

THE CIVIL PHARMACOPOEIAS OF AUSTRIA

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INTRODUCTION

In Austria, pharmacies appeared for the first time in the 14th century. The records cite the towns of Innsbruck (Tyrol), Vienna, Krems and Wiener Neustadt (Lower Austria) as the first places where pharmacies were established. At that time, there existed no regulations in the Austrian territories regarding the apothecary's professional education, and no standards for producing medicines were set up. In general, the apothecaries prepared their medicines according to the recipes of the physicians who, for their part, relied on the texts of Galen, Avicenna and other acknowledged medical authorities. The different medical texts often listed medicines, which had the same names but differed in ingredients or weight ratios. Therefore, such medicines often showed great differences in their formulas.

In 1389, twenty-four years after the founding of the University of Vienna, the Medical Faculty came into being. Since the early 15th century, the Medical Faculty tried to gain influence upon Vienna's apothecaries in order to improve the quality of the dispensed medicines and to implement uniform preparation modes. As the Viennese apothecaries were citizens of the town underlying the town's jurisdiction, the faculty's influence was limited. For decades, the apothecaries, backed up by the town council, battled successfully against the attempts of the Medical Faculty to get the right for supervision and to introduce an apothecary order and a dispensatory. Finally, in 1517, the Emperor Maximilian I bestowed a privilege upon the Medical Faculty which granted the faculty the right to inspect the Viennese pharmacies and to examine the identity, quality and proper storage of the medicinal ingredients and the formulated preparations. This privilege might have triggered the writing of the first dispensatory, the "Dispensatorium Vienensium", which, however, was never put into force.

DISPENSATORIUM VIENENSIIUM (16th century)

A handwritten copy of that dispensatory is part of a collection of medical manuscripts (Codex 11548), which are kept in the Austrian National Library in Vienna. The text, written by an unknown author, dates most likely from the time between 1520 and 1530. The dispensatory contained 353 medical prescriptions arranged in 16 sections, but there were no entries

regarding crude drugs or minerals. Occasionally, the text mentioned scarce instructions for preparation procedures. The majority of the prescriptions based on the recipes of the most valued medical authorities of the time such as Avicenna, Galen, or Mesue and referred, in particular, to the *Antidotarium Nicolai parvum*, *Dispensatorium Nicolai Prepositi* and the *Luminare Maius* of Johannes Manlius de Bosco.

DISPENSATORIUM PRO PHARMACOPOEIS VIENNENSIBUS IN AUSTRIA (1570)

In 1564, Emperor Ferdinand I enacted the First Viennese Apothecary Order. That order did not mention the "*Dispensatorium Vienensium*" but demanded instead the elaboration of a new pharmacopoeia. A few years later, in 1570, the Viennese Medical Faculty created a new dispensatory, the "*Dispensatorium pro pharmacopoeis viennensibus in Austria*", which only existed in two handwritten copies and, similarly to the former *Dispensatorium Vienensium*, has never been introduced officially. The writer of the text was Johannes Rucardus (Ruckhard) from Torgau, Saxony, a student of medicine at the University of Vienna.

The latter dispensatory consisted of a collection of recipes, which still referred to well-known authorities such as Avicenna, Rhazes, Mesue and Nicolaus Prepositus. However, that dispensatory differed from the former "*Dispensatorium Vienensium*" by an increased number of sections (18), listed 830 crude drugs of plant and animal origin and minerals, and included more medical preparations (a total of 394). Only about one third of the recipes equalled those of the older dispensatory. It is unknown why the emperor did not approve that dispensatory. Possible reasons for the missing approval could have been the petty jealousy between the Medical Faculty and the Viennese Government or other problems due to the pest epidemics of 1570 and 1571.

THE ADOPTION OF THE PHARMACOPOEIA AUGUSTANA (1616)

In 1602, Emperor Rudolf II enacted another apothecary order which did not mention the "*Dispensatorium pro pharmacopoeis viennensibus in Austria*", but instead demanded again a new dispensatory. The need for a pharmacopoeia was obvious and, finally, in 1616, the Dean of the Viennese Medical Faculty proposed to introduce in Vienna, Lower and Upper Austria the widely recognised pharmacopoeia of Augsburg, the *Pharmacopoeia Augustana*. A commission, set up to take a decision on that proposal, followed the suggestion of the dean and advocated the adoption of the *Pharmacopoeia Augustana*, edition of 1613.

In 1618, an amendment to the Pharmacopoeia Augustana, the “Catalogus medicamentorum compositorum, a decano et collegio medico archigymnasii Viennensis consignatorum” was put into force. The Viennese Medical Faculty had worked out that amendment to consider the specific situation in Vienna. The catalogue listed 708 preparations of the Pharmacopoeia Augustana, which each pharmacy had to have in stock. Furthermore, it contained various recipes and regulations set up for Vienna considering the prescription habits of the Viennese physicians. The apothecaries were obliged to swear an oath that they would respect this catalogue. In 1692, a second edition of this catalogue was published in Frankfurt.



Frontispiece
Pharmacopoeia Augustana renovata,
1684

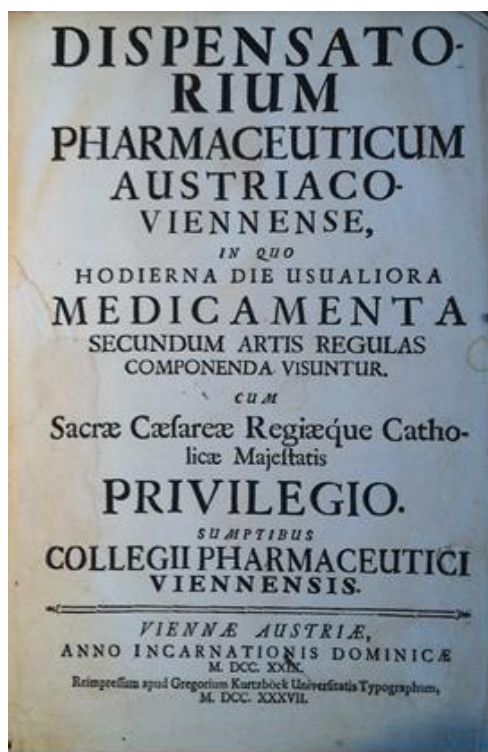
In other parts of Austria, the Pharmacopoea Augustana was also the relevant pharmacopoeia. In Innsbruck, the apothecaries seemed to have followed that above mentioned pharmacopoeia already since the late 16th century. Their form of oath contained an instruction to dispense the medicines according to the dispensatory, which referred obviously to the Pharmacopoeia Augustana. At least, the apothecary order for Innsbruck of 1603 stipulated its use there. In Linz, the Pharmacopoeia Augustana became effective in 1615 and in Graz in 1660. At that time, sanitary regulations and dispensaries were only valid for towns or defined territories, a situation resulting from a lacking centralised health care system in the Habsburg Empire.

It took another century before the first Austrian dispensatory came into being.

DISPENSATORIUM PHARMACEUTICUM AUSTRIACO-VIENNENSE

(1729 – 1774)

(The Viennese Dispensatory)



Title Page
Dispensatorium Pharmaceuticum
Austriaco-Viennense
1737

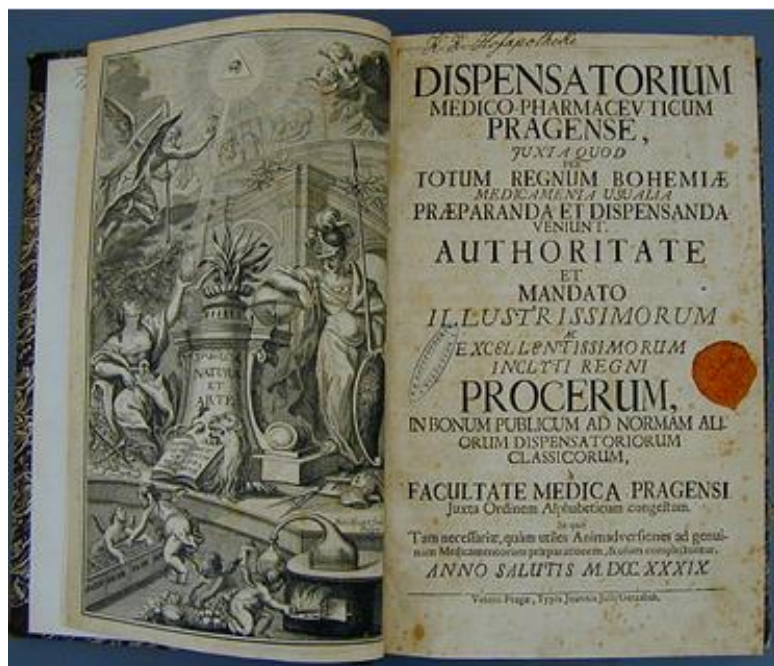


Frontispiece
Dispensatorium Pharmaceuticum
Austriaco-Viennense
1737

In 1726, the Viennese apothecary board (Collegium Pharmaceuticum Viennense) finally took the initiative to establish a pharmacopoeia at their own costs. The public authorities sanctioned this approach in 1729 on the condition that the apothecaries observed the guidelines set up for that dispensatory by the Viennese Medical Faculty. As the work on the dispensatory had already been in an advanced state, the apothecary board published the first Austrian dispensatory—the "Dispensatorium Pharmaceuticum Austriaco-Viennense"—in the same year.

In 1729, all apothecaries of Vienna had to comply with this new pharmacopoeia. Eight years later, the second edition of 1737 was legally valid in all Austrian territories (including the Austrian Netherlands). Several editions of the Viennese Dispensatory, which hardly differed in their contents, were issued in Vienna until 1774 (1729, 1737, 1744, 1751, 1765 and 1770). Another print of the dispensatory came out in 1747 in Brussels, which was a reprint of the 1737 edition enlarged by an appendix of the Brussel's Collegium Medicum. Three more

editions were published in Louvain (1774) and in Leiden (1781, 1786), most probably representing reprints of the last edition of 1770.



The Viennese Dispensatory was not valid in Prague, the capital of the Kingdom of Bohemia, because Bohemia had its own legal status within the Habsburg Empire. In 1739, the Medical Faculty of the Prague University published its own dispensatory, the "Dispensatorium medico-pharmaceuticum Pragense". However, the format and the content of this dispensatory

largely resembled the Viennese dispensatory of 1729. In Hungary, the Viennese Dispensatory was widely used but not mandatory.

The structure of the Viennese Dispensatory still reflected the influence of the Pharmacopoeia Augustana. The dispensatory encompassed 19 different classes, which described the different formulated preparations (1421 preparations in 1729 and 1618 in 1770). The first 17 classes were dedicated to complex medical preparations. Each class treated a different type of dosage form and listed the recipes for the respective medicines. The last two classes described the production of different chemicals and salts and the processing of plant drugs, animal drugs and minerals, which were necessary for compounding the medicines. The dispensatory started with a frontispiece displaying an allegory of medicine and pharmacy followed by a title page and a page listing the titles of Emperor Charles VI. The subsequent pages held various sections. The first section contained a panegyric of the apothecary board dedicated to Emperor Charles VI followed by the privilege of Emperor Charles VI. Consecutive sections showed a preface to the reader, the censorships of two professors of the Medical Faculty and the printing permissions of the Dean of the Medical Faculty and of the Rector of the University of Vienna. A glossary of pharmaceutical and chemical terms listed in alphabetic order followed, as well as a list of 18 mostly herbal medicines, each one named by a specific abbreviated term. The next pages referred to the Viennese Medical Pound and its parts per

weight and enclosed a list of chemical signs, which still depicted their resemblance with alchemical symbols. The main body of the dispensatory was dedicated to the recipes outlined in the formerly mentioned different classes. Finally, the dispensatory closed with an index.

In the 18th century, the public health care system and the medical education were truly unsatisfactory in the Habsburg Empire. Empress Maria Theresia was quite aware of the necessity to work out reforms for health care and to modernize the medical curriculum. She assigned Gerard van Swieten, a renowned physician from the Northern Netherlands, to fulfil those tasks and to work out a body of laws. The resulting sanitary bill (Sanitaetshauptnormativ) released in 1770 and amended in 1773 became effective for the whole Empire and influenced greatly the apothecary's profession. This sanitary bill also included the demand for a new and modern pharmacopoeia, because the Viennese Dispensatory, which was still in force, did not account for the new findings in science. It was outdated due to a large number of obsolete recipes and formulations with easily decomposing ingredients. Moreover, various recipes of the Viennese Dispensatory contained such expensive ingredients that physicians in the countryside did not prescribe them, because the rural population could not afford such upscale medicines.

It took another four years before a new pharmacopoeia, the *Pharmacopoeia Austriaco-Provincialis*, came into being. However, the Viennese Dispensatory was still valid in the capital cities of the empire and was in use there until 1780.

PHARMACOPOEIA AUSTRIACO-PROVINCIALIS (1774 – 1794)



In 1774, a new pharmacopoeia, the Pharmacopoeia Austriaco-Provincialis, was put into force in the whole of the Habsburg Empire and was mandatory for all physicians and apothecaries. Its sphere of influence comprised the crownlands of Austria, Bohemia and Hungaria, the Austrian Netherlands and scattered regions of contemporary Germany, called the Austrian Forelands, parts of present-day Württemberg, Baden and Swabia. Since 1780, the pharmacopoeia was also valid in Lombardia. Within the following years, the usage of the pharmacopoeia changed in different parts of the empire according to the acquisition or loss of regions by the Habsburgs. Seven Latin editions (1774, 1775, 1778, 1780, 1784, 1787 and 1790) and six editions in

German entitled “Oesterreichische Provinzial-Pharmakopoe” (1776, 1778, 1783, 1785, 1787 and 1790) are known. One Latin edition was printed in Bratislava in 1779. The necessity to publish the pharmacopoeia in German was its use by minor medical professions without knowledge of Latin, such as surgeons. A Dutch translation of the pharmacopoeia entitled “Apotheek der Oostenrijksche Staaten” which based on the edition of 1775 was published in Rotterdam in 1780.

The content and the format of the new pharmacopoeia had changed dramatically compared to the former one. While the Viennese Dispensatory represented a Baroque pharmacopoeia in size and in its abundance

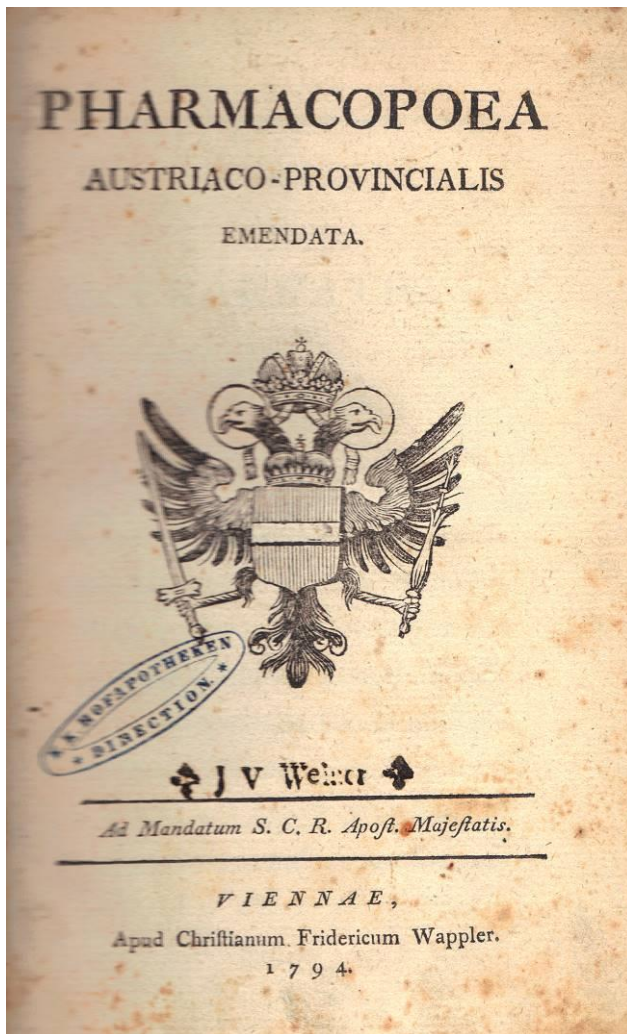
of recipes, the new Pharmacopoeia Austriaco-Provincialis was a rather small booklet with a drastically reduced number of formulations.



The pharmacopoeia of 1774 started with a short introduction signed by Protomedicus Anton L.B. de Störck, Nicolaus Josephus de Jacquin, Professor for Chemistry and Botany at the University of Vienna, and Joannes Jacobus de Well, pharmacist of the Viennese pharmacy “Zum Schwarzen Bären”, who became Professor for Natural History at the University of Vienna in 1774. Two sections built up the body of the pharmacopoeia. The first one cited the *Materia Pharmaceutica* (minerals, crude drugs of plant and animal origin) in separate chapters mentioning the Latin name, the scientific identification and the Austrian local name of all items. Another chapter listed the chemical characters, some of them still representing alchemical signs. A list of apothecaries’ weights, detailed instructions how to collect and process the plant parts and a glossary of technical terms completed the first part. The second part consisted of formulated preparations in alphabetical order, followed by an index. The pharmacopoeia had a new concept, and, for the first time, specified the medicinal ingredients alphabetically and listed the formulations in alphabetical order according to the recipes’ names. The number of medicinal ingredients and recipes did not vary greatly in the different editions. The fourth edition of 1780 contained 442 items (49 minerals, 348 drugs of plant origin, 45 animal drugs) and about 500 formulated preparations.

Twenty years after the release of the *Pharmacopoeia Austriaco-Provincialis* an updated edition named *Pharmacopoeia Austriaco-Provincialis emendata* was introduced.

PHARMACOPOEIA AUSTRIACO-PROVINCIALIS EMENDATA (1794-1812)



The editors of the revised pharmacopoeia were Protomedicus Anton L.B. de Störck, Nikolaus Joseph de Jacquin, and his son, Joseph Franz de Jacquin, both professors for Chemistry and Botany at the University of Vienna. Other editors were the Pro-Dean of the Medical Faculty and three apothecaries, among them the Imperial apothecary. Another Latin edition of 1794 is known from Milano, a German translation came out in Vienna in 1795.

The pharmacopoeia listed all medicinal ingredients (275) in alphabetical order in one chapter using the new system of Lavoisier to denominate the chemicals. Only 13 items of animal origin stayed in that edition. All commentaries how to process the ingredients and to produce the formulations were left out, but the table of

the apothecary's weights remained. The second part contained a largely reduced number of recipes (370), missing many preparations with easily decomposing ingredients or obsolete formulations. The pharmacopoeia contained two appendices and two tables. The appendices listed those medicinal ingredients (7) and medicines (22), which the apothecary was not obliged to store in the pharmacy due to their either doubtful therapeutic effects or because they were rarely prescribed. One table referred to the solubility of salts in water and the other one to medicines, which contained mercury, antimony and opium specifying the amount of mercury, antimony and opium in the respective medicine. An index closed the pharmacopoeia. Despite the release of a new pharmacopoeia in 1812, the Pharmacopoeia Austriaco-Provincialis emendata of 1794 was still in use until 1820.

PHARMACOPOEIA AUSTRIACA (1812- 1939)

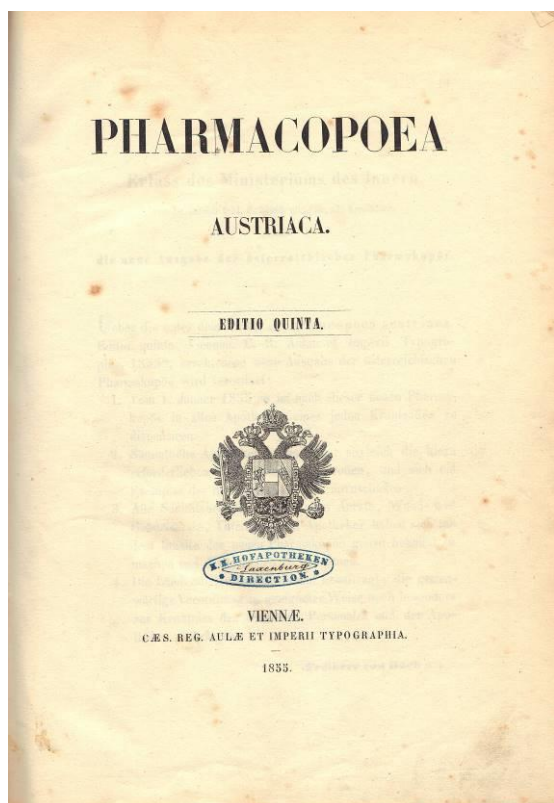
Pharmacopoeia Austriaca Editions I –IV



In 1812, a new pharmacopoeia, the Pharmacopoeia Austriaca, a small booklet of 156 pages was put into force. The commission, which elaborated the first edition, consisted of eight persons: Protomedicus Andreas Joseph Stiff, Franz Matoschek, the Dean of the Medical Faculty, Joseph Franz. LB. de Jacquin, who held the chair for Botany and Chemistry at the University of Vienna, Valent. Nob. ab Hildenbrand, Professor for Practical Medicine, Ferdinand Bernard Vietz, Professor for Forensic Medicine, Johann Andreas de Scherer, Professor for Natural History at the University, and the two principals of the Viennese Board of Apothecaries, Joseph Scharinger and Joseph Wödl. A table of apothecaries' weights and a list of all medicinal ingredients (224) in alphabetical order preceded the recipes (309), the latter representing the main body of the pharmacopoeia. Following the

recipes, there were four tables: The first two tables resembled the two tables of the former pharmacopoeia, the third one represented a list of reagents and the fourth table gave the specific weight of different liquids. The booklet closed with an alphabetical index and an addendum pointing out corrections. The following three editions of 1814, 1820, 1834 and a reprint of the fourth edition in 1836 did not differ greatly from the first one. One issue printed in Milano in 1819, named erroneously "Pharmacopoeia Austriaca. Tertio editio, emendata", was actually a reprint of the second edition of 1814. Protomedicus Andreas Joseph Stiff who was the primary responsible editor for the first four editions died in 1836, and it took almost 20 years before a new edition came out in 1855.

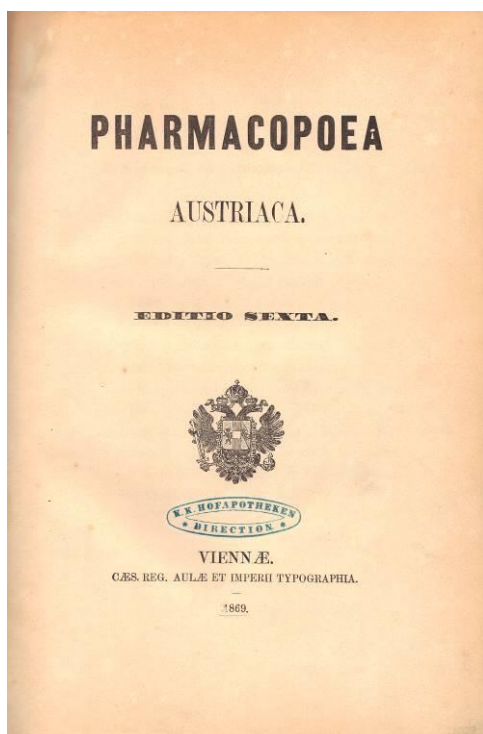
Pharmacopoeia Austriaca Edition V



The fifth edition of 1855, still written in Latin, was issued by the Ministry of Internal Affairs and introduced several novelties. The 867 medicinal ingredients and formulated preparations were not treated anymore in separate chapters but listed in alphabetical order. Worth mentioning is one regulation that allowed the different crown lands to decide themselves which of the formulations of the pharmacopoeia – called *Medicina obligata* - needed to be in stock in each pharmacy. In addition, a specific sign (†) marked prescription medicines. For the first time, the fifth edition contained not only the scientific name but also descriptions of the crude drugs, including in some cases their microscopic

characters, and instructions how to recognise their quality and how to detect foreign matter. Until 1855, the apothecary was obligated to prepare all chemical ingredients himself, but the fifth edition partly released him from this obligation. Since 1855, the apothecary could buy chemical substances labelled as “*Praeparatum officinarum chemicarum*”, but he had to verify their quality and purity before usage. However, the methods and chemical reactions described in the pharmacopoeia were still not sufficient for the chemical analyses, and the apothecary had to rely in large part on his own skills. The pharmacopoeia included two sections on general information. It also contained several tables, necessary to fulfil the new analytical tasks, and listed those substances, which had to be stored separately or to be locked up. The Austrian apothecaries’ weights were still in use, but the pharmacopoeia already contained tables to convert the apothecaries’ weights into the metric system. One conversion table even showed the gram equivalents of different European apothecaries’ weights. All tables were in Latin except the last one, written in German, which listed poisonous substances and their respective antidotes.

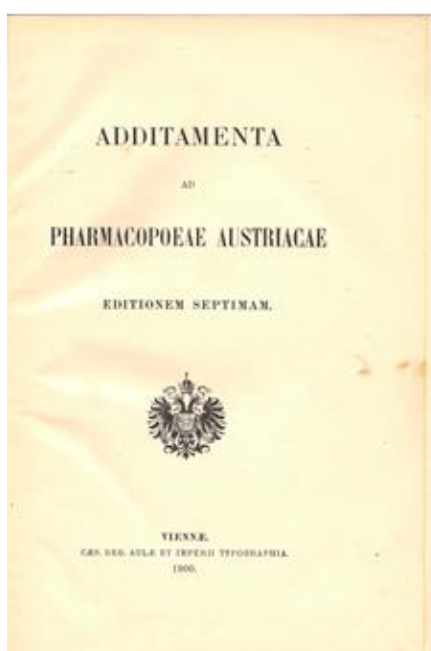
Pharmacopoeia Austriaca Edition VI



The sixth edition of the Austrian Pharmacopoeia was released in 1869. It comprised 509 monographs on medicinal ingredients and formulated preparations as well as 18 tables. One novelty was the introduction of the obligatory use of the metric system. For the first time, the weights given in the recipes of the pharmacopoeia appeared in grams. Therefore, three of the tables treated the conversion of the Austrian apothecaries' weights and liquid measures into the metric system and vice versa. This was necessary, because older recipes showing the former apothecaries' weights needed to be converted into the new metric system. Furthermore, the metric weights were hardly available in the market, and it took some

time before all pharmacies had the necessary equipment. In 1879, a short addendum (Additamenta ad Pharmacopoeae Austriacae Editionem Sextam) introduced 25 new monographs on medicinal ingredients and formulated preparations.

Pharmacopoeia Austriaca Edition VII



In 1889, the seventh edition was published, but became only valid on January 1, 1890. This edition contained 578 monographs and provided more test systems and reagents than the former one to facilitate the examination of the medicinal ingredients. The pharmacopoeia listed 63 reagents, 5 volumetric solutions and, for the first time, named all devices, which had to be available in each pharmacy, e.g. a microscope, an analytical scale or an aerometer. It included 12 tables and a list with the obsolete names of all medicinal ingredients treated in the current edition.

Even though the seventh edition was enlarged by an

addendum (Additamenta ad Pharmacopoeae Austriacae Editionem Septimam) published in 1900, the pharmacopoeia did not meet the demands of the pharmacists.

National Pharmacopoeias in the Habsburg Empire

The seventh edition of the Pharmacopoeia Austriaca was still in Latin in order to communicate its content to all pharmacists in the multilingual Habsburg Empire. However, it was not in use in all parts, because the rising nationalism in different countries of the Empire encouraged the release of national pharmacopoeias. After the Compromise of 1867 between Austria and Hungary, Hungary published its own pharmacopoeia (bi-lingual in Latin and Hungarian) in 1871 (Pharmacopoeia Hungarica) and put it into force in 1872. A second edition came out in 1888 and an addendum to this edition in 1898. The third edition of 1910, published in Hungarian, was the last one issued in the Austrian-Hungarian Monarchy.

Another country of the Empire, the kingdom of Croatia and Slavonia, having been in political union with Hungary, also adopted the Pharmacopoeia Hungarica of 1871 as mandatory pharmacopoeia. In 1888, a Croatian translation of the Hungarian Pharmacopoeia, the Pharmacopoeia croato-slavonica, was introduced in Croatia and Slavonia. Nevertheless, the Croatian pharmacists promoted the publication of their own pharmacopoeia. As a result, the second edition of the Pharmacopoeia croato-slavonica became effective in 1901 and represented a modern pharmacopoeia reflecting the pharmaceutical knowledge of the time.

Pharmacopoeia Austriaca Edition VIII

The eighth edition of the Austrian Pharmacopoeia, printed in 1906 but mandatory only since January 1, 1907, was the last one published in the Habsburg Empire. The pharmacopoeia contained 644 monographs describing 191 crude drugs (185 drugs of plant origin, 6 drugs of animal origin), 2 minerals, 178 chemical products, 254 formulated preparations and 19 monographs treating the preparation of different dosage forms. In addition, there was one chapter listing 54 frequently prescribed medicines while another chapter referred to medicated bandaging material. The pharmacopoeia included a list of 102 reagents and 14 volumetric solutions. A separate chapter specified various pharmaceutical devices and instruments necessary for the analytical work. Finally, the pharmacopoeia comprised six tables and a list of synonyms.

This edition did not fulfil the expectations of the pharmacists, because there was little difference to the former seventh enlarged edition, and even the subsequent amendments of 1910 and 1916 did not improve greatly the quality of the pharmacopoeia.

After World War I, in 1918, the eighth edition of the Pharmacopoeia Austriaca was still valid in the First Republic of Austria. Even though the amendments of 1932 and 1933 updated this pharmacopoeia by incorporating new medicinal ingredients and deleting several obsolete medicines, there was certainly a need for a modern pharmacopoeia.

During the interwar period, the elaboration of a new pharmacopoeia was under way and, at the beginning of 1938, a new edition of the pharmacopoeia was almost ready for publication. However, the annexation of Austria by the Third Reich in 1938 interrupted this project.

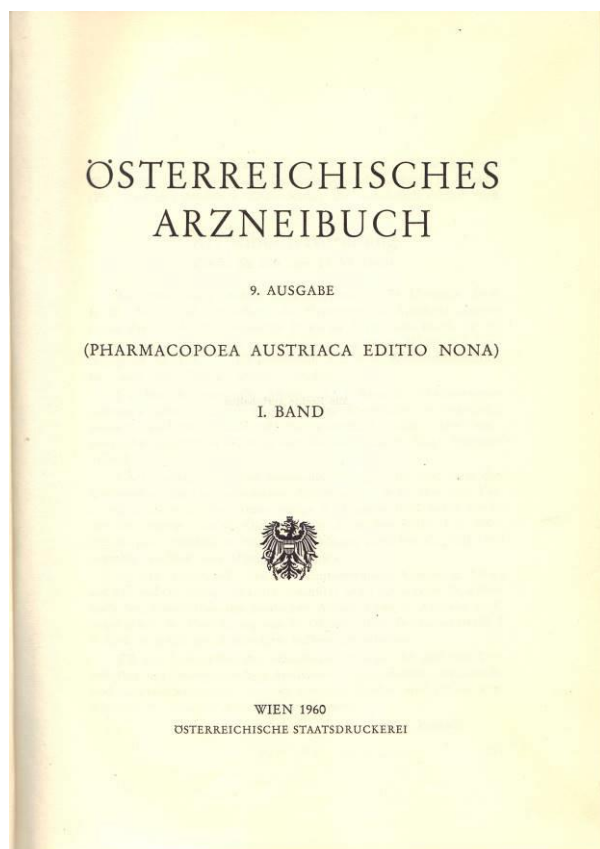
GERMAN PHARMACOPOEIA, EDITION VI (1940-1961)

On January 1, 1940¹, the sixth edition of the German Pharmacopoeia (Deutsches Arzneibuch) became effective in the former Republic of Austria. This pharmacopoeia, written in German, included already new products such as Salvarsan preparations, sera and tuberculin. After the end of World War II and the foundation of the Second Republic of Austria in 1945, the German Pharmacopoeia remained valid in Austria, because the Austrian Pharmacopoeia of 1906 was outdated and a new edition could not be worked out in short time.

In 1954, the Minister for Social Affairs set up a pharmacopoeia commission to elaborate a new Austrian pharmacopoeia. The experts of this commission could not rely on the former work for a new pharmacopoeia edition, because the chemical and pharmaceutical sciences had rapidly developed since the interwar period, and the monographs elaborated at that time were not the state-of-the-art anymore.

¹ The foreword of the ninth edition of the Austrian Pharmacopoeia, published in 1960, cites a wrong year (1939) for the introduction of the German Pharmacopoeia.

PHARMACOPOEIA AUSTRIACA EDITION IX



On July 1, 1961, the ninth edition of the Austrian Pharmacopoeia (Österreichisches Arzneibuch) became valid in Austria. This was the first edition written in German. Solely, the monographs had German and Latin headings. It contained 901 monographs describing chemical substances, crude drugs of plant and animal origin, formulated preparations, and 68 sera and hemoderivatives. For the first time, this edition stated procedures to examine sera, hemoderivatives and antibiotics. A large introduction preceded the main body of the pharmacopoeia referring to nomenclature, weights and measures, to the expression of concentrations, and to sterilisation. There

were regulations for storage and dispensing of medicines, methods to identify and give proof of the quality of chemicals, crude drugs and formulated preparations, procedures to perform quantitative analyses and different assays. One chapter was dedicated to the testing of surgical suture material, while others described the examination of gases, the determination of various chemical values such as acid value or hydroxyl value, and physical values such as melting points or refractive index. The pharmacopoeia included also methods to trace pyrogenic substances and to examine glass flasks used for medical purposes. Finally, a table compared the nomenclature of the medicinal ingredients and formulations as used in the German pharmacopoeia and in the current Austrian edition.

Two addenda amended the ninth edition in 1966 and 1976. Finally, the second addendum introduced two already widely used analytical methods, paper chromatography and thin-layer chromatography.

ÖSTERREICHISCHES ARZNEIBUCH (1982-)

In 1978, Austria joined the convention on the elaboration of a European Pharmacopoeia as 15th member state. A new era in the history of Austrian pharmacopoeias started.

On January 1, 1982, a new pharmacopoeia, Österreichisches Arzneibuch, became effective in Austria. It consisted of two parts, the Austrian issue of the European Pharmacopoeia (in German) and a revised ninth edition of the Austrian national pharmacopoeia. All regulations and monographs of the ninth edition of the Austrian national pharmacopoeia became invalid when they were replaced by the respective instructions and monographs of the European Pharmacopoeia. One year later, in January 1983, the first amendment to the pharmacopoeia came out. In 1990, the second edition of the European Pharmacopoeia (Austrian issue) and another revised ninth edition of the Austrian national pharmacopoeia, called ÖAB 1990, replaced the former ones. The ÖAB 1990 edition was a loose-leaf print to facilitate the exchange of the revised monographs. Additionally, it included a large chapter on instructions how to produce homeopathic products. However, the eighth amendment of 2001 invalidated again the chapter on homeopathy in the Austrian national pharmacopoeia. Since 2008, the national pharmacopoeia has been published each year in hard cover. Five revised editions of the Austrian national pharmacopoeia came out in 2008, 2009, 2010, 2014 and 2015. To date², 53 amendments to the European Pharmacopoeia and to the Austrian national pharmacopoeia have been enacted in Austria.

² December 2015

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