

A Concise History of Turkish Pharmacopœias from 1818 to 2007

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Pharmacopœia might be defined as a collection of formulae for medical preparations. It embodies a list of approved drugs and describes the various methods of preparing them, together with the proper weights and measures to be employed for accurate compounding. Since the profession's extensive development over the course of time can easily be observed by searching through pharmacopœias, these books are among the most significant resources in terms of the history of pharmacy.

In light of this, this study aims to address Turkey's pharmaceutical progress in the last two centuries from a historical perspective. Consequently it examines Turkish pharmacopœias, codices, and formularies from several different angles, primarily focusing on the content, but also physical appearance, publication details and so on. The materials of this study were obtained mainly from the personal collections of Prof. Emre Dölen, Prof. Bayhan Çubukçu, Prof. Afife Mat, Mr. Mert Sandalci, Mrs. Nermin Hastas and from my own collection. Related books and articles were also obtained from the personal archives of the authors and the libraries of Istanbul University, Ankara University, and the National Library in Ankara. It is my hope that this study will be an introduction to the history of Turkish pharmacopœias and guide researchers for more detailed studies in the future.

At this point I must say that this subject provided extensive research opportunities for us. However, considering the fact that I have a limited time for this presentation, I will do my best to address each of them as quickly as possible.

Although some drug formularies, called acrabadins, were used before, the first pharmacopœia of the Ottoman Empire goes back to 1818. Pharmacopœias which were published in Istanbul and used in the period of the Ottoman Empire are as follows:

1818 – *Pharmacopœia Geniki* by Brugnatelli,

1844 – *Pharmacopœia Castrensis Ottomana* by Dr. Charles Bernard,

1859 – *Vade Mecum del Medico Pratico e del Farmacista* by Dr. Gio. Spagnolo,

1874 – *Dustur-ul Edviye* by Dr. Huseyin Sabri Bey,

1892 – *Annuaire Oriental de Médecine et de Pharmacie* by Pierre Apéry,

1912 – *Guide Complet pour les Pharmaciens civils et militaires* by Mehmet Suleyman.

Furthermore, books which were published abroad and used by Turkish pharmacists and doctors during that period include:

1905 – *Formulaire Clinique du Praticien* by Dr. Courtois-Suffit and L. Lafay,

1909 – *Guide Formulaire de Thérapeutique Générale et Spéciale* by Dr. V. Herzen,

1909 – *Nouveau Formulaire Magistral* by A. Bouchardat et G. Bouchardat,

1910 – *l'Officine – Répertoire Général de Pharmacie Pratique* by Dorvault,

1913 – *Formulaire Consultations Médicales et Chirurgicales* by G. Lemoine and E. Gérard,

1913 – *Formulaire Pratique de Thérapeutique et de Pharmacologie* by A. Gilbert et P. Yvon,



1920 – *Codex Medicamentarius Gallicus - Pharmacopée Française*,
1923 – *Formulaire Astier - Vade Mecum de Médecine Pratique* by Vigot Frères,

1. Pharmacopoeia Geniki: This book is a Greek translation of Dr. Luigi Brugnatelli's *Pharmacopoeia* which was first published in 1802 under the name *Farmakopoea ad uso degli Speciali, e Medici Moderni della Repubblica Italiana*. It was translated by Dr. Dionysiou Pyrrou (1774-1853) who was an Orthodox priest studied medicine and philosophy at the University of Pavia. The book was published in Istanbul in 1818. It has 266 pages in total, and consists of 214 monographs in 2 chapters. In addition, there is an index together with a list of some teachers and students, and a table for tools and instruments for drug making at the end.

2. Pharmacopoea Castrensis Ottomana: This book, which is also known as *Pharmacopée Militaire Ottomane*, was written by Dr. Charles Bernard, director of Ecole Militaire Ottomane de Medecine (1808-1844). It was published in Istanbul in 1844, and consists of 161 pages. It is written in both Latin and French. From the foreword we understand that Dr. Bernard prepared this book for the use of military health organizations and hospitals in general. It has 4 chapters: 1. Drogues simples (Simple medications, p. 1-21), Chapter 2: Médicaments préparés et composés (Prepared and compounded medications, p. 22-94), Chapter 3: Formulaire à l'usage des hôpitaux militaires (Formulary for military hospital's usage, p. 95-126), Chapter 4: Tables (Tables, p. 127-139).

3. Vade Mecum del Medico Pratico e del Farmacista: This book was written by Dr. Gio. Spagnolo and published in Istanbul in 1859. It has 208 pages and is written in Italian. The cover indicates that it was published for the use of Ottoman physicians, surgeons and pharmacists. The book includes several sections like Austrian units of measurement and their equivalents in some European cities (p. 7-8), an approximate decimal ruler (p. 9), regulations for medication doses (p.10), abbreviations (p.11), Farmacologia (pharmacology, p. 13-183), Tossicologia (toxicology, p. 184-193), Formule et Préparations Officinales (Official preparations, p. 194-205) and indice (index, p. 206-208)

4. Dustur'ul Edviye: This book is a translation of the *Pharmacopée Française 1866*. It was translated by Dr. Huseyin Sabri who was a teacher at Mekteb-i Tibbiye-i Mulkiye, and was published in Istanbul in 1874. It has 544 pages and is written in Ottoman Turkish. The book which is in Prof. Emre Dölen's collection is 21 cm long, 13 cm wide, and 3 cm thick.

5. Annuaire Oriental de Médecine et de Pharmacie: This book was written by Pierre Apéry and was published in Istanbul in 1892. It has 440 pages and is written in French. It consists of 3 chapters: Chapter 1: Nouveaux remèdes (New Remedies, p. 1-177), Chapter 2: Du traitement de quelques maladies d'après les derniers travaux des médecins des hôpitaux de Paris (Treatment of some illnesses based on the latest studies of doctors in Paris hospitals, p. 181-321), Chapter 3: Règlement sur l'exercice de la médecine civile en Turquie (Regulations for the practice of civic medicine in Turkey, p. 325-395)

6. Guide Complet pour les Pharmaciens civils et militaires: This book was written by Mehmet Suleyman, a military inspector of the Ottoman Empire. It was published in 1912. It has 224 pages, and is written in Ottoman Turkish. It consists of several sections, such as regulations for surgeons and pharmacists in military service and a seniority notebook (p. 192-

196). Unfortunately, since our copy is missing the last 27 pages, we were not able to determine their contents.

After the proclamation of the Turkish Republic in 1923, three years later, on March 3, 1926, law no. 767 concerning the preparation of a national pharmacopoeia was legislated by the new government. This law mandated the establishment of a commission which would work on writing a national pharmacopoeia. During the same time, as one of Atatürk's reforms for the new Republic, the Ottoman script was replaced with a phonetic variant of the Latin alphabet by law 1353 on November 1, 1928. This situation necessitated a translation movement for medical references, including pharmacopoeias. The commission's work concluded in 1929 and the first national pharmacopoeia came into being one year later in 1930.

Here is a list of official Turkish pharmacopoeias from 1930 to today:

- 1930 – *Türk Kodeksi* (Turkish Codex) (1st Edition)
- 1940 – *Türk Kodeksi* (2nd Edition)
- 1948 – *Türk Kodeksi* (1940's re-printing with a supplement)
- 1954 – *Türk Kodeksi* (1948's re-printing)
- 1974 – *Türk Farmakopesi* (*Türk Kodeksi*)
- 2004 – *Türk Farmakopesi I* (*Adoption of the European Pharmacopoeia*)

In addition, it has been discovered that the following books were used “unofficially” by Turkish pharmacists:

- 1925 – *Formulaire Pratique de Thérapeutique et de Pharmacologie (Ancien Formulaire de Dujardin-Beaumetz et Yvon)* by A. Gilbert et Ch. Michel,
- 1927 – *Aide Mémoire de Poche du Médecin et du Pharmacien* by Michel Sophroniadis and Antoine Stouyannidis,
- 1928 – *Eczacinin El Kitabı* (hand book of a pharmacist) by Fuad Mehmet,
- 1931 – *Hekimler için İlaçlar ve Tedaviye Ait Muhim Notlar* by Sark İspenciyari Laboratuvarı,
- 1931 – *Aide Mémoire de Poche du Médecin et du Pharmacien* by Michel Sophroniadis and Antoine Stouyannidis,
- 1932 – *Formulaire Bouchardat* by A. Desgrez et F. Rathery,
- 1935 – *Formulaire des Médicaments Nouveaux pour 1935* by Dr. R. Weitz,
- 1937 – *Formulaire Astier – Vademecum de Médecine Pratique* by Vigot Frères,
- 1938 – *Guide-Formulaire de Thérapeutique* by Dr. V. Herzan,
- 1938 – *Formulaire des Médicaments Nouveaux pour 1938* by Dr. R. Weitz,
- 1938 – *Formulaire Pratique de Thérapeutique et de Pharmacologie* by M. Loeper et Ch. Michel,
- 1939 – *Tıbbi Hazır İlaçlar* by Hulki Goknar and Nizameddin Diler,
- 1946 – *Pratik Tıbbi Formüller* by S. J. Becarano and Cemal Emden,
- 1946 – *Tıbbi Spesiyalitelere ve Kullanılışları* by Dr. Hamdi Unutmaz, Dr. Said Erbil and Dr. Cemal Soydan,
- 1949 – *Formulaire des Médicaments Nouveaux pour 1949* by Dr. R. Weitz et J. Singier,
- 1949 – *Formulaire Médical Français* by A. Duchemin et G. Boez,
- 1949 – *Prescriptions Magistrales et Produits Officinaux* by R. Tiffeneau, J. Singier et J. Boissier,



- 1949 – *Kozmetik Mustahzarlar Imal Formuleri* by Ragip Saib Atademir,
1950 – *Tibbi Formuller ve Tedavi Esaslari* by Prof. Saib Ragip Atademir,
1955 – *Tedavi ve Receteler* by Dr. B. K. Varvar,
1956 – *Doktor ve Eczacilarin El Kitabı* by Kasim Cemal Guven,
1971 – *Tibbi Formuler (Spesialiteler Dahil)* by Kasim Cemal Guven,
2006 – *Vademecum, Eczacilar Icin Ilac Rehberi* by Bilal Gunes,
2007 – *TIK-5 2007 Formuleri (Turkiye Ilac Kilavuzu)* by Oguz Kayaalp,
2007 – *Vademecum Modern Ilac Rehberi* by Dr. Riza Ommaty,

Now, let's take a look at the 6 official Turkish pharmacopoeias in more detail:

1. Turk Kodeksi 1930 (Turkish Codex): This was the first official pharmacopoeia of the Republic of Turkey. It consists of 605 pages, and was published in Istanbul. From the foreword we understand that the commission members who were assigned to write this book greatly benefited from several different pharmacopoeias, including American, French, Swiss, and German pharmacopoeias. Turk Kodeksi 1930 has 659 monographs; and names are given in Turkish, Latin and French.

2. Turk Kodeksi 1940: This book is an updated edition of the Turk Kodeksi 1930. Seventy-one drugs were added and twenty-five were omitted from the 1930 Codex. It has 837 pages and was also published in Istanbul. Like the previous edition, this book also includes indexes in Turkish (p. 795-809), Latin (p. 810-820), and French (p. 821-837).

3. Turk Kodeksi 1948: This book is an updated version of the Turk Kodeksi 1940. It also includes a supplement at the end. It has 955 pages and was published in Istanbul. Like the previous ones, this book also includes indexes in Turkish (p. 907-923), Latin (p. 924-936), and French (p. 937-955).

4. Turk Kodeksi 1954: This book is a facsimile of the Turk Kodeksi 1948, published in 1954.

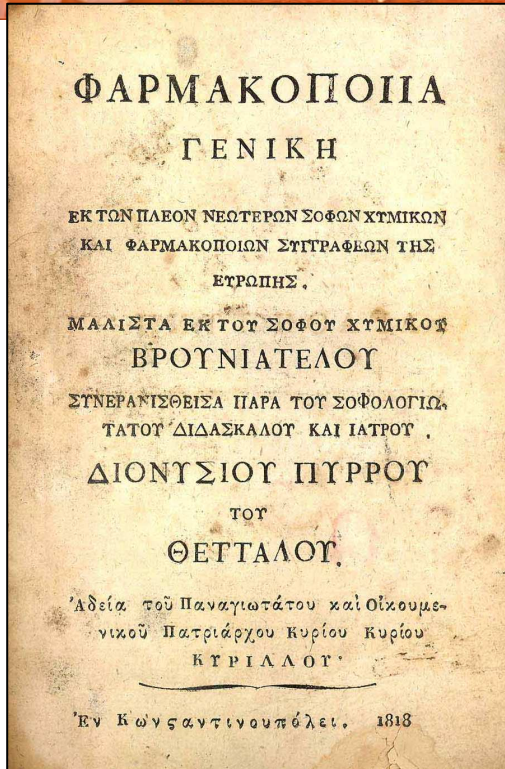
5. Turk Farmakopesi 1974: This book is completely different from the others we have mentioned so far. In contrast to the aforementioned ones the name of this book is pharmacopoeia instead of codex. According to the forward of the book, the commission used several resources like *Pharmacopoea Internationalis (I, II, Supplement)*, *Specification for the Quality Control of Pharmaceutical Preparations (1967, Supplement 1971)*, *British Pharmacopoeia 1968 and 1973*, *European Pharmacopoeia, U.S.P. XVIII*, during its preparation. It is written in Latin and Turkish, and was published in Istanbul. It has 947 pages and includes 617 monographs and 57 supplements. Unlike the previous publications, it includes only a Turkish index.

6. Turk Farmakopesi I (Adoption of the European Pharmacopoeia): Our last pharmacopoeia is the Turk Farmakopesi I which is actually an adoption of the European Pharmacopoeia. As you know, Turkey's candidacy to become a member of the EU is still underway. Although the country has not yet been accepted as a member of the Union, several different regulatory changes and modifications which span from healthcare to education, law to economy, and so on, have been implemented by Turkish authorities in order to reach EU standards. Therefore, in 2004, the European Pharmacopoeia was accepted as the national

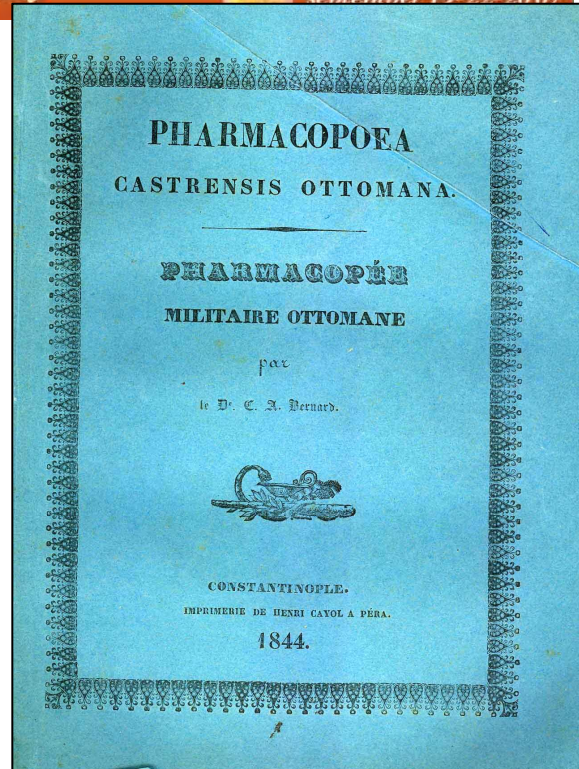


pharmacopoeia of the country by the Ministry of Health. The book was published in Ankara, and has 390 pages. It consists of the following chapters: 1. General cautions, 2. Method of Analysis, 3. Containers and materials for them, 4. Reactives, and 5. General issues.

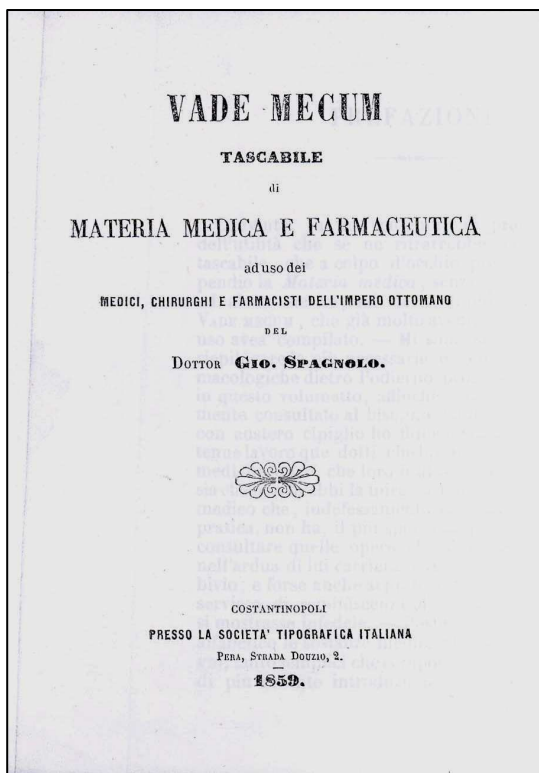
In conclusion, throughout the history of Turkish pharmacy, twelve different pharmacopœias have been published and used by pharmacists in Turkey. Six of these books belong to the period of the Ottoman Empire and were mostly written in languages other than Turkish, such as French, Italian, Greek and Latin. Recently, the Turkish Ministry of Health authorities have officially approved the use of the *European Pharmacopœia* since the Turkey's EU membership is underway.



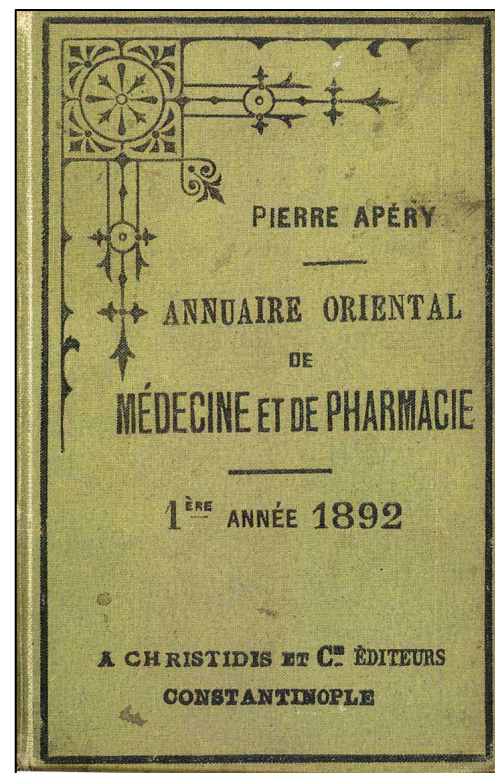
Pharmacopoeia Geniki (1818)
(Mert Sandalci Collection)



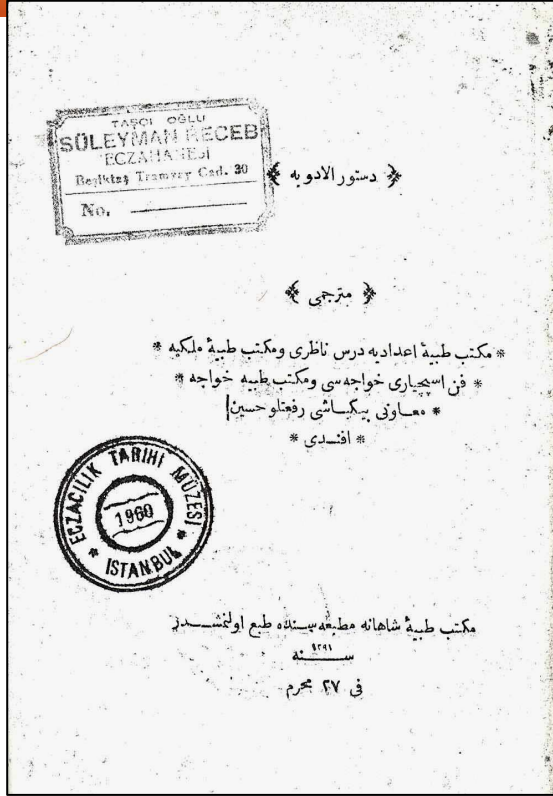
Pharmacopoea Castrensis Otomana (1844)
(Mert Sandalci Collection)



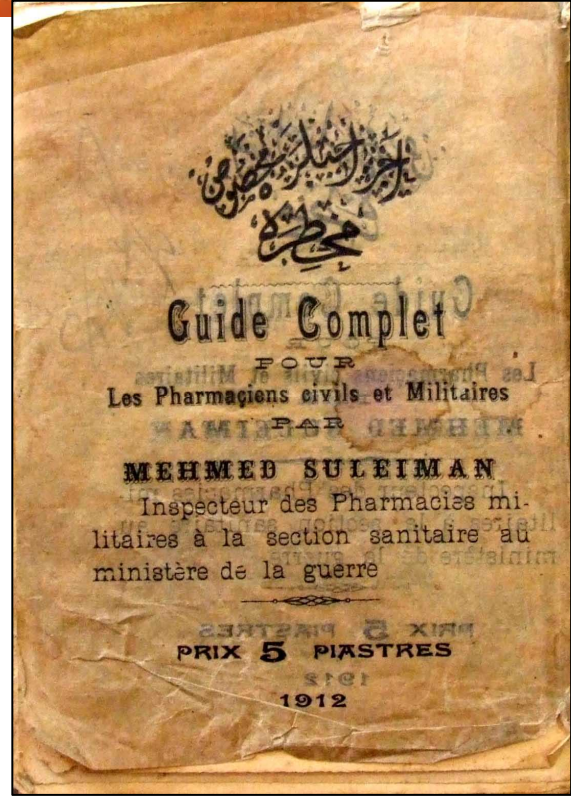
Vademecum Tascabile di Materia Medica e
Farmaceutica (1859)
(Mert Sandalci Collection)



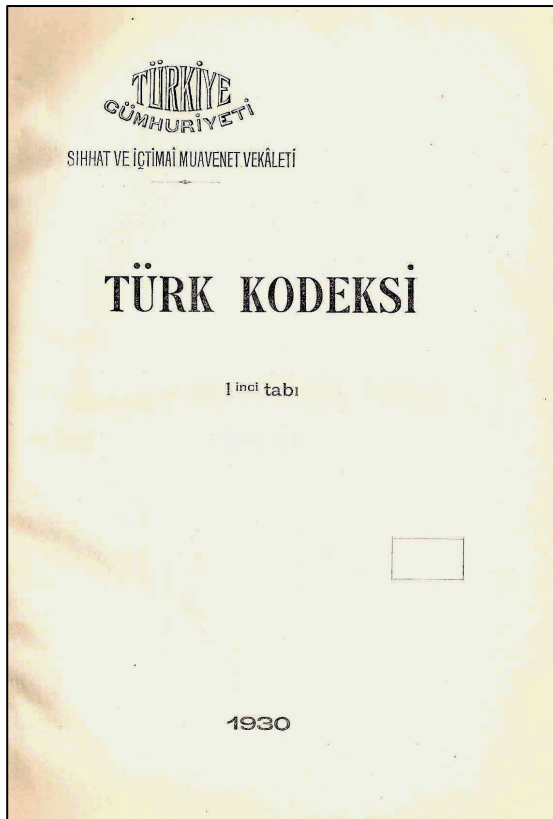
Annuaire Oriental de Médecine et de
Pharmacie (1892)
(Afife Mat Collection)



Dustur'ul Edviye (1874)
(Bayhan Cubukcu Collection)



Guide complet pour les pharmaciens civils et militaires (1912)
(Mert Sandalci Collection)



Türk Kodeksi (1930)
(Halil Tekiner Collection)



Türk Farmakopesi I – Avrupa Farmekopesi Adaptasyonu (2004)
(Halil Tekiner Collection)