yeliz Demir<sup>1\*</sup> and Serkan Bertan<sup>2</sup>

## Abstract

This research aims to determine the contents, cooking, and serving styles of local Turkish coffee kinds in Türkiye and to reveal their differences from traditional Turkish coffee. In addition, the distribution of local Turkish coffee kinds determined according to cities and regions was determined. Document analysis was applied to determine the features of local Turkish coffee kinds. In the document analysis, local Turkish coffee kinds are divided into three basic categories according to the codes of "coffee content," "serving style," "cooking method," and "difference from traditional Turkish coffee." Turkish coffee in the first category is prepared without using coffee powder, and local Turkish coffee kinds in the second category differ from traditional Turkish coffee with their features such as the coffee beans are roasted and ground, the presentation of the coffee, the degree of cooking, and the cooking method of the coffee. Different products (local products) are mixed into the coffees in the last local Turkish coffee category. Additionally, local Turkish coffees specific to cities were collected under the "city/region authenticity" code. Black Cumin Coffee, Mirra Coffee, Menengic Coffee, Kenger Coffee, Turkish coffee cooked in a cup, and Dibek Coffee are common local Turkish coffee kinds in some cities and regions.

**Keywords** Coffee culture, Coffee cooking method, Decaffeinated coffee, Coffee service, Turkish coffee, Types of coffee

## Introduction

The homeland of coffee is Ethiopia [1, 2]. It is stated that coffee was brought to Yemen in the 14th [3] century and started to be consumed as a beverage in the same century [4]. It is claimed that coffee was first brought to Mecca and Medina from Yemen [5] and then Anatolia was introduced to coffee through pilgrims in Mecca and Medina [1]. It is seen that different dates are given for the arrival of coffee in Istanbul [4]. It is accepted that coffee came to Istanbul in the early sixteenth century [6]. Additionally, in most of the sources, it is stated that the Governor of

Yemen, Ozdemir Pasha, brought coffee to Istanbul first, and he had the coffee tasted by Suleiman the Magnificent [1, 4, 7].

Coffee, which was consumed by the palace and its notables at first, started to be consumed in mansions and houses [8, 9]. Coffee, which entered the daily life of Ottoman society, caused the emergence of coffeehouses with architectural features [9]. The coffeehouse, which emerged in Anatolian culture, is the name given to *public places to drink coffee* [10]. According to another definition, coffee in a Turkish place is a *cheap and traditional place where mostly men go and consume tea, Turkish coffee, and beverages* [11]. Coffeehouses can be considered social communication mechanisms in Anatolian lands [12]. During the Ottoman period, coffeehouses became places where men exchanged information [10]. Although women and men consume coffee as a beverage from the past to the present, coffeehouses have continued to exist

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as a place for men since Ottoman times [13]. Today, the coffeehouse culture continues in Turkish society [9, 12], and the idea that these places belong only to men continues [13]. The word “Cafe” in Turkish is defined as *a place where men and women mostly go to Turkish coffee, tea, and soft drinks, as well as different types of coffee, where they can drink alcohol and have easy meals* [11]. Today, there are cafes and chain coffee shops where women and men can drink Turkish coffee and other coffee kinds and socialize.

Coffee is a tropical plant and has different varieties. On the other hand, one of the two most known coffee types in the world market is coffee Arabica and the other is coffee Robusta [1, 5, 14]. It is necessary to use Arabica coffee beans to make Turkish coffee [15]. *Roasting degree is one of the most important factors in the taste of Turkish coffee. To achieve the characteristic flavor of Turkish coffee and grind it finely, the beans should remain moist after roasting and not be completely dried. When finely ground, the coffee will heat up because of the friction during grinding, and this heat it produces will create the “post-roasting” effect* [16]. Turkish coffee is defined as *coffee that is cooked in a coffee pot (cezve) on low heat, with sugar, medium, or plain* [17]. While making Turkish coffee, 8 g of ground coffee and a cup (70 g) of room temperature water are mixed with a wooden spoon in a copper coffee pot (cezve). It is cooked on medium heat for 2–2.5 min without stirring. The coffee is taken from the heat without boiling and added to the Turkish coffee cup at a 45-degree angle [18].

A special Turkish coffee cup is used in the traditional Turkish coffee presentation (Fig. 1). A Turkish coffee cup is smaller than other cups, has a single handle, and takes

an average of 50–70 ml of liquid [19]. This is because Turkish coffee is served in a glass cup with water, the mouth is cleaned before drinking it, and it is ready for coffee tasting [19]. It is stated that offering a favorite dessert to the guests increases the value and position of the host [19, 20] and therefore, one of the types of Turkish delight is used in Turkish coffee service [19]. The main ingredients of Turkish delight are starch, sugar, and water [21]. Turkish delight has an elastic texture that feels soft and slippery in the mouth [22] (Fig. 2).

Turkish coffee, a cultural heritage of Turkish society [19], has a long political, social, and cultural history [2]. “Turkish coffee Culture and Tradition entered the UNESCO Intangible Cultural Heritage Representative List in 2013” [23, 24]. Turkish coffee is distinguished from other coffees with its unique aroma, coffee grounds, and foam [25]. The foaminess of traditional Turkish coffee is seen as a useful feature that prevents the coffee from cooling [26], and foamy coffee is seen as more acceptable in Turkish culture [1]. However, families from Antakya prefer coffee without foam and consider foamy coffee sloppy [27]. Also, some local Turkish coffees kinds differ from traditional Turkish coffee in their preparation and presentation. For example, Adana Gar Coffee, Tarsusi Coffee, Süvari Coffee, or Affan Coffee are served in a tea glass [7, 18, 27–29] (Fig. 3). As another example, while a traditional Turkish coffee pot (cezve) (Fig. 4) is used for the preparation of Turkish coffee [2, 26], the traditional “Gümgüm” coffee pot is used for the preparation of Mirra Coffee [7, 14]. Although the cooking and presentation of Turkish coffee have not changed much in the regions of Türkiye, some beverages are obtained by drying and



**Fig. 1** Presentation of Turkish coffee



**Fig. 2** Turkish delight



**Fig.3** Tea glass

grinding plant seeds such as Menengic (*Pistacia terebinthus* L.), Chickpea (*Cicer arietinum* L.), and Kenger (*Gundella Tournefortii* L.) grown in different geographical regions as alternatives to coffee, which is an imported product, and consumed as coffee [1]. In another example, because the bitter (Mirra) coffee had a strong taste in ancient times, the people of the region searched for sweet coffee [18]. They found the “Hilve Coffee” by mixing stone-ground walnuts, honey, and milk into the coffee [18].

In the relevant literature, it is seen that some of the local Turkish coffee kinds are explained in studies on Turkish coffees in the subject [1, 14, 26, 30, 31]. In addition, in some studies on this subject, it has been seen that local coffee kinds belonging to certain cities are indicated [27, 28, 32–50]. Besides, some books introduce Türkiye’s local Turkish coffee kinds [7, 18]. These studies provide important contributions to the literature on the introduction of local Turkish coffee kinds belonging to Türkiye, the determination of their features, and the cultural values of these coffee kinds [1, 7, 14, 18, 26–28, 30–50].

Turkish coffee is important in terms of cultural value. Some cities in Türkiye have city-specific kinds of Turkish coffee. Evaluating local coffee kinds holistically and scientifically recording them scientifically is essential. In the present study, two objectives have been set; the first one is to determine the contents, serving styles, and cooking methods of local Turkish coffee kinds; the second one is to determine the local Turkish coffees owned by the cities of Türkiye and to determine the number of local Turkish coffees owned by the seven regions of Türkiye.

### Methods

The study was conducted in two phases. Firstly, literature on local Turkish coffee was analyzed using the document analysis method to determine the characteristics of Turkish coffee, including “coffee content,” “serving style,” “cooking method,” and “difference from traditional Turkish coffee” (as shown in Table 1).



**Fig.4** Turkish coffee on coal embers (Picture taken from <https://www.kulturportali.gov.tr/portal/turkkahvesi>, [6])

**Table 1** Local Turkish coffees

The local Turkish coffee is prepared without the use of coffee powder	Alanya Almond Coffee Datca Almond Coffee (Datca Bitter Almond Coffee) Kenger Coffee Menengic Coffee (Cedene Coffee–Bittim Coffee) Chickpea Coffee (Fakir Tiryakiye)
Local Turkish coffees differ according to the way the coffee beans are roasted and ground, the presentation of the coffee, the degree of cooking, and the cooking method of the coffee	Affan Coffee (Suvari Coffee–Süvari Coffee) Adana Gar Coffee Ash Coffee (Turkish coffee on coal embers) Dibek Coffee Turkish coffee cooked in a cup Turkish coffee cooked on sand Mandabatmaz Turkish coffee Mirra Coffee Yandan Carklı Coffee
Local Turkish coffees are cooked by mixing different products (local products)	Adiyaman Coffee Black Cumin Coffee Cilveli Coffee Hilve Coffee Mastic gum Turkish coffee Mihrimah Sultan Coffee (Turkish coffee with Milk) Syriac Coffee (Syriac Dibek Coffee–Mardin Dibek Coffee) Tatar Coffee Turkish coffee with Lavender Turkish coffee with Saffron Zingarella Coffee
Local Turkish coffees whose content cannot be determined	Dagdagan Coffee

Secondly, local Turkish coffees specific to cities were collected under the code of “city/region authenticity” (as shown in Table 2). The data were analyzed using Geographical Information System. Spatial distribution [51], point distribution analysis, line and area distribution analysis, and point density analysis [52] which are important methods to understand how the data are geographically distributed and distributed or clustered in a geographical area. Geographic information systems (GIS) play an important role in understanding and analyzing the spatial distribution. GIS is an information technology used to store, organize, and analyze geographic data [53]. GIS is also an effective tool in the mapping and visualization processes of geographic data [54]. Thanks to geographic information systems and spatial analysis methods, spatial patterns, and relationships are better understood, and this information contributes to decision-making processes in many areas [55]. Spatial distribution analysis was conducted using a Geographic Information System (GIS) program to reveal the spatial distribution of local Turkish coffee kinds across different cities. In this study, Geographic Information System software was utilized to examine the distribution of local Turkish coffees within the country. For this purpose, firstly, local Turkish coffees were analyzed and their distribution by cities was mapped. Then, the spatial analysis of the number of local Turkish coffees by cities was evaluated. When the spatial distributions given by the geographical information system program are examined, the distribution of local Turkish coffees according to the cities is given

below (Fig. 11). Because Turkish coffee culture is practiced by every member of society in Türkiye [25], only the distribution of local Turkish coffee kinds is shown in the map below (Fig. 11).

## Results and discussion

### Document analysis

Local Turkish coffee kinds, whose features are determined according to the codes of “coffee content,” “service style,” “cooking method,” and “differential from Turkish coffee,” are grouped under the following categories:

- Local Turkish coffee substitutes prepared without the use of coffee beans.
- Local Turkish coffees differ according to the way the coffee beans are roasted and ground, the presentation of the coffee, the degree of cooking, and the cooking method of the coffee.
- Local Turkish coffees cooked by mixing different products (local products)

The local Turkish coffee kinds determined because of document analysis are shown in Table 1.

### The local Turkish coffee is prepared without the use of coffee powder

#### *Alanya Almond Coffee*

Alanya Almond Coffee is a patented coffee kind [7, 56, 57]. For Alanya Almond Coffee, *the almonds are roasted,*

**Table 2** Local Turkish coffees in the city and region

City	Local Turkish coffee types	Number of local coffees
<i>Mediterranean region</i>		
Adana	Adana Gar Coffee* <b>Mirra***</b>	9
Antalya	Alanya Almond Coffee	
Burdur	Black Cumin Coffee	
Hatay	Affan Coffee* (Suvari Coffee-Süvari Coffee*)	
Isparta	Turkish coffee with Lavender	
Mersin	Tarsusi Coffee* Kenger Coffee <b>Mirra*** = Again</b>	
Kahramanmaraş	Menengic Coffee**	
<i>Aegean region</i>		
Izmir	Dibek Coffee Turkish coffee cooked in a cup Turkish coffee cooked on sand Mastic Gum Turkish coffee	8
Manisa	Cilveli Coffee	
Denizli	Black Cumin Coffee	
Mugla	Datca Bitter Almond Coffee (Datca Almond Coffee) Zingarella Coffee	
<i>Southeast Anatolia region</i>		
Adiyaman	Adiyaman Coffee	7
Batman	Hilve Coffee	
Gaziantep	<b>Gaziantep Menengic Coffee**</b> <b>Mirra***</b> Turkish coffee cooked in a cup	
Mardin	<b>Mirra*** = Again</b> <b>Bittım Coffee (Menengic Coffee**)</b> Syriac Coffee (Syriac Dibek Coffee-Mardin Dibek Coffee)	
Siirt	<b>Bittım Coffee (Menengic Coffee**) = Again</b>	
Sanlıurfa	<b>Mirra*** = Again</b> <b>Menengic Coffee** Again</b>	
<i>Marmara region</i>		
İstanbul	Mandabatmaz Coffee Mihrimah Sultan Coffee-Turkish coffee with milk Ash Coffee (Turkish coffee on coal embers)	5
Kırklareli	Dibek Coffee	
Canakkale	Chickpea Coffee <b>Dibek Coffee = Again</b>	
<i>Eastern Anatolia region</i>		
Elazığ	Cedene Turkish coffee**	3
Hakkâri	Dagdagan Coffee	
Erzurum	Yandan Carklı Coffee	
<i>Central Anatolia</i>		
Eskisehir	Tatar Coffee	2
Sivas	Kenger Coffee	
<i>Black sea region</i>		
Karabük	Turkish coffee with saffron	1

\*Tarz-ı Hususi, \*\*Menengic, \*\*\*Mirra (Note: The same local coffee varieties in different cities of a region are written in bold.)

and almonds are crushed in a mortar and aromatic flavors such as cardamom and carob can be added during the grinding of the almond [7]. It is cooked like Turkish coffee, no sugar is used, and honey is added to sweeten it [7].

#### **Chickpea Coffee (Fakir Tiryakiye)**

Chickpea (*Cicer arietinum* L.) is used in making herbal coffee [42]. This type of coffee is also referred to as “Kahve-i Rūmī” in Ottoman sources [31]. When coffee consumption was banned in the Ottoman Empire, the demand for this type of coffee increased [31]. It is claimed that the demand for Chickpea Coffee increased during the Second World War with a decrease in the import of coffee [31]. Today, Chickpea Coffee is still consumed in Canakkale [31]. It has been reported that Chickpea Coffee is made in a coffeehouse in the Işıkeli village of the Biga district of Canakkale [18]. To cook Chickpea Coffee, first, chickpeas are boiled, dried, roasted, ground, and cooked with the addition of carbonate, traditionally it is recommended to drink Chickpea Coffee with raisins. Boiling water is used in the cooking of Chickpea Coffee [18].

#### **Datca Almond Coffee–Datca Bitter Almond Coffee**

First, to cook Datca Almond Coffee, the almonds are roasted in a pan and ground into a powder. Then, ground almonds and milk were combined in a coffee pot (cezve), and Datca Almond Coffee is cooked like Turkish coffee and coffee can be flavored with honey [18]. It has been reported that this coffee is made in tea gardens around the Datca coast [18]. In addition, it was stated that this coffee is among the gastronomic souvenirs that can be purchased from the province of Mugla [58].

#### **Kenger Coffee**

Roasted, sieved, and crushed Kenger (*Gundella Tournefortii* L.) grains are stored in tightly closed containers to cook coffee [59]. It is drunk plain and cooked with sugar like coffee [18]. It is claimed that the origin of Kenger Coffee is a product left by the ancient nomads and nomads [31]. In Central Anatolia and the Mediterranean region, this plant is consumed as Kenger Coffee [60]. Kenger Coffee is consumed in Mersin (Silifke) [32, 59] and Sivas [33].

#### **Menengic Coffee (Cedene Coffee–Bittim Coffee)**

Menengic Coffee is obtained from roasted and ground pistachio seeds [61]. “*Pistacia terebinthus* L. is a coffee substitute in the paste form obtained by roasting and grinding” [62]. Since Menengic Coffee does not contain caffeine [26]. This beverage is known as coffee among the people because the seeds of Menengic are roasted and cooked like Turkish coffee [7]. It has been reported

that Menengic Coffee is drunk in a larger cup compared to a Turkish coffee cup [61]. Menengic Coffee is particularly drunk in the cities of Siirt [41, 46], Sanliurfa [34], Kahramanmaras [50], and Gaziantep [61]. Gaziantep Metropolitan Municipality has obtained the geographical indication certificate for Gaziantep Menengic Coffee (Antep Menengic Coffee/Gaziantep Menengic Coffee/Antep Melengic Coffee/Gaziantep Melengic Coffee) (Registration Date: 16.12.2020) [62]. Although Menengic Coffee is referred to as Bittim Coffee in Siirt [46], it is larger and more aromatic than Bittim Menengic and Cedene, which are the local coffee kinds of the Siirt and Mardin regions [31].

The coffee, which is called “Menengic Coffee” in the Southeastern Anatolia Region, is called “Cedene Coffee” in the city of Elazig [31]. The raw material of Elazig Cedene Coffee is the fruits of the Cedene tree (*Pistacia terebinthus* L.), which grows wild in the mountainous parts of Elazig [63]. “Elazig Cedene Coffee” was registered by the Elazig Chamber of Commerce and Industry and Elazig Provincial Directorate of Agriculture and Forestry on 22.02.2022 and received a geographical indication certificate [63]. To cook *Elazig Cedene Coffee*, a cup of water or milk (65–80 g), two teaspoons of *Elazig Cedene Coffee* (10 g), and optional two teaspoons of sugar (10 g) are placed in a coffee pot (cezve) and cooking over moderate heat until it boils [63].

Local Turkish coffee kinds in this group do not contain coffee. It is seen that products such as nuts, various herbs, and legumes are used as an alternative to coffee in local Turkish coffee kinds in this group.

**Local Turkish coffees differ according to the way the coffee beans are roasted and ground, the presentation of the coffee, the degree of cooking, and the cooking method of the coffee**

#### **Affan Coffee-Suvari Coffee (Süvari Coffee)**

The coffee served in a tea glass in Hatay is called Süvari Coffee [28], Suvari Coffee (Antakya) [27], or Affan Coffee [43]. It is stated that this coffee is known as Süvari Coffee in the Aegean and “Tarz-ı Hususi” in the Mediterranean as “Tarsusi” [18]. The reasons why coffee is served in a tea glass (Fig. 3) in Hatay include the fact that a cup of coffee is not enough for people [28] and the prohibition of coffee sales [27] can be counted. During the times when coffee was banned, local people started to drink coffee in a tea glass instead of a cup, so that it would not be understood that they drank coffee, and over time they adopted this serving style [27]. In Suvari Coffee (Affan Coffee), Arabica coffee beans are used [27], the coffee beans are dark roasted, and freshly ground coffee is used [28]. The coffee is cooked without foam [27] and sugar [43].

**Adana Gar Coffee-Tarsusi**

A family living in Adana discovered “Adana Gar Coffee” or “Tarsusi” Coffee because of a family-specific roasting method [7]. In addition, it was stated that Tarsusi Coffee is unique to the Mersin region [29]. In this local coffee kind, coffee beans roast normally or double (dark roast), and coffee ordered as a “Gar” has a dark roast, and a strong and intense coffee flavor [7]. Adana Gar Coffee or Tarsusi Coffee is served in tea glass [7, 18, 29] (Fig. 3).

**Dibek Coffee**

Dibek Coffee is a type of Turkish coffee that emerged from the way the coffee beans were ground [45]. In the beginning, Dibek was two slightly dimpled stones used to grind roasted coffee beans, and by rubbing these two stones together, the coffee beans were crushed and ground, later the Dibek had a deeper and more useful structure [45]. The roasted coffee beans in the Dibek are crushed with a wooden or iron hammer until they reach the desired size [45]. The structure of the roasted Coffee that is pounded in a stone Dibek is coarse-grained and does not turn into powder [38]. With this method, the aromatic oils of the coffee are revealed, and it contributes to foam protection when the coffee is cooked [45]. Dibek Coffee stands out as a local Turkish coffee in some cities in Türkiye. Dibek Coffee is traditionally prepared in a Coffeehouse in Kırklareli, which has been around for 142 years [45]. In addition, Dibek Coffee is counted among the local products of the Gökceada district of Canakkale [47] and Zeytinliköy of this district [38]. It is emphasized that Dibek Coffee is a drink that can represent the gastronomy of Izmir and the Peninsula (Urla, Seferihisar, Sığacık, Cesme, Alacati, and the surrounding villages) [39].

**Ash Coffee (Turkish coffee on coal embers)**

Ash Coffee is a type obtained by heating the copper coffee pot (cezve) used in the preparation of Turkish coffee classically, on embers or barbecue [18]. It is emphasized that Ash Coffee was usually served to very important guests during the Ottoman period [30]. The Coffee cooked on the coal fire in the barbecue was also called Ash Coffee [30]. With the spread of coffee machines, Ash Coffee has helped the Turkish-style coffee business to rise again and gain value in Istanbul (around Eminönü, Kadıköy, Maltepe) [18] (Fig. 4).

**Turkish coffee cooked in a cup**

Dibek Coffee is cooked in a cup at the coffee shops in the Izmir Kızlarağası Inn [64]. When Dibek Coffee is cooked in a cup in the Gümrük Han in the Sahinbey district of Gaziantep, after this process, the coffee becomes

bi-colored, and the patent and name rights of this coffee have been taken [18].

**Mandabatmaz Turkish coffee**

Mandabatmaz Coffee, which is consumed with its dense foam, is made in Asmalımescit, Istanbul [18] Details about Mandabatmaz Coffee are given in the images below (Fig. 5).

**Mirra Coffee**

Mirra Coffee is widely consumed in the Southeastern Anatolia Region [14]. It is known that Mirra Coffee, which belongs to the Arab geography, is frequently consumed in regions such as Adana, Gaziantep, Mersin, Mardin, and Sanliurfa in Türkiye [49]. Because Mirra Coffee does not contain any sweetener, its taste is bitter. The coffee beans are roasted slowly, stirring constantly with a wooden spoon [14]. Roasted coffee beans are cooled, taken in a mortar made of stone or brass, and beaten with a mallet [14]. Mirra coffee is cooked in a traditional coffee pot called “Gümgüm” [7, 14]. In this coffee pot (cezve), coffee is brewed in about two hours [7]. Putting the cup on the table or the floor while serving coffee insult to the person who distributes the coffee [19]. In Sanliurfa, Mirra Coffee is served at Urfa “Sıra” nights [35, 36].

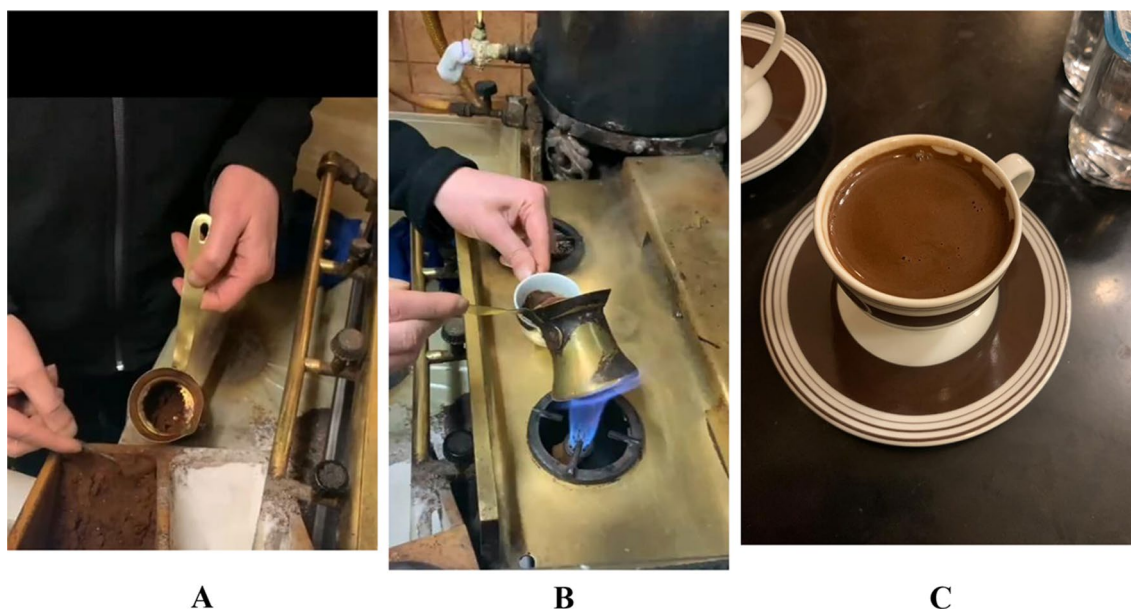
**Turkish coffee cooked on sand**

Turkish coffee cooked in the sand is a technique used for cooking coffee (Fig. 6). In this cooking technique, the sheet metal is heated by placing fine sand on the stove. Coffee is cooked in a copper coffee pot (cezve) or a Turkish coffee cup in the heated sand [65]. Turkish coffee cooked in the sand is cooked in a copper Coffee pot (cezve) for 7 min and in a cup for 10 min [65]. Turkish coffee on the sand in the village of Sirince in Izmir appears to be considered a local food and beverage experience [48].

**Yandan Carklı Turkish coffee**

“Yandan Carklı” describes “coffee or tea with sugar put next to it” [66]. In other words, when sugar or Turkish delight is served next to a plain Turkish coffee cup, it is called “Yandan Carklı” [30]. The beginning of this type of coffee dates to the Ottoman palaces [7]. It is still consumed in this way in the Erzurum region, and its other name, the “Kıtlama (Kit)” method, also means to use sugar economically [18].

Local Turkish coffee kinds in this group differ from traditional Turkish coffee according to the roasting and grinding of coffee beans, presentation of coffee, cooking degree, and method of cooking coffee.



**Fig. 5** Cooking and serving Mandabatmaz Coffee, **A** the ingredients for this coffee are coffee, water, and optional sugar, **B** Mandabatmaz Coffee cooked with hot water and high heat, **C** the presentation of this coffee



**Fig. 6** Turkish coffee cooked on sand. (Picture taken from <https://www.pexels.com/tr-tr/fotograf/geleneksel-turk-kahvesi-turk-kulturu-dikey-atis-16192197/> [71])

#### Local Turkish coffees are cooked by mixing different products (local products)

##### **Adiyaman Coffee**

The preparation of Adiyaman Coffee is the same as for Turkish coffee. This coffee includes coffee, cardamom, mastic gum, Menengic, carob, sahlepe, and cream, and water or milk is used in coffee making [7].

##### **Black Cumin Coffee**

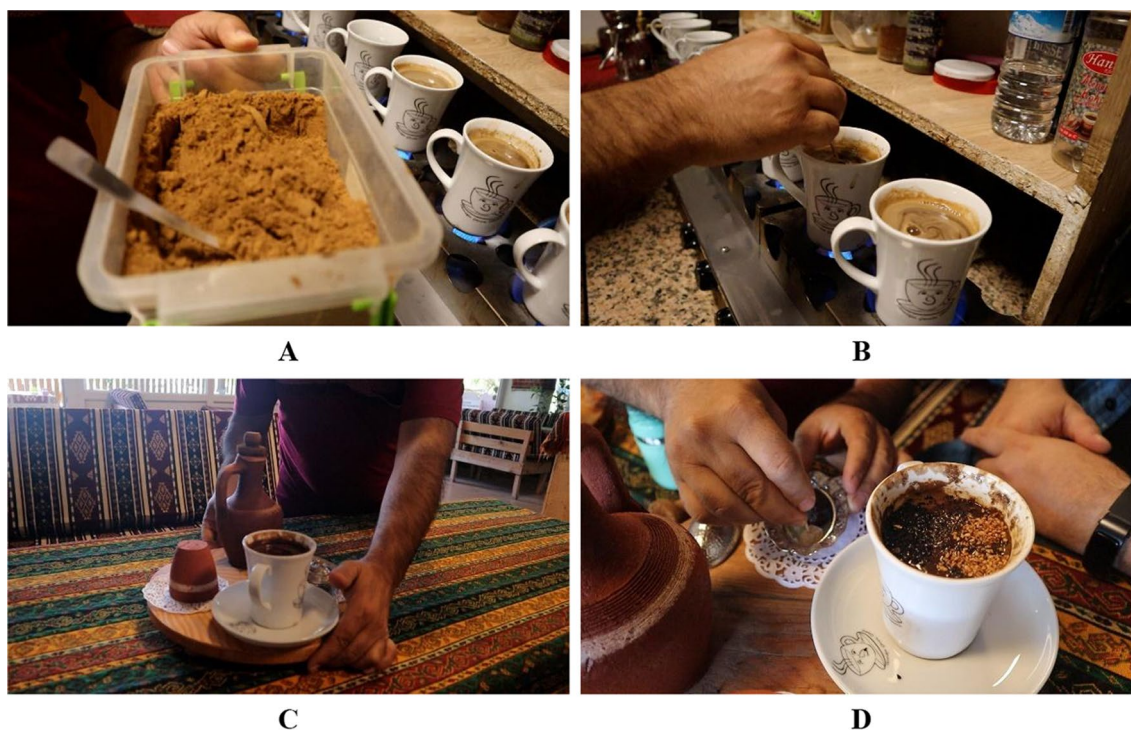
Black Cumin Coffee is a type of coffee that belongs to the cities of Burdur and Denizli [1]. It was stated that Black Cumin Coffee originated from the First World War and in the absence of coffee during the war [18], black cumin seeds were roasted, ground, and turned into coffee [1].

For Black Cumin Coffee, “approximately two teaspoons of black cumin, a teaspoon of roasted chickpeas, cinnamon sticks, cardamom, or nutmeg can be added” [7] has also been stated that chickpeas are used instead of roasted chickpeas in this coffee [18]. *These ingredients are roasted in a pan, and after the roasted mixture is cooled, it is ground with a Turkish coffee grinder. Black Cumin Coffee is cooked like Turkish coffee in a cezve with about four or five grams of Turkish coffee* [7]. The cooking technique for Black Cumin Coffee is the same as that of Turkish coffee [1, 18]. Since this coffee is cooked in a porcelain cup set directly on the fire in the Gölhisar region, the coffee is foamier and stays hot for a longer time [14, 18]. It is served by sprinkling sesame and black cumin over Black Cumin Coffee [14] (Fig. 7).

##### **Cilveli Coffee**

To make Cilveli Coffee, a mixture of double-roasted and ground almonds and two kinds of spices is added to the foamy Turkish coffee in the cup. When serving coffee, a spoon is placed next to it. With this spoon, the guest first eats the almond mixture on the coffee and then drinks the coffee (Fig. 8). An almond mixture





**Fig.7** Ground Black Cumin Coffee, **A** Black Cumin Coffee powder (Burdur), **B** cooking Black Cumin Coffee (Burdur), **C** presentation of Black Cumin Coffee, (Burdur), **D** drinking Black Cumin Coffee. Before drinking this coffee, some black cumin seeds and roasted sesame seeds are added to it (Burdur) [14]. The picture was taken from [72]

eaten with foam creates a special taste in the mouth [19]. When ground almonds are double roasted, the almonds do not sink to the bottom of the coffee [19].

Cilveli Coffee is a type of Turkish coffee belonging to the province of Manisa [19, 26]. It has been reported that this coffee was prepared for princes in ancient times [19]. In Manisa, this coffee is included in



**Fig.8** Presentation of Cilveli Coffee, **A** the foam of this coffee is covered with ground almonds, **B** Cilveli Coffe serving a spoon is placed next to it, **C** the guest first eats the almond mixture on the coffee with the spoon next to the coffee and then drinks the coffee [19]

the marriage ritual [19, 26]. It has been reported that the young girls conveyed the message that they liked the grooming candidate and his family, who came as a seer, by offering Cilveli Coffee [26].

#### **Hilve Coffee**

“Hilve Coffee” is made in Hasankeyf (Batman) [26]. The ingredients of this coffee are Turkish coffee, ground walnuts, and milk [18].

#### **Mastic Gum Turkish coffee**

Mastic Gum Turkish coffee is one of the flavored Turkish coffee kinds. This coffee is a beverage that can represent the gastronomy of Izmir and the Peninsula (Urla, Seferihisar, Sığacık, Cesme, Alacati, and surrounding villages) [39]. To make Turkish coffee with mastic gum, it is recommended to grind the measured mastic into powder, boil it with measured water, filter the water, and then cook the Turkish coffee with cooled mastic water [18].

#### **Mihrimah Sultan Coffee-Turkish coffee with milk**

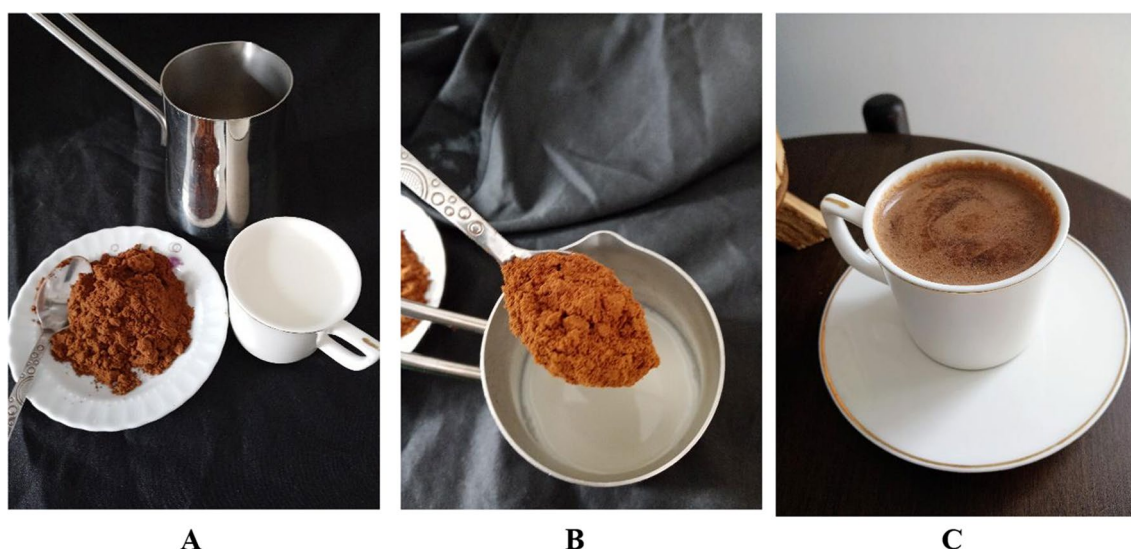
Mihrimah Sultan is the daughter of the Ottoman Sultan Süleyman I and his wife Hürrem Sultan [18]. It is said that this coffee emerged because of the sultan's desire to try coffee with milk because she found it bitter [18] (Fig. 9). Today, Turkish coffee with Milk continues to be served under the name “Mihrimah Sultan Coffee” in some cafes in Üsküdar [7].

#### **Syriac Coffee (Syriac Dibek Coffee-Mardin Dibek Coffee)**

It is said that the coffee called “Syriac Coffee/Syriac Dibek Coffee,” or “Mardin Dibek Coffee” is widely consumed among the people who drink it in the Mardin region, many provinces of Southeastern Anatolia and other provinces [7, 26]. The general features of this coffee are that it has a similar structure to Mirra, it has cardamom, the coffee beans are double-roasted, and it is brewed like traditional Turkish coffee brewing [7]. However, this coffee is boiled by stirring over low heat after the coffee is boiled, it is boiled on the stove for a while, allowing the coffee to get its full aroma [18]. It is also stated that the famous, blue-colored almond candy of Mardin (Mardin Almond Candy) should not be forgotten next to this coffee [7] (Fig. 10). *Almond candies flavored with various spices such as cinnamon and cardamom are produced from local almonds and differ from classical almond candy due to the color and flavor of the candy, and blue-colored almond candy is also called “ghost candy” among the people. It is the root dye obtained from the “Lahor” tree growing in the region that gives the blue color to the candy [67].*

#### **Tatar Coffee**

The other name of Tatar Coffee is Turkish coffee with clotted cream (milk cream) [7, 18, 26]. The Crimean Tatars brought this coffee to the coffee literature [7, 18, 26]. To make Tatar Coffee, clotted cream (milk cream) is added after Turkish coffee is cooked. This coffee is served in cups called “Tostakay” [7, 18, 26]. This cup was larger than a Turkish coffee cup and had no handle. Tatar Coffee



**Fig. 9** Mihrimah Sultan Turkish coffee Making, **A** two teaspoons (7 g) of Turkish coffee and one cup (70 ml) of milk are used to make Mihrimah Sultan Coffee, **B** before putting the coffee pot (cezve) on the cooker the ingredients are mixed. The coffee pot (cezve) is put on the cooker and left to brew until the coffee foams. The coffee is then poured into the cup [18], **C** presentation of Mihrimah Sultan Coffee



**Fig.10** Mardin almond candy is a registered product with a Geographical Indication. (Picture taken from <http://www.mardin.gov.tr/yeni-mardin-mutfagi>, [67])

is widely consumed in some parts of Central Anatolia [7, 18, 26]. Tatar Coffee is still made intensively in Eskisehir [18]. Tatar Coffee is sugar-free [7]. Additionally, this coffee can be drunk by the “Kitlama” method (put the sugar next to the cup) or by adding sugar to it [18].

**Turkish coffee with lavender**

Lavender-flavored Turkish coffee is made in the Kuyucak Village of Isparta [18, 37, 44]. The key point in Turkish coffee with lavender is that Turkish coffee is brewed with chilled lavender water tea [7, 18].

**Turkish coffee with saffron**

Turkish coffee with saffron is offered to visitors at the Safranbolu Turkish Coffee Museum [68].

**Zingarella Coffee**

Coffee contains “burned coffee, “çitlembik” seeds, and a few dried bay leaves” [18]. It is stated that this coffee was introduced to the public in Mugla [18].

Local Turkish coffee is cooked by mixing different products (local products) into Turkish coffee. As in the local Turkish coffee kinds in the first group, the process steps followed in terms of cooking technique or presentation are the same as the process steps used in the preparation of classical Turkish coffee.

**Local Turkish coffees whose content cannot be determined**

**Dagdagan Coffee**

“Dagdagan Coffee” is made from Celtis (Hackberry) seeds in Hakkâri [40]. As a result of the document review, no more data could be obtained about “Dagdagan Coffee”; it was given under this title.

**Spatial distribution of local Turkish coffee kinds**

Figure 11 shows the distribution of the number of local Turkish coffees owned by the cities on the map of Türkiye. When the distribution of local coffee according to the city was examined, there were four local Turkish coffees in Izmir. The names of these local Turkish coffees are Dibek Coffee, Turkish coffee Cooked in a Cup, Turkish coffee Cooked on Sand, and Turkish coffee with Mastic Gum (Fig. 11).

It has been determined that Mersin, Gaziantep, Mardin, and Istanbul have three local Turkish coffee kinds each, and Adana, Sanliurfa, Canakkale, and Mugla have two local Turkish coffee kinds each. Additionally, it is seen that Antalya, Burdur, Hatay, Isparta, Kahramanmaras,



**Fig. 11** Distribution of local Turkish coffee by City

Adıyaman, Batman, Siirt, Kırklareli, Manisa, Denizli, Elazığ, Hakkâri, Erzurum, Eskisehir, Sivas, and Karabük have one local Turkish coffee kinds each.

Türkiye has seven geographical regions: Marmara, Aegean, Mediterranean, Black Sea, Eastern Anatolia, Southeastern Anatolia, and Central Anatolia [69]. While Fig. 11 shows the number of local Turkish coffee kinds owned by cities in Türkiye, Table 2 shows the number of local Turkish coffee kinds in seven regions of Türkiye.

Detailed information about local Turkish coffee kinds is shown in Table 2. In the regional context, Mirra Coffee in the Mediterranean region is referred to as the local Turkish coffee kind in the cities of Adana and Mersin. For this reason, Mirra Coffee was counted once while determining the number of local Turkish coffees owned by the region. This counting process was also performed in other regions. In this context, it has been determined that there are nine local Turkish coffee kinds in the Mediterranean Region, eight in the Aegean Region, seven in the Southeast Anatolian Region, five in the Marmara Region, three in the Eastern Anatolia Region, two in the Central Anatolia Region, and one in the Black Sea Region (Table 2). Additionally, Black Cumin Coffee, Mirra Coffee, Menengic Coffee, Kenger Coffee, Turkish coffee Cooked in a Cup, and Dibek Coffee are common local Turkish coffee kinds in some cities and regions (Table 2).

## Conclusion

In this study, which was conducted to identify and record the local coffee kinds that Türkiye has, and to raise awareness to protect the cultural richness of the local coffee, the spatial distribution of the number of local coffee kinds specific to the cities and region was revealed.

To achieve the first objective of this study, document analysis was performed to determine the characteristics of local Turkish coffee kinds. In the document analysis, local Turkish coffee kinds were classified using the codes of “coffee content,” “serving style,” “cooking method” and “difference from Turkish coffee.”

The first group of local Turkish coffee kinds is Alanya Almond Coffee, Datca Bitter Almond Coffee (Datca Almond Coffee), Kenger Coffee, Menengic Coffee (Cedene Coffee-Bittim Coffee), and Chickpea Coffee (Fakir Tiryakiye). The local Turkish coffee in this group is prepared without the use of coffee beans. However, these local Turkish coffees use the cooking or presentation techniques used in traditional Turkish coffee.

Adana Gar Coffee, Affan Coffee (Süvari Coffee-Suvari Coffee), Dibek Coffee, Turkish coffee cooked in a cup, Mandabatmaz Turkish coffee, Mirra Coffee, Turkish coffee cooked on sand, Yandan Carklı Coffee, and Ash Coffee (Turkish coffee on coal embers) are the local Turkish coffee kinds in the second group. Local Turkish coffee

kinds in the second group contained coffee. The Coffee in this group differs from traditional Turkish coffee according to the roasting of the coffee beans, the cooking method, and the presentation of the coffee.

Local Turkish coffee kinds in the last group are Adıyaman Coffee, Black Cumin Coffee, Cilveli Coffee, Hilve Coffee, Turkish coffee with lavender, Mihrimah Sultan Coffee (Turkish coffee with Milk), Turkish coffee with saffron, Mastic Gum Turkish coffee, Syriac Coffee (Syriac Dibek Coffee-Mardin Dibek Coffee), Tatar Coffee, and Zingarella Coffee. Local Turkish coffee kinds in the last group contained coffee and the coffee in this group was cooked by mixing different or local products. As in the local Turkish coffee in the first group, the process steps followed in terms of cooking technique or presentation are the same as those used in the preparation of classical Turkish coffee. In addition, because of the document review, information about the content, cooking, and serving style of Dagdagan Coffee could not be obtained.

To achieve the second objective of this research, local Turkish coffee kinds were classified according to the “city/region authenticity” code in the document analysis. In addition, the number of local Turkish coffee kinds owned by the cities is shown on the map of Türkiye, and their spatial distribution is shown. Moreover, the number of local Turkish coffee kinds owned by the seven regions of Türkiye has been determined.

The spatial distribution of the local Turkish coffee kinds obtained because of the document analysis has been revealed with the geographic information system program. İzmir is the leading city in terms of local Turkish coffee kinds. The Mediterranean region is the region with the highest number of local Turkish coffee kinds. The second place is the Aegean region, and the third place is the Southeastern Anatolia Region. The region with the least local Turkish coffee kinds is the Black Sea Region.

## Limitations of the research

It is reported that there are 40 types of coffee in Safranbolu Turkish Coffee Museum [70]. As a result of the document analysis made in this research, there are 26 different types of local Turkish coffee directly belonging to the cities or regions.

## Suggestions

In future, researchers can provide more data on local Turkish coffee kinds from experts and local people through semi-structured interviews. Because of the document analysis, it has been determined that there are 26 local Turkish coffee kinds owned by the cities in the context of locality in Türkiye. However, it was determined that the Geographical Indication Certificate was obtained only for Gaziantep Menengic Coffee and Elazığ

Cedene Coffee. To preserve, maintain, and transfer the local Turkish coffee culture of Türkiye to future generations, these Turkish coffee kinds should be protected and recorded in a national and international context.

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