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**Conservation & Restoration of Cultural Heritage**  
**(Technical Art History)**

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**The Market of Art Materials in 18th-Century Regensburg:**  
Investigating the Professions Involved in the Trade and Sale of Artists' Supplies

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*Student:* Caroline Kirmer ([caroline.kirmerTAH@gmail.com](mailto:caroline.kirmerTAH@gmail.com))  
*Primary Supervisor:* Dr. Arjan de Koomen ([a.r.dekoomen@uva.nl](mailto:a.r.dekoomen@uva.nl))  
*Second Reader:* Dr. Maartje Stols-Witlox ([m.j.n.stols-witlox@uva.nl](mailto:m.j.n.stols-witlox@uva.nl))  
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## **Author's Note**

This text is based on my master's thesis, which was written for the Technical Art History specialization within the Conservation and Restoration of Cultural Heritage program at the University of Amsterdam. It has been slightly revised based on suggestions made by Prof. Dr. Andreas Burmester.

## **Summary**

This thesis is a preliminary investigation into Regensburg's 18th-century market of art materials. Drawing on results of archival research and the analysis of art-technological sources – a legal document, a pharmacy price list, a material invoice, and an inventory – the research project identifies the professions that participated in the trade and sale of artists' supplies and sheds light on the types, prices, and qualities of art materials that were available in Regensburg in the specified period.

## **Abstract**

*The Market of Art Materials in 18th-Century Regensburg:  
Investigating the Professions Involved in the Trade and Sale of Artists' Supplies*

Caroline Kirmer, University of Amsterdam, July 2023.

This thesis presents the results of a preliminary investigation into the market of art materials of 18th-century Regensburg. The research was guided by the objective to identify the professions that participated in the trade and sale of artists' supplies in the German city. The thesis is composed of four chapters. Chapter one discusses the current historical knowledge on art markets of the past. It identifies the diverse source types that have been used in scholarship to study the movement of art materials and introduces the broad range of actors that played a role in supplying artists with the products they required. Chapter two establishes the historical framework of the project by examining 18th-century Regensburg's political situation, economic conditions, and cultural circumstances, which impacted artistic production and influenced the demand for art materials. Chapter three presents the methodology employed in this thesis: archival research. A detailed explanation of the approach was called for because the Regensburg market of art materials and the professions it involved has never been an area of inquiry in art historical or art-technological studies. Chapter four examines four art-technological sources of disparate nature, namely a legal document from 1714, and pharmacy price list from 1727, a material invoice from 1752, and an inventory from 1808. Each document ties a different profession to the art market and provides unique information about the art materials that were available in the examined period.

This thesis builds on findings from the fields of Art History, Technical Art History, History of Pharmacy, and History of Commerce, and is thus a study in which different disciplines converge. By drawing from archival records and historical texts, a clearer picture of the 18th-century Regensburg market of art materials begins to take shape. The examined art-technological sources are documentary evidence of the involvement of grocers, apothecaries, spice traders, and merchants in the trade and sale of artists' supplies in the city. Moreover, they provide insight into the types, prices, and qualities of art materials and thus they are found to be rich sources as well as profitable tools for future research into the 18th-century Regensburg market of art materials.

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All figures were made by the author unless stated otherwise.

## Acknowledgements

While pursuing my undergraduate degree in Art History (McGill University, Montreal), I developed a keen interest in artists' materials. I was eager to learn about the ore locations of raw materials, the production of pigments and related supplies, and the professions that were involved in the trade and retail of such products. These themes are especially addressed in art-technological research. It is for this reason that I am beyond grateful and excited to have been granted the opportunity to write my master's thesis about the 18th-century market of art materials in my hometown Regensburg, Germany.

This thesis was my final project for the two-year master's program in Technical Art History at the University of Amsterdam. First and foremost, I would like to express my sincere gratitude to Dr. Arjan de Koomen (UvA) for the supervision of this thesis. His continued guidance, reassurance, feedback, and words of encouragement were instrumental in shaping the outcome of this research. I am indebted to Prof. Dr. Andreas Burmester, without whom this project would not have been possible. His exemplary work on pharmacy price lists (*Münchner Taxenprojekt*) was the inspiration for writing this thesis and the thought-provoking conversations with him sparked the idea of using the city of Regensburg as a case study. His expertise in working with archival records and his assistance with the transcription of documents were indispensable for the success of this project.

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## Introduction

The study of past societies and the goods they produced and consumed is a profitable pursuit. Materials can provide insight into the periods they were made in and reveal a great deal about the purposes they served. This is especially true for art materials, which constitute the main determinants of artistic production. Factors such as the price, quality, and range of art supplies strongly influence *if, how, and with what* artists work. In turn, supply sources, retail networks, and economic conditions are essential components of the art market that determine if and what kind of materials are available for purchase and use.

The history of the art market is a promising field of research that provides ample opportunity for collaboration. Especially art historians and economic historians have found interest in the subject and the multifaceted, thematic approaches it offers.<sup>1</sup> The study of art materials in the context of the art market also lends itself particularly well to the discipline of Technical Art History, which studies artistic practice in all its facets and considers the mobility of materials an important subject of investigation.<sup>2</sup> Some of the questions that have been addressed in art-technological studies into the movement of art materials are: “What kind of materials could an artist or craftsman use? Which material was available at a certain time and place? Who was trading and selling artists’ materials? How much did they cost and what was the trade chain for such materials?”<sup>3</sup> These enquiries about the art market reverberate in modern-day research. A case in point is one of the sessions that will be held at the 36th CIHA World Congress “Matter Materiality” in June 2024. Titled *Trade, production and availability of pigments in Early Modern Europe (1400-1800)*, this session aims to discuss themes such as “Trade and its actors in relation to wholesale and retail”, “Pigment quality, value and price in relation to the European economic situation and local currencies”, and “terminology used to designate pigments in relation to location, quality and manufacturing process.”<sup>4</sup>

This thesis aims to contribute to this line of research by examining the market of art materials in 18th-century Regensburg, Germany. The research question that guides this investigation is: *What professions participated in the trade and commerce of art materials in 18th-century Regensburg?* In the pursuit of answering this query, the range and quality of the artists’ supplies that were available in the city in the examined period will also receive attention.

There are two reasons for focusing on the 18th century. First, it marks the period in which the city of Regensburg found itself in a unique political situation that had a palpable impact on artistic production and the art market. Second, 18th-century Europe saw the emergence of a new professional category within the art market: the color merchant.<sup>5</sup> Specialized color sellers

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<sup>1</sup> Michael North and David Ormrod, “Introduction,” in *Art Markets in Europe, 1400-1800* (Aldershot: Ashgate, 1998), 1.

<sup>2</sup> “Technical Art History,” Netherlands Institute for Conservation+ Art+ Science+, accessed April 2, 2023, <https://www.nicas-research.nl/mission/technical-art-history/>.

<sup>3</sup> Stephanie Correll and Andreas Burmester, “Trade in Artists’ Materials: The Venino Merchants in Würzburg,” in *Preprints of the 21st IIC Congress in Munich. The Object in Context: Crossing Conservation Boundaries*, ed. D. Saunders, J.H. Townsend, and S. Woodcock (Munich, 2006), 312.

<sup>4</sup> “Trade, production and availability of pigments in Early Modern Europe (1400-1800),” Call for Papers, 36th CIHA World Congress – Lyon 2024, accessed July 11, 2023, <https://www.cihalyon2024.fr/en/call-for-papers/the-materials-of-the-work-les-materiaux-de-loeuvre/trade-production-and-availability-of-pigments-in-early-modern-europe-1400-1800#memecategorie>.

<sup>5</sup> Charlotte Guichard, Anne-Solenn Le Hô, and Hannah Williams, “Prussian Blue: Chemistry, Commerce, and Colour in Eighteenth-Century Paris,” *Art History* 46 (2023): 164, <https://doi.org/10.1111/1467-8365.12695>.



gradually began replacing earlier suppliers of art materials such as apothecaries, grocers, spice traders, and merchants. Did such specialized shops also begin to appear in 18th-century Regensburg or did the previously mentioned professions still have the upper hand in the industry?

What is more, the Regensburg art market has never been the focus of art historical (or art-technological) studies. The lack of research attests to the necessity and significance of this project, but also means that an appropriate methodology is required. Archival research serves as the methodological foundation and art-technological sources provide the most promising answers to the research question. This thesis also leverages the approaches from art history and technical art history and incorporates insights from economic studies and the history of pharmacy.

Chapter one presents how art markets have been studied in art historical and art-technological scholarship. Above all, it identifies the documentary sources that have been used to examine the movement of art materials and introduces the professions that were historically involved in the sale and commerce of such supplies. Chapter two provides the historical framework for the research project. It considers Regensburg's political situation and economic conditions in the 18th century and explores the implications that these had for artistic production and, consequently, the city's market of art materials. Chapter three explains the methodological approach employed for this thesis. It introduces the archives that were consulted and discloses the limitations of archival research. Chapter four analyzes and discusses four types of art-technological sources that were discovered through archival research. A legal document from 1714, a pharmacy price list from 1727, a material invoice from 1752, and the inventory of a trading company from 1808 are case studies in this thesis. Each document ties a different profession to the 18th-century Regensburg market of art materials and provides distinct insights into the types and qualities of artists' supplies available.

## Chapter 1: Understanding the Art Market

### 1.1: Art Markets in Art Historical Scholarship

Art historical scholarship has always been interested in the study of art markets. Perhaps the topic's appeal is a result of the many investigative pathways it offers. The themes generally discussed in this line of research include the circulation of artworks and art materials, the role of artists, manufacturers, dealers, and retailers in the process of artistic production, as well as economic conditions and networks of trade. Within this, one can differentiate between regional, national, and world markets, analyze a market and its development at a specific period or consider the impact of fluctuating economic conditions on the availability and cost of artistic goods. The fourth international CATS conference, which was held at the National Museum of Denmark in June 2018, testified to the subject's importance for the field of art history and related disciplines. The conference, titled *Trading Paintings and Painters' Materials 1550-1800*, focused on emerging international markets in Early Modern Europe and their implications for artistic production.<sup>6</sup> The contributions covered a broad range of topics related to the art market and included an essay about the transatlantic art trade during the 17th century (Sandra van Ginhoven), an exploration of the market of art materials in Québec at the end of the 18th century (Pierre-Olivier Quellet), and individual case studies of the trade of painters' supplies in European countries.

The extent to which the history of art markets can be researched “[...] depends heavily on surviving guild records, inventory studies, and legal documents.”<sup>7</sup> Hereby, retracing the movement of art materials can be particularly challenging because even those records that have withstood the test of time survive in limited quantities or contain only little relevant information. One possible explanation for this is that, in the past, such goods were imported and exported in small amounts. This meant that they were neither well documented, nor explicitly labelled as art materials.<sup>8</sup> Pigments (in addition to drugs and other grocery commodities), for instance, were historically listed as spices.<sup>9</sup>

Despite the gaps in knowledge that are the result of such inadequacies, certain source types have proven useful for research into the movement of art materials. Sandra van Ginhoven's review of 848 surviving shipping documents of Flemish fleets that sailed to New Spain and Tierra Firme between 1630 and 1680, for instance, revealed that the cargo included materials such as lead white, blue powders, oils, and canvases.<sup>10</sup> Other sources such as exchequer records, port books, and toll registers have also been studied to better understand the art market.<sup>11</sup> The *Sound Toll Registers*, for example, “[a]re extensive records of the tolls levied at Elsinore on behalf of the king of

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<sup>6</sup> Jørgen Wadum, “Foreword,” in *CATS Proceedings IV. Trading Paintings and Painters' Materials, 1550-1800*, ed. A.H. Christensen and A. Jager (Copenhagen: CATS; London: Archetype Publications Ltd, 2019), vii.

<sup>7</sup> Neil de Marchi and Hans J. Van Miegroet, “The History of Art Markets,” *Handbook of the Economics of Art and Culture* 1 (2006): 71, [https://doi.org/10.1016/S1574-0676\(06\)01003-9](https://doi.org/10.1016/S1574-0676(06)01003-9).

<sup>8</sup> Jo Kirby, “Painting in a Wider World: Developments in the Trade in Painters' Materials,” in *CATS Proceedings IV. Trading Paintings and Painters' Materials, 1550-1800*, ed. A.H. Christensen and A. Jager (Copenhagen: CATS; London: Archetype Publications Ltd, 2019), 4.

<sup>9</sup> Kirby, “Painting in a Wider World,” 1.

<sup>10</sup> Sandra van Ginhoven, “Flemish Dealers and a thriving Transatlantic Art Trade during the 17th century,” in *CATS Proceedings IV. Trading Paintings and Painters' Materials, 1550-1800*, ed. A.H. Christensen and A. Jager (Copenhagen: CATS; London: Archetype Publications Ltd, 2019), 1.

<sup>11</sup> Kirby, “Painting in a Wider World,” 6.

Denmark on shipping passing through the Sound between Denmark and Sweden. They were maintained from 1497 until the toll was abolished in 1857 [...]”<sup>12</sup> and documented the name of the shipmaster, the ports of departure and destination, and the composition of the cargo and toll. One such cargo, dated to May 31st, 1750, included 313 pounds of verdigris and 1220 pounds of indigo.<sup>13</sup> Other significant administrative documents are the Colour Chamber accounts from 1610 to 1626, which Anne Haack Christensen examined for her research into the trade in painters' supplies in 17th-century Denmark. The Royal Colour Chamber (*Det Kongelige Farvekammer*) was a stockroom of supplies available to painters and craftsmen of the Danish court. The accounts, preserved for the early years of the 17th century, list the incoming materials and the names of tradesmen, and document the outgoing materials “[...] with short descriptive passages of the assignments to be carried out and the names of the craftsmen receiving the supplies.”<sup>14</sup> The wealth of information these documents can provide about the movement, dealers, and users of artists' materials is remarkable. Yet, the creation and survival of such records are intricately tied to the context in which they exist. Christensen explains:

A high proportion of the projects described in the accounts were completed in order to manifest the king's courtly power and cultural superiority during a particular lucrative and affluent period of increasing decorative and architectural endeavors.<sup>15</sup>

The Colour Chamber accounts were established and maintained due to the direct connection to the Danish court. This affiliation, which imbued the documents with historical significance, was an important factor in their preservation.

Shop inventories of grocers, spice traders, and apothecaries have also been valuable resources for (technical) art historical research into art materials, as they too allow conclusions to be drawn about the type, quantity, and value of materials available. Pigments and related supplies could be purchased at these establishments because, traditionally, the materials used by artists were traded as spices or because they were also drugs.<sup>16</sup> Lead white (basic lead carbonate) and gum Arabic, for instance, were not only used as pigment and binder but also functioned as basic pharmaceuticals that were sold at pharmacies.<sup>17</sup> An example of the usefulness of this source type is the Kolberg inventory list from 1589. Before 1945, Kolberg was a German town; today, it is a small Polish city at the Baltic Sea. The Kolberg document was “[...] drawn up on the occasion of the sale of the *Ratsapotheke* (council pharmacy) [...]”<sup>18</sup> and details all the materials and goods stocked in the pharmacy at that time. Included in this list were large amounts of pigments, media, and other art-related supplies such as orpiment, azurite, vermilion, linseed oil, glue/size, and various dyestuffs.<sup>19</sup>

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<sup>12</sup> Kirby, “Painting in a Wider World,” 5.

<sup>13</sup> *Ibid.*, 5.

<sup>14</sup> Anne Haack Christensen, “The Trade in Painters' Supplies in 17th-Century Denmark,” in *CATS Proceedings IV. Trading Paintings and Painters' Materials, 1550-1800*, ed. A.H. Christensen and A. Jager (Copenhagen: CATS; London: Archetype Publications Ltd, 2019), 39.

<sup>15</sup> Christensen, “The Trade in Painters' Supplies in 17th-Century Denmark,” 39.

<sup>16</sup> *Ibid.*, 5.

<sup>17</sup> Christoph Krekel and Andreas Burmester, “Pharmacy Pricelists as a New Type of Documentary Source for Research into Historical Artists' Materials,” in *Dyes in History and Archaeology 19*, edited by Jo Kirby (London: Archetype Publications Ltd, 2003), 32.

<sup>18</sup> Andreas Burmester, Ursula Haller, and Christoph Krekel, “Munich Taxae project: The Kolberg inventory list of 1589,” in *Art of the Past: Sources and Reconstructions: Proceedings of the first symposium of the Art Technological Source Research study group*, ed. Mark Clarke, Joyce H. Townsend, and Ad Stijnman (London: Archetype Publications Ltd, 2005), 44.

<sup>19</sup> Burmester, Haller, and Krekel, “Munich Taxae project: The Kolberg inventory list of 1589,” 45-46.

The fact that such a broad range of art materials was available at a pharmacy may seem odd, but pharmacists began trading coloring matter and binding media as early as the Middle Ages.<sup>20</sup>

## 1.2: Apothecaries, Pharmacy Price Lists, and the *Münchner Taxenprojekt*



*Fig.1:* Woodcut print of the apothecary profession (“Der Apotheker”), in Hans Sachs and Jost Amman, *Eygentliche Beschreibung aller Stände auff Erden* (1568): 36.

Historical research on pharmacies has revealed that medieval and early Renaissance pharmacies sold a broad range of non-medicinal products alongside the standard supply of medicines and basic pharmaceuticals (*Fig.1*). The involvement of generalist apothecaries in the sale of painters' supplies is mentioned in numerous documentary sources from the Middle Ages and the Early Modern Period, but most notably in Cennino Cennini's *Il libro dell'arte* (ca.1390s).<sup>21</sup> In the chapter “Of Colours or Pigments” Cennini states: “But I advise you, that you may not lose your time in making experiments, to purchase what you want at the apothecaries' [...].”<sup>22</sup> On the one hand, art materials were available at apothecaries because they were basic pharmaceuticals or because they were toxic and required special handling.<sup>23</sup> On the other hand, for centuries, no clear distinction existed between the profession of the apothecaries and that of the trader of goods. Scholars have even suggested that at the onset of the Early Modern Period, pharmacists generally self-identified as (long-distance) merchants.<sup>24</sup> This also meant that pharmacists typically did not prepare art materials themselves but rather obtained them

from elsewhere. The city in which the pharmacist was active was either located on a larger trading route or intermediaries traveled to trade fairs in cities like Frankfurt, Leipzig, Antwerp, or Strasbourg to purchase supplies.<sup>25</sup>

In the German-speaking regions, practically all artists' materials could be purchased in pharmacies. This is well documented by statutory pharmacy price lists or *Taxae*. *Taxae* were established in the mid-thirteenth century when the Holy Roman Emperor Frederick II issued the Edict of Salerno. The edict decreed that the occupations of the physician and the apothecary must be separate and that all German pharmacies must “make public the prices of all their products in the form of so-called *Taxae*.”<sup>26</sup> Interestingly, the phenomenon of the *Taxa* is also found in other European countries. There is evidence of such records from Prague, Stockholm, Copenhagen, St Petersburg, and Venice. According to Burmester and Krekel “[t]he reason for this probably lies in

<sup>20</sup> Christoph Krekel and Andreas Burmester, “Das Münchner Taxenprojekt: Apothekentaxen als neuer Quellentyp für die Erforschung historischer Künstlermaterialien,” *Restauro* 107, no.6 (2001): 450.

<sup>21</sup> Krekel and Burmester, “Pharmacy Pricelists,” 32.

<sup>22</sup> Cennino Cennini, *A Treatise on Painting*, trans. Mary P. Merrifield (London: Edward Lumley, 1844), 23.

<sup>23</sup> Krekel and Burmester, “Pharmacy Pricelists,” 32.

<sup>24</sup> Jana Schreiber, “Herren oder Knechte? Die Frankfurter Apothekenordnung von 1500 im Spiegel frühneuzeitlicher Rangkonflikte,” *Medizin, Gesellschaft und Geschichte* 40 (2022): 19-20, [https://media.dav-medien.de/sample/9783515133432\\_p.pdf](https://media.dav-medien.de/sample/9783515133432_p.pdf).

<sup>25</sup> Krekel and Burmester, “Pharmacy Pricelists,” 33.

<sup>26</sup> *Ibid.*, 33.

the fact that many German pharmacists, and also German brewers, worked in foreign countries. There they established their tried and trusty lists and then instructed the town officials in their usefulness.”<sup>27</sup> *Taxae* are an invaluable type of documentary source for research into artists' materials. They document the range of art supplies available, highlight the emergence of new materials, and record the price developments of individual pigments and related products. Moreover, they can be used to study the disappearance or reappearance of products.<sup>28</sup> This information, in turn, can “reflect the multitudinous trade associations of individual towns as well as important historical events.”<sup>29</sup> Because of the information such sources provide about trade in former times, the value of price lists is also acknowledged by economic historians.<sup>30</sup>

The Munich *Taxae* Project (*Münchner Taxenprojekt*), which was initiated by Prof. Dr. Andreas Burmester, Prof. Dr. Christoph Krekel, and Prof. Dr. Ursula Haller and officially ran from 1998 to 2017, was dedicated to the study of all German pharmacy price lists printed between 1553 and 1800. The found pharmacy price lists were recorded, evaluated, and edited. The publications that have been released as part of the project generally discuss the structure and contents of the *Taxae*, focusing primarily on the materials that are of art-technological relevance. They also aim to answer the question as to whether the pigments, colors, and related supplies were sold to be used for artistic purposes. The multifaceted uses of the materials sold by apothecaries, which were mentioned earlier, require these kinds of considerations. The *Taxae* that have been evaluated so far are typically written in Latin with a German translation and structured in different ways.<sup>31</sup> While some list materials in alphabetical order, others group products of similar use or nature into the same chapter. Some price lists even differentiate between composed pharmaceuticals – *Composita* – and pure drugs and raw materials – *Simplicia* – and present them in separate chapters.<sup>32</sup> The stark variation in the way in which the information is organized means that each *Taxa* must be studied with a customized approach.

Although the Munich *Taxae* Project officially ended in 2017, the project's research efforts into pharmacy price lists and their relevance for Technical Art History are ongoing. The collected data and the insights obtained from the *Taxae* that have been evaluated so far are set to be published on a project website, which will serve as a valuable research tool in art-technological studies.<sup>33</sup> Simultaneously, project leaders are continuing their search for still undiscovered German *Taxae*.

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<sup>27</sup> Krekel and Burmester, “Pharmacy Pricelists,” 34.

<sup>28</sup> Krekel and Burmester illustrate this function of the pharmacy price list with the example of the tree resin ‘copal’, which was first recorded in the German-speaking regions in a document from the 1582 Frankfurt trade fair (*Frankfurter Messe*). Following this, the material disappeared from the market and was mentioned for the first time again in the 1657 Nordhausen *Taxa*, see: Krekel and Burmester, “Das Münchner Taxenprojekt,” 452-453.

<sup>29</sup> Krekel and Burmester, “Pharmacy Pricelists,” 34.

<sup>30</sup> Correll and Burmester, “Trade in Artists' Materials: The Venino Merchants in Würzburg,” abstract.

<sup>31</sup> Krekel and Burmester, “Pharmacy Pricelists,” 34.

<sup>32</sup> Andreas Burmester, Ursula Haller, and Christoph Krekel, “*Pigmenta et Colores*: the artist's palette in pharmacy price lists from Liegnitz (Silesia),” in *Trade in Artists' Materials: Markets and Commerce in Europe to 1700*, ed. Jo Kirby, Susie Nash, and Joanna Cannon (London: Archetype Publications Ltd, 2010), 314-315.

<sup>33</sup> Since October 2021, the creation of a project website for the results of the research is funded by the Munich-based *Schoof'sche Stiftung*, a foundation for the promotion of art, culture, vocational training, science, and research. At the time of writing this, the website is still under construction.



### 1.3: Other Professions involved in the Sale of Art Materials

Exploring the key players involved in the movement of art materials can be advantageous for understanding the wider context of art and art making. Research into the *vendecolori*, a merchant group of specialized color sellers that emerged in Renaissance Venice, for instance, revealed valuable information about the Venetian art market as well as artistic practice of the 15th and 16th centuries.<sup>34</sup> These color vendors are said to have existed in Venice about a century earlier than in other Italian cities<sup>35</sup> and only by the end of the 16th century were merchants with a similar occupation, known as *verfvercopere* or *marchands de couleurs*, active in Antwerp.<sup>36</sup> Titian's commemorative portrait of the color seller Alvise dalla Scala (*Fig.2*) demonstrates that the



*Fig.2:* Titian, *Portrait of a Man with a Palm (Bildnis des Farbhändlers Alvise dalla Scala)*, 1561/62, Oil on Canvas, 138 x 116 cm. Picture credit: Gemäldegalerie Alte Meister, Staatliche Kunstsammlungen Dresden.

*vendecolori* were much more than just simple merchants. Dalla Scala, whose affiliation with the color industry is apparent from the small box containing pigment samples at the back left of the composition, was a highly regarded businessman in Venice.<sup>37</sup> In fact, scholars have argued that the *vendecolore* profession played a crucial role in the city's artistic and economic success. Its involvement in the industry of color supposedly created conditions for stylistic developments, stimulated technical innovation due to the availability of new materials, and enabled the cross-fertilization of knowledge between different artistic disciplines. Louisa Matthew and Barbara Berrie, for instance, note that Renaissance artists achieved striking coloristic and luminescent effects because of their combined use of (unusual) pigments and new painting methods with oil.<sup>38</sup> Furthermore, they explain that due to the broad selection of materials made available by the *vendecolori*, Venetian artists started using various colors for their underpaint and created "novel mixtures of colors – such as red lakes mixed with copper green glazes, and orange mixed with blue paint – to make subtle changes in hue and tone."<sup>39</sup>

Matthew and Berrie also suggest that the establishments of Venetian color sellers "were meeting places, where information about familiar materials and new ones could be shared among the trades."<sup>40</sup> Because the *vendecolori* were unique to Renaissance Venice, the profession of the specialized color seller is not further considered in this thesis.

<sup>34</sup> The *vendecolore* profession emerged from the Venetian apothecary's guild (*spezieri/speziali*). But because they developed into their own profession (color sellers), they are discussed here as a group that is distinct from the apothecary profession.

<sup>35</sup> Barbara H. Berrie and Louisa C. Matthew, "Material Innovation and Artistic Invention: New Materials and New Colors in Renaissance Venetian Paintings," in *Scientific Examination of Art: Modern Techniques in Conservation and Analysis* (Washington, DC: National Academies Press, 2005), 12.

<sup>36</sup> Julia A. Delancey, "In the Streets Where They Sell Colors: Placing 'vendecolori' in the Urban Fabric of Early Modern Venice," *Wallraf-Richartz-Jahrbuch* 72 (2011): 194, [www.jstor.org/stable/24666662](http://www.jstor.org/stable/24666662).

<sup>37</sup> Tristan Weddigen and Gregor J.M. Weber, "Alchemie der Farben: Tizian porträtiert seinen Farbenhändler Alvise 'dai colori' dalla Scala," in *Tizian: Die Dame in Weiss*, ed. Andreas Henning and Günter Ohlhoff (Dresden: Staatliche Kunstsammlungen Dresden, 2010), 53.

<sup>38</sup> Barbara H. Berrie and Louisa C. Matthew, "Venetian Colore: Artists at the Intersection of Technology and History," in *Bellini, Giorgione, Titian, and the Renaissance of Venetian Painting*, ed. D.A. Brown and S. Ferino-Pagden (Washington: National Gallery of Art; Vienna: Kunsthistorisches Museum, 2006), 3.

<sup>39</sup> Berrie and Matthew, "Venetian Colore," 3.

<sup>40</sup> *Ibid.*, 7.

In the context of this research, it is important to note that pharmacies were not the only places in Germany where artists could acquire their materials. In fact, some German pharmacies stopped supplying coloring matter and binding media around 1750, at a time when the trade of specialized color men grew increasingly popular.<sup>41</sup> The pharmacy's loss of relevance in its role as a vendor of art materials and its replacement by other professions has been highlighted by Stefanie Correll's research, which focused on the 18th-century trade in artists' materials in the city of Würzburg, Germany.<sup>42</sup> Correll investigated handwritten price lists from 1727 and 1790 from a shop that sold materials and spices. The establishment belonged to the *Materialist*<sup>43</sup> Carl Antonio Venino, a supplier of materials, who opened his shop in Würzburg in 1740. The documents revealed that Venino stored and traded in "[...] pigments, dyestuffs, and binders as well as additives and accessories for painting and drawing [...]."<sup>44</sup> Alongside the *materialists*, other merchant groups such as traders and wholesalers (*Grossisten*), chandlers (*Krämer*), spice traders or spice merchants (*Spezereihändler*), and druggists (*Drogisten*) were involved in the trade in art materials.<sup>45</sup> This is because the trade in colors and related materials had parallels with the trade in spices and other goods.<sup>46</sup> The high amount of overlap in the materials sold by these professions, however, makes it difficult to clearly differentiate between the roles that each played within the trade chain. The lack of distinction between some of these occupations is perhaps also perpetuated by the fact that certain terms were used synonymously. Johann Georg Krünitz's 1781 *Oekonomische Encyclopädie oder allgemeines System der Staats-, Stadt-, Haus- u. Landwirtschaft in alphabetischer Ordnung*, for instance, defines the term *Materialist* as:

[...] a merchant who, if the word is understood in a broader sense, sells all and any material goods or drugs and is therefore also called a druggist, Latin *Speciarius*, French *Droguiste*. In a narrower sense, a materialist is someone who trades in spices, that is, all kinds of spices and other materials that are used especially in pharmacies, and is therefore especially given the name of spice merchant.<sup>47</sup>

According to this definition of the profession, a *Materialist* was a type of merchant, who could also be referred to as druggist (*Droguist*) or spice merchant (*Spezereihändler*) because he sold a broad range of goods that included spices and drugs. The passage also reveals that commercial relationships existed between *materialists* and apothecaries, whereby the former supposedly supplied the latter. Interestingly, the definition does not explicitly list artists' pigments and related

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<sup>41</sup> Jacob Simon, "London, 1600-1800: trading artists' materials with Europe and worldwide," in *CATS Proceedings IV. Trading Paintings and Painters' Materials, 1550-1800*, ed. A.H. Christensen and A. Jager (Copenhagen: CATS; London: Archetype Publications Ltd, 2019), 96.

<sup>42</sup> Andreas Burmester and Stephanie Correll, "72 Florin for Colours, White, and Glue: The Tiepolos, The Veninos and Würzburg," in *Studying 18th Century Paintings and Works of Art on Paper*, ed. Helen Evans and Kimberley Muir (London: Archetype Publications, 2015), 68.

<sup>43</sup> Throughout this thesis, the German term *Materialist* is sometimes used, but spelled with a lower-case "m" (i.e., *materialist*). Burmester et al. do the same when referring to this kind of merchant in their English publications. The term 'grocer' is used too.

<sup>44</sup> Burmester and Correll, "72 Florin for Colours, White, and Glue," 61.

<sup>45</sup> Stephanie Correll and Andreas Burmester, "Trade in Artists' Materials: The Venino Merchants in Würzburg," abstract. For detailed explanations of the different professions see: Burmester and Correll, "72 Florin for Colours, White, and Glue," 62.

<sup>46</sup> Stephanie Correll and Andreas Burmester, *Farbwarenhandel um 1800: Die Würzburger Kaufleute Venino* (Munich: Siegl, 2012), 29.

<sup>47</sup> "[...] ein Kaufmann, der, wenn man das Wort im weitläufigen Verstande nimmt, alle und jede Materialwaaren oder Droguistereien verkauft und daher auch ein Droguist, lat. *Speciarius*, franz. *Droguiste*, genannt wird. Hingegen im engern Verstande heißt ein *Materialist*, der mit *Specerey*waaren, das ist, mit allen Arten von Gewürz und andern *Materialien*, die besonders in den Apotheken gebraucht werden, Handel treibt, und daher insbesondere mit dem Nahmen eines *Spezereyhändlers* belegt wird." Johann Georg Krünitz, *Oekonomische Encyclopädie oder allgemeines System der Staats-, Stadt-, Haus- u. Landwirtschaft in alphabetischer Ordnung* (Berlin: Pauli, 1781), 439.

supplies as part of a merchant's stock. Similar observations can be made about earlier definitions of the merchant profession. One example is Hans Sachs' and Jost Amman's *Eygentliche Beschreibung aller Stände auff Erden*, a book of trades published in Frankfurt in 1568. It contains woodcut prints and short, descriptive rhymes that introduce readers to various professions. The description for the merchant – *der Kauffmann* (Fig.3) – reads:

Ich aber bin ein Handelsmann/  
Hab mancherley Wahr bey mir stan/  
Würz/Arlas/Thuch/Wolln uñ Flachß.  
Sammat/Seiden/Honig und Wachß/  
Und ander Wahr hie ungenannt/  
Die führ ich eyn und aus dem Land/  
Mit grosser Sorg und gfehrlichkeit  
Wann mich auch offft das unglück reit.<sup>48</sup>

The poem provides further insight into the products traded and sold by a 16th-century German merchant: spices (*Würz*), high quality cloths from Arles (*Arlas*),<sup>49</sup> cloth (*Thuch*), wool (*Wolln*), flax (*Flachß*), velvet (*Sammat*)<sup>50</sup>, silks (*Seiden*), honey (*Honig*), and wax (*Wachs*). Pigments, dyes, and binding media are again not mentioned. The case of the Würzburg *materialist* Venino, however, whose price lists record a vast selection of pigments, binders, and dyes (and other supplies), demonstrates that this merchant group sold art materials in 18th-century Germany.



**Fig.3:** Woodcut print of the merchant profession ("Der Kauffmann"), in: Hans Sachs and Jost Amman, *Eygentliche Beschreibung aller Stände auff Erden* (1568): 70.

If we divert our focus from items such as colors, binders, and varnishes, and onto the supports that artists used, a broad spectrum of other trades involved in the art market emerges. A case in point and a remarkable project is *The Guide to Suppliers of Artists' Materials, France 18th-20th Centuries* (or *Labreuche Guide*) that was initiated by Pascal Labreuche in 2014. The project, which is hosted on an open-access site, aims to create a directory of suppliers who were active in Paris and France from the 18th century until the second half of the 20th century. Notably, the emphasis of this undertaking lies on painters' and draftsmen's materials such as canvases, panels, stretchers, boards, papers, and frames.<sup>51</sup> The names, dates<sup>52</sup>, and locations of suppliers are determined based on the marks, labels, stencils, and stamps that often appear on historical supports. This is further substantiated by evidence from documentary sources. The project site compiles all the accumulated marks of various kinds into a searchable catalog. However, it is also possible to search the database for specific providers of painters' materials as well as for artists. The latter provides

<sup>48</sup> Hans Sachs and Jost Amman, *Eygentliche Beschreibung Aller Stände auff Erden. Hoher vnd Nidriger, Geistlicher vnd Weltlicher, Aller Künsten, Handwercken vnd Händeln, [et]c. vom grösten biß zum kleinsten, Auch von jarem Ursprung, Erfindung vnd gebreuchen.* Franckfurt am Mayn: Feyerabents, 1568. SLUB Dresden, available online via: <http://digital.slub-dresden.de/id278811973/5>, 69.

<sup>49</sup> "Arlas," Frühneuhochdeutsches Wörterbuch, accessed June 6, 2023, <https://fwb-online.de/lemma/arlas.s.0m>.

<sup>50</sup> "Sammt," Digitales Wörterbuch der deutschen Sprache, Deutsches Wörterbuch von Jacob Grimm und Wilhelm Grimm, accessed June 6, 2023, <https://www.dwds.de/wb/dwb/sammt>.

<sup>51</sup> The analysis, however, is not limited to these supplies.

<sup>52</sup> In the context of the supplier, the term "dates" refers to the period of a given supplier's activity or a shop's existence. In the context of the marks, the term "date" refers to the date that appears on the given mark.



insight into the commercial relationships that existed between artists and particular businesses.<sup>53</sup> By broadening the research purview to a different category of artists' supplies and by taking into consideration a vast array of professions that participated in the sale of such products – for instance, framers, shippers, packers, restorers, and art dealers – the scope of Labreuche's research initiative surpasses that of this thesis. Yet, it must be acknowledged that the availability of information also depends on the city or region being studied. Paris indisputably held greater importance than Regensburg in the 18th century and the French capital's competitive art market of that period<sup>54</sup> likely resulted in a more substantial reservoir of evidence and archival records on which to draw. Irrespective of these differences, the *Labreuche Guide* serves as a significant example of how one can study the professions involved in the sale of artists' materials.

The method of analyzing marked art products and combining it with the study of textual sources to learn more about artists' suppliers was also employed by Jacob Simon who established the online resource *British artists' suppliers, 1650-1950*. The initiative, hosted by the National Portrait Gallery, "is devoted to British and foreign firms of artists' suppliers and colourmen operating in Britain."<sup>55</sup> The project identifies retailers through the marks left on art objects as well as through newspaper advertisements and magazines. The database provides a wealth of information about specific suppliers including business addresses, biographical information, and indications of who their patrons were. It is therefore a useful resource for art historical and art-technological studies.<sup>56</sup>

## Conclusion

This chapter presented the diverse source types that record the movement of artists' supplies. Among these are shipping documents, account books, exchequer records, toll registers, shop inventories, and pharmacy price lists. Furthermore, it was explained that marked products such as canvases, panels, or frames can reveal valuable information about art markets. The chapter also introduced the professions that were historically involved in the trade and commerce of art materials such as specialized color sellers, grocers, apothecaries, traders and wholesalers, chandlers, druggists, and spice traders as well as other types of suppliers. Collaboration among these professions was often necessary, as they depended on each other for the supply of materials. The information provided in chapter one situates this research project within the existing body of knowledge about historical art markets. In addition, it informs the methodological approach of the investigation, as it shows that the examination of historical records can produce the most auspicious results in this line of research.

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<sup>53</sup> "About us," Labreuche Guide: The Guide to Suppliers of Artists' Materials, France 18<sup>th</sup>-20<sup>th</sup> Centuries, accessed July 19, 2023, <https://www.guide-labreuche.com/en/qui-sommes-nous>.

<sup>54</sup> Andrew McClellan, "Watteau's Dealer: Gersaint and the Making of Art in Eighteenth-Century Paris," *The Art Bulletin* 78, no.3 (1996): 452, <https://www.jstor.org/stable/3046194>.

<sup>55</sup> "British artists' suppliers, 1650-1950," National Portrait Gallery, accessed July 19, 2023, <https://www.npg.org.uk/collections/research/programmes/directory-of-suppliers/>.

<sup>56</sup> "British artists' suppliers, 1650-1950," National Portrait Gallery, accessed July 19, 2023, <https://www.npg.org.uk/collections/research/programmes/directory-of-suppliers/>.

## Chapter 2: 18th-Century Regensburg: A New European Center

Throughout the Middle Ages, Regensburg was a thriving center of trade and commerce, benefitting from its “position as the principal cross-roads of [important] trade routes [...]”<sup>57</sup> Conveniently located along the Danube, the city’s early medieval merchants established trade links to Eastern and Southeastern Europe.<sup>58</sup> As a result of this flourishing economy, Regensburg held great wealth in the 12th and 13th centuries.<sup>59</sup> Even up until the turn from the 14th to the 15th century, many of the city’s trading companies (*Handelshäuser*) were still involved in trading precious goods such as fabrics, spices, and wine with Italy, Flanders, and Bohemia.<sup>60</sup> The rise of other Southern German mercantile cities such as Augsburg and Nuremberg during the Renaissance, however, eventually led to Regensburg’s economic decline.<sup>61</sup> It would take centuries for the city to restore some of the power and influence it once possessed.

Chapter two discusses the significance of Regensburg in the 18th century, exploring the city’s political and economic situation as well as cultural and artistic developments. This brief survey paints a picture of the conditions during which the 18th-century Regensburg market of art materials existed and highlights the many factors that were involved in creating a demand for artists’ supplies.

### 2.1: Seat of the Perpetual Imperial Diet

The 18th century marks an important period in Regensburg’s history. It was during this time that the city regained, at least in part, its status as a center of politics, culture, and art. A decisive factor in this development was that Regensburg was the seat of the Perpetual Imperial Diet (*Immerwährende Reichstag*), a session of the Reichstag of the Holy Roman Empire that sat continuously in the city from 1663 until 1806.<sup>62</sup> The *Immerwährende Reichstag* had a profound impact on cultural life and the production of art in Regensburg. The significance of the ongoing presence of European delegates (*Fig.4*) and other important and wealthy individuals was already acknowledged in the 18th century.<sup>63</sup> Friedrich Nicolai, who visited Regensburg in 1781, offers his thoughts about the city:

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<sup>57</sup> John Dornberg, “Where the Middle Ages live,” *The New York Times*, accessed March 1, 2023, <https://www.nytimes.com/1987/01/18/travel/where-the-middle-ages-live.html>.

<sup>58</sup> Roland Schönfeld, “Regensburg im Fernhandel des Mittelalters,” *Verhandlungen des Historischen Vereins für Oberpfalz und Regensburg* 113 (1973): 47, <http://nbn-resolving.de/urn/resolver.pl?urn=urn:nbn:de:bvb:355-rbh-1998-8>.

<sup>59</sup> “History,” Stadt Regensburg, accessed June 13, 2023, <https://www.regensburg.de/welterbe/en/world-heritage-site/about-regensburg/history>.

<sup>60</sup> Franz Bastian, *Das Runtingerbuch 1383-1407 und verwandtes Material zum Regensburger -südostdeutschen Handel und Münzwesen*, vol.1 (Regensburg: Gustav Bosse, 1944), passim, as cited in Schönfeld, “Regensburg im Fernhandel des Mittelalters,” 47.

<sup>61</sup> Hermann Kellenbenz, “Bürgertum und Wirtschaft in der Reichsstadt Regensburg,” *Blätter für deutsche Landesgeschichte* 98 (1962): 108, as cited in Schönfeld, “Regensburg im Fernhandel des Mittelalters,” 47.

<sup>62</sup> Stadt Regensburg, “History.”

<sup>63</sup> Alois Schmidt, *Regensburg: Reichsstadt – Fürstbischof – Reichsstifte – Herzogshof* (Munich: Kommission für Bayerische Landesgeschichte, 1995), 201, as cited in Christine Riedl-Valder, “Das Kunstschaffen in Regensburg unter dem Einfluss des Immerwährenden Reichstags,” in *Regensburg zur Zeit des Immerwährenden Reichstags: Kultur-historische Aspekte einer Epoche der Stadtgeschichte*, ed. Klemens Unger, Peter Sytra, and Wolfgang Neiser (Regensburg: Schnell & Steiner, 2013), 131.

What a wasteland would Regensburg be if all the envoys were gone from the city.<sup>64</sup>



**Fig.4:** Andreas Geyer, *Auffahrt der Gesandten am Alten Rathaus*, 1729, copper engraving.  
Picture credit: Museen der Stadt Regensburg.

Indeed, the delegates, who were representatives of the emperor, lead opulent lives, inhabiting lavish residences and attending sumptuous parties.<sup>65</sup> As a result, a new standard of living was established in the city, and it prompted art and culture to flourish anew.<sup>66</sup>

## 2.2: The Flourishing of Art and Culture

Because members of the Imperial Diet (*Reichstagsgesellschaft*) were prohibited from purchasing property in Regensburg, local homeowners began leasing their buildings, and many carried out ambitious renovation projects to accommodate the multitude of influential and affluent guests in the city.<sup>67</sup> As Riedl-Valder states:

The old building fabric was given a contemporary makeover with new facade designs, grand staircases, stucco ceilings, wall paintings, and Baroque or Rococo style furnishings to satisfy the tastes of the financially strong tenants.<sup>68</sup>

<sup>64</sup> “Welche Einöde würde Regensburg seyn, wenn die sämtlichen Gesandtschaften aus der Stadt weg wären.” Friedrich Nicolai, *Beschreibung einer Reise durch Deutschland und die Schweiz im Jahre 1781: Nebst Bemerkungen über Gelehrsamkeit, Industrie, Religion und Sitten*, vol. 2 (Berlin: Friedrich Nicolai, 1783), 398.

<sup>65</sup> Riedl-Valder, “Das Kunstschaffen in Regensburg,” 131.

<sup>66</sup> Christian Schaller, “Geschichte der Stadt Regensburg,” LM Stadtschreiber, accessed February 24, 2023, <https://www.stadtschreiberinnen.der-leiermann.com/geschichte-regensburgs/>.

<sup>67</sup> Riedl-Valder, “Das Kunstschaffen in Regensburg,” 132.

<sup>68</sup> “Die alte Bausubstanz wurde zeitgemäß mit neuen Fassadengestaltungen, großen Treppenhäusern, Stuckdecken, Wandmalereien sowie einer Möblierung im Stil des Barock oder Rokoko nach dem Geschmack der finanzkräftigen Mieter gestaltet.” Riedl-Valder, “Das Kunstschaffen in Regensburg,” 132.

The cultural and artistic developments of the 18th century are also owed to the Principal Imperial Commissioner (*Kaiserlicher Prinzipalkommissar*), who represented the Holy Roman Emperor before the imperial assembly. In 1748, this office was transferred to the Princely House of Thurn und Taxis and was officially assumed by Alexander Ferdinand von Thurn und Taxis in December of that year. Friedrich Nicolai describes the significance of the family's presence in Regensburg:

The Principal Imperial Commissioner, Prince von Thurn und Taxis, has a splendid court, and makes a very respectable expenditure here, which certainly benefits the city.<sup>69</sup>

When the Princely House of Thurn und Taxis moved from Frankfurt to Regensburg in 1748, its court was comprised of approximately four hundred people, including many craftsmen, musicians, and artists.<sup>70</sup> One such court painter was Johann Nepomuk Schöpf, who was hired in 1768 to paint frescoes for the interior of the Collegiate Church of St. Johann in Regensburg.<sup>71</sup> In fact, numerous of the city's churches were renovated and redecorated in the 18th century. The Collegiate Church of Our Lady at the Ancient Chapel (*Alte Kapelle*) is a prominent example; a far-reaching refurbishment of its interior – including a new program of frescoes and decorations – took place between 1747 and 1797.<sup>72</sup> These efforts were supposedly made in response to the modernization projects carried out in the Saint Emmeram's Abbey with frescoes by the brothers Egid Quirin Asam and Cosmas Damian Asam.<sup>73</sup> Although these renovations were undertaken because of a desire to adorn Regensburg's religious buildings in the Baroque and Rococo style, they often had to do with church politics. The modernization of the Saint Emmeram's Abbey, for instance, was likely also motivated by the monastery's elevation to the estate of imperial princes (*Reichsfürstenstand*), which warranted the building to reflect the newfound status.<sup>74</sup>

Many commissions at the time were awarded to non-local artists. There are at least two plausible reasons for this. First, artists working under the patronage of delegates or completing projects for convents, monasteries, and churches in Regensburg were not obliged to join a guild nor were they required to pay taxes. Second, local painters and artisans could often not compete with foreign artists' reputation and quality of craftsmanship.<sup>75</sup> Notable artists that came to work in Regensburg during the 18th century are the painter Peter Ayrshedel, born in Brazil to a mercenary from Nuremberg, as well as Martin Speer and his student Johann Joseph Zoffany. Around 1700, Ayrshedel completed beautiful ceiling frescoes in Regensburg's Domkapitelhaus. Speer, who is today considered one of the masters of Southern German Rococo painting, made portraits of many prominent Regensburg individuals and completed paintings and frescoes for religious institutions

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<sup>69</sup> "Der kaiserl. Principal-Kommissarius, Fürst von Thurn und Taxis, hat einen prächtigen Hofstaat, und macht hier einen sehr ansehnlichen Aufwand, welcher der Stadt gewiß zu Gute kommt."

Nicolai, *Beschreibung einer Reise durch Deutschland und die Schweiz im Jahre 1781*, 399.

<sup>70</sup> Riedl-Valder, "Das Kunstschaffen in Regensburg," 133.

<sup>71</sup> Christine Riedl, "Die Freskendekoration der Stiftskirche St. Johann durch den Münchner Hofmaler Johann Nepomuk Schöpf im Jahr 1768," in *St. Johann in Regensburg. Vom Augustinerchorherrenstift zum Kollegialstift*, ed. Paul Mai (Munich and Zurich: Schnell & Steiner, 1990), as cited in Riedl-Valder, "Das Kunstschaffen in Regensburg," 137.

<sup>72</sup> *The Collegiate Church of Our Lady at the Alte Kapelle* (Regensburg: Schnell & Steiner, 2017), 6. This source is a little art guide/pamphlet created by the church (*Alte Kapelle*) in collaboration with a Regensburg publishing house for art and cultural history. It discusses the church's historical significance and construction history. As it is well-researched, it is considered a credible source.

<sup>73</sup> Riedl-Valder, "Das Kunstschaffen in Regensburg," 134.

<sup>74</sup> *Ibid.*, 134.

<sup>75</sup> *Ibid.*, 138.



across Bavaria. Zoffany came to Regensburg with his father the craftsman Anton Franz Zoffany, who moved to the city with the court of Thurn und Taxis in 1748. He worked in Speer's studio for a short period before leaving for Italy in 1750.<sup>76</sup>

### 2.3: A Note on Regensburg's Economy<sup>77</sup>

Despite its special status as seat of the Perpetual Imperial Diet, Regensburg was, in the 18th century, no longer a long-distance trading hub.<sup>78</sup> What is more, the establishment of new trade routes, which no longer passed through Regensburg, prevented many goods from reaching the city. One such route connected Lauingen, a small town southwest of Regensburg, and Salzburg via Kelheim.<sup>79</sup> During the 18th century, many retailers were active in the city. For most, the procurement of goods depended on non-local wholesalers passing through Regensburg. The rerouting of trade routes as well as embargos and strict custom regulations made the acquisition of materials for retail increasingly difficult.<sup>80</sup> Did this impact the amount and types of art materials that entered the city? Throughout the century, trade with Austria via the Danube still played an important role for Regensburg. A notebook of the shipmaster Michael Hans Naimer, which survives in the *Stadtarchiv Regensburg*, substantiates this claim. Naimer exported goods for the city's trading companies to Vienna, occasionally transported Regensburg merchants, delegates of the *Reichstag*, and court officials, and brought various products back into the town.<sup>81</sup>

### Conclusion

It was established in this chapter that, following the loss of its importance during the Renaissance, Regensburg partly regained its position as a European center – *Europäischer Zentralort*<sup>82</sup> – in the 18th century. The main reason for this was that Regensburg served as the seat of the Perpetual Imperial Diet. This unique political situation played a pivotal role in the city's cultural revival and heightened artistic production. The modernization of buildings, abundant patronage of wealthy individuals, and refurbishing of churches are also proof that artists working in Regensburg were in need of art materials. The magnitude of commissions carried out for influential political and religious clients may even suggest a desire for and availability of high-quality materials that would have been needed to satisfy the tastes of such prestigious patrons.

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<sup>76</sup> Riedl-Valder, "Das Kunstschaffen in Regensburg," 138-143.

<sup>77</sup> For an excellent introduction to and discussion of the city's economy during the 18th century see: Roland Schönfeld, *Studien zur Wirtschaftsgeschichte der Reichsstadt Regensburg im achtzehnten Jahrhundert* (Kallmünz: Michael Lassleben, 1959).

<sup>78</sup> Walter Fürnrohr, "Das Patriziat der Freien Reichsstadt Regensburg zur Zeit des Immerwährenden Reichstags: Eine sozialgeschichtliche Studie über das Bürgertum der Barockzeit" (PhD diss., Friedrich-Alexander-Universität Erlangen, 1952), 262.

<sup>79</sup> Friedrich Hermann Heller, *Die Handelswege Innerdeutschlands im 16., 17. und 18. Jahrhundert und ihre Beziehungen zu Leipzig: nach archivalischen Quellen bearbeitet* (Dresden: Baensch, 1884), 62, as cited in Schönfeld, *Studien zur Wirtschaftsgeschichte*, 46.

<sup>80</sup> Schönfeld, *Studien zur Wirtschaftsgeschichte*, 41.

<sup>81</sup> *Ibid.*, 94-95.

<sup>82</sup> Schaller, "Geschichte der Stadt Regensburg."

## Chapter 3: Research Methodology

Rediscovering the actors involved in the trade and sale of art materials in 18th-century Regensburg calls for the study of archival records. This is supported by prior studies of historical markets of art materials, which relied on archival research. This chapter introduces the archives that were consulted, explains the methods used, and touches on the limitations of the chosen methodology.

### 3.1: Archives

Archival research was carried out in four archives, three of which are in Regensburg and one in Munich, namely the *Stadtarchiv Regensburg* (Regensburg City Archive), the *Staatliche Bibliothek Regensburg* (Regensburg State Library), the *Bischöfliches Zentralarchiv Regensburg* (Episcopal Central Archive Regensburg), and the *Archiv für Restaurierung des Bayerischen Landesamts für Denkmalpflege* (Archive for Restoration of the Bavarian State Office for the Preservation of Monuments, Munich).

#### 3.1.1: Stadtarchiv Regensburg

The *Stadtarchiv Regensburg* contains archival materials that date back to the late 13th century and served as the most useful archive for this research project. Its collection consists of a vast array of source types including administrative documents, association files, documentation of estates, newspapers, posters, and archival items about people of local and regional importance.<sup>83</sup> The documents in the archive that predate the 19th century – therefore, including those that originate from the 18th century – almost exclusively have an official or corporate purpose of creation. As a result, private-law business documents are generally not included in the collection. This means that the archive generally does not possess inventory lists and/or invoices of tradespeople from 18th-century Regensburg. Instead, archival items pertain to the laws and regulations of city guilds and other professional groups.<sup>84</sup> This is useful for understanding how the apothecary profession was organized in Regensburg as well as with whom they collaborated or were in competition. *Materialists* were part of the so-called *Kramer Bruderschaft der offenen Gewerbe*, the grocer's guild of open trades. The archive holds files that mainly discuss trade disputes from the 16th to the 18th century.<sup>85</sup>

#### 3.1.2: Staatliche Bibliothek Regensburg

The *Staatliche Bibliothek Regensburg* closely collaborates with the Regensburg University Library and the University of Applied Sciences of Eastern Bavaria (*Ostbayerische Technische Hochschule Regensburg*). Its collection focuses especially on documents from the humanities and cultural studies and, notably, includes literature on German arts and crafts. The archival information about apothecaries and *materialists* is limited and likely the result of the scope of the library's historical collection, which consists of approximately 90.000 items that predate 1800. Hereby, 13.000

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<sup>83</sup> "Aufgaben," Abteilung Stadtarchiv, Stadt Regensburg, accessed May 15, 2023, <https://www.regensburg.de/rathaus/aemteruebersicht/kulturreferat/amt-fuer-archiv-und-denkmalpflege/abteilung-stadtarchiv/10536>.

<sup>84</sup> Ferdinand Wagner (archivist, Stadtarchiv Regensburg), email message to author, March 22, 2023.

<sup>85</sup> Ferdinand Wagner (archivist, Stadtarchiv Regensburg), email message to author, March 22, 2023.

archival items originate from the 16th century.<sup>86</sup> The library does not have larger collections concerning Regensburg apothecaries in its section with manuscripts (*Handschriften*).<sup>87</sup> The only relevant surviving documents are a pharmacy price list (*Taxa*) from 1727 and an apothecary's receipt from 1741.

### 3.1.3: *Bischöfliches Zentralarchiv Regensburg*

The *Bischöfliches Zentralarchiv* keeps all surviving documents from the administrative departments, offices, and institutions of the Episcopal Ordinariate Regensburg. Additionally, the archive collects pictures, maps, plans, and posters on the history of the diocese. Most importantly, the archive is in possession of parish files, which “are valuable sources for the legal situation, the religious development, and the social situation of the individual parishes.”<sup>88</sup> The most significant archival materials for this research are the contracts drawn up between artists and church officials, as these often include descriptions of the materials required for a commission.

### 3.1.4: *Archiv für Restaurierung des Bayerischen Landesamts für Denkmalpflege*

The *Archiv für Restaurierung* forms part of the documentation department of the Bavarian State Office for the Preservation of Monuments. The documentation department is responsible for the evaluation and upkeep of archival materials that deal with the preservation of historic buildings and monuments in Bavaria.<sup>89</sup> In the context of this analysis, the archive was primarily consulted to gain access to a secondary source, which contains transcriptions of handwritten documents held in the *Bischöfliches Zentralarchiv*.

Throughout this thesis, the consulted archives will be referred to with the following abbreviations:

<b>StdA</b>	Stadtarchiv Regensburg
<b>SB</b>	Staatliche Bibliothek Regensburg
<b>BZA</b>	Bischöfliches Zentralarchiv Regensburg
<b>BLfD</b>	Bayerisches Landesamt für Denkmalpflege (Archiv für Restaurierung)

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<sup>86</sup> “Bestände,” Staatliche Bibliothek Regensburg, accessed May 15, 2023, <https://www.staatliche-bibliothek-regensburg.de/die-staatliche-bibliothek/bestaende/>.

<sup>87</sup> Bernhard Lübberts (director, Staatliche Bibliothek Regensburg), email message to author, May 3, 2023.

<sup>88</sup> “Sie sind wertvolle Quelle für die Rechtsverhältnisse, die religiöse Entwicklung und die sozialen Verhältnisse der einzelnen Pfarreien.” “Bestände des Archivs,” Bistum Regensburg, accessed May 15, 2023, <https://bistum-regensburg.de/bistum/einrichtungen-a-z/archiv>.

<sup>89</sup> “Dokumentationswesen,” Denkmalforschung und Denkmalerfassung, Bayerisches Landesamt für Denkmalpflege, accessed May 15, 2023, <https://www.blfd.bayern.de/abteilungen/denkmalforschung-erfassung/dokumentationswesen/index.html>.

### 3.2: Limitations of Conducting Archival Research

The limitations that come with conducting archival research must be acknowledged. First, the organization of archival collections impacts the accessibility of archival materials. In the case of Regensburg, the city's turbulent past has caused the documentation of its cultural history to be distributed among various institutions, including facilities outside of the city.<sup>90</sup> Second, only a limited number of documents survive or are held in archives. This is the case either because they simply did not endure the test of time due to damage or decay, because they were or are not deemed significant enough to be preserved or because they do not fit thematically into the narratives of archival collections.<sup>91</sup> Third, it can be challenging to decipher the information found in archival materials. This problem may occur when a document is in poor condition, when the handwriting is illegible or when a text is written in a foreign language.

### 3.3: Research Goals and Approach

The goal of conducting research in the Regensburg archives was to find information that would help paint a picture of the professions that participated in the sale of artists' supplies and the materials that were available at the time. The professions of the apothecary, the grocer, the spice trader, and other tradespeople were the starting point of this research, as their involvement in the market of art materials has been confirmed in past research. In order to find suitable archival materials, initial web searches were conducted using the respective archives' digitized collections. The first step consisted of searching the databases using keywords. The searches were made in German and included terms such as *Apotheke* (pharmacy), *Materialist* (grocer), *Krämer* (chandler), *Spezereyhändler* (spice trader), *Pigment* (pigment), *Farbe* (color), *Färben* (dyeing), *Farbwaren* (coloring matter), *Farbwarenhandel* (color trade), and *Inventar* (inventory).<sup>92</sup> Because the names of individual 18th-century Regensburg apothecaries, grocers, and tradesmen are known thanks to address books of that period and secondary literature concerning Regensburg's economic history and history of pharmacy, name searches were carried out as well.

This research project heavily relied on the information found in 18th-century German handwritten documents. These are predominantly written in cursive script (*Kurrent* or *Kurrentschrift*), which can be difficult to decipher. To get familiar with the script and improve the reading of archival materials, the Bavarian State Archives' (*Die Staatlichen Archive Bayerns*) training platform for reading historic handwriting fonts was used.<sup>93</sup> Furthermore, the contents of some of the documents are written in Latin. To facilitate the translation of terms from Latin into German, the glossary of

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<sup>90</sup> "Regensburg in der Bayerischen Landesbibliothek Online," Digitale Sammlung, Staatliche Bibliothek Regensburg, accessed May 15, 2023, <https://www.staatliche-bibliothek-regensburg.de/literatursuche/digitale-sammlung/>.

<sup>91</sup> This is the case with the *Stadtarchiv Regensburg*, which typically does not hold apothecaries', grocers', or other merchants' inventory lists because of the nature of its collection.

<sup>92</sup> Variations of these words were used to increase the likelihood of relevant results. For the word *Apotheke*, for instance, such variations included: *Apotheken* (pharmacies), *Apotheker* (apothecary), *Apothekerrechnung* (pharmacy receipts), *Apothekentaxe/Apothekertaxe* (pharmacy price list), and so forth.

<sup>93</sup> The training platform "Digitale Schriftkunde", which is offered by the Bavarian State Archives, can be accessed here: <https://www.gda.bayern.de/DigitaleSchriftkunde/>. Visitors can practice reading handwriting styles from the 8th to the 20th century.



art materials created for the Munich Taxae Project, was consulted.<sup>94</sup> 18th-century encyclopedias of goods (*Waarenlexika*) aided in the translation of terms from German into English.

### 3.4: Results of Archival Research

#### 3.4.1: Four Art-Technological Sources

The most significant results of the research carried out in the archives are four documents of disparate nature: a legal document dated 1714, a pharmacy price list dated 1727, a material invoice dated 1752, and an inventory dated 1808. Each document was created for a different purpose and discloses unique information about the art materials sold in Regensburg. Because they provide insight into historical artists' supplies, the archival records are considered art-technological sources within the context of this thesis. They form the basis of this research and will be analyzed in chapter four.

#### 3.4.2: Supporting Documents

A diverse selection of historical documents was used to contextualize the information found in the four art-technological sources. This includes archival records that mention pigments, dyes, and other art supplies. Although these sources reference such materials without linking them to specific retailers in Regensburg, they are relevant because they attest to the availability of and demand for artists' supplies in the city. In addition to consulting physical archival materials, digitized versions of primary sources from the 18th century were also consulted. These were accessed online to supplement the information found in the archives. Most of these documents are held in digital collections such as the *Digitale Bibliothek* of the Munich Digitization Center (*Münchener DigitalisierungsZentrum*) as well as *bavarikon*, an internet portal that stores a vast array of cultural and art historical knowledge from Bavarian institutions. *Bavarikon* is overseen by the Bavarian State Ministry of Science and the Arts and the Bavarian State Ministry for Digital Affairs.<sup>95</sup>

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<sup>94</sup> The glossary was accessed via the (still unpublished) project website. Because most of the *Taxae* that have been analyzed by the Munich Taxae Project contain Latin terms and their German translations and because there is an overlap in the materials that German pharmacies offered, the glossary was used as a reference tool.

<sup>95</sup> "About bavarikon," Services, bavarikon, accessed May 16, 2023, <https://www.bavarikon.de/object/bav:BSB-CMS-000000000000605?lang=en>.

## Chapter 4: Case Studies of Four Art-Technological Sources

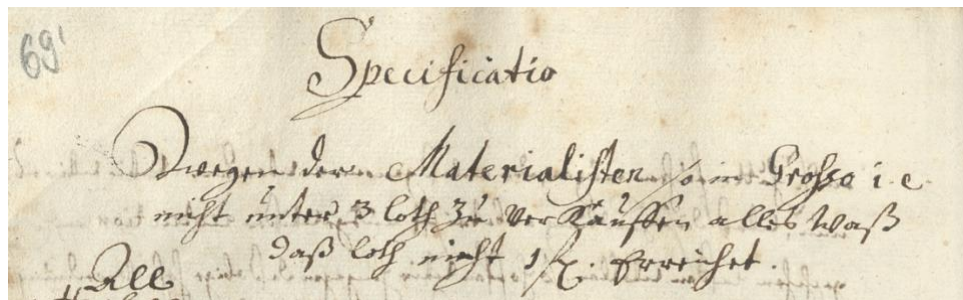
Each of the four documents presented in this chapter ties a different profession to the 18th-century Regensburg art market and provides unique information about the art materials that were sold. The four items in question are a legal document from 1714, a pharmacy price list from 1727, a commission contract from 1752, and the inventory of a trading company from 1808. Because these items are historical sources for artists' materials, they are treated as art-technological sources. The structure and content of the documents are examined. An in-depth analysis of the sources was not feasible due to the scope of this thesis.

### 4.1: A Legal Document (*Specificatio*) from 1714

The first art-technological source that will be examined is a hand-written legal document that dates to 1714. It is held in the StdA and belongs to a collection of documents from the 17th and early 18th centuries.<sup>96</sup> The complete document is provided in *appendix I*.

#### 4.1.1: Structure

The item consists of three pages, is titled *Specificatio*<sup>97</sup>, and contains a list of materials that were sold by the Regensburg grocer (*Materialist*) Johann Adam Wittich. The list is prefaced by a short paragraph in German specifying that the products listed are not to be sold under three lot (*Loth*) (*Fig.5*). Lot was a unit of weight whereby one lot was defined as either 1/30 or 1/32 of a pound.<sup>98</sup> Prices for the materials are not given.



*Fig.5:* Detail of page one of the 1714 *Specificatio*, including the specification to not sell the materials listed in the document under three lot. Stadtarchiv Regensburg.

<sup>96</sup> "Die Medizinal-Ordnungen und -Akten der Stadt Regensburg von 1659 bis 1719," HVOR, AAR, 46/22, Stadtarchiv Regensburg.

<sup>97</sup> *Specificatio* is a legal term that describes the law of property, "Specificatio," Britannica, accessed July 8, 2023, <https://www.britannica.com/topic/specificatio>.

<sup>98</sup> "Lot," museum-digital, accessed July 5, 2023, <https://bawue.museum-digital.de/tag/102446>.

#### 4.1.2: Contents

The products, which are written in Latin or German, are diverse and include herbs such as mint (*Menthe*) and oregano (*Majoran*) and spices such as cinnamon (*Cinnamoni*) and nutmeg (*Moschat*).<sup>99</sup> The *Specificatio* also lists several pharmaceutical products. *Sperma ceti*, which appears on page one, is a waxy substance obtained from the head cavity of a sperm whale.<sup>100</sup> It was used medicinally in emollients and as demulcent.<sup>101</sup> Other examples of products that had medicinal uses are crude antimony (*Antimonium crudum*), Venetian theriac (*Theriaca Venet.*), and

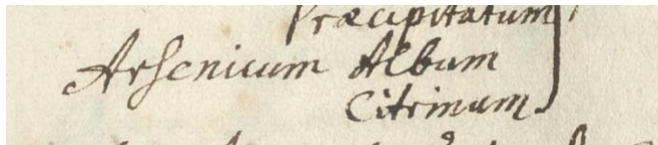


Fig.6: The material *Arsenicum citrinum* (orpiment) mentioned on page two of the 1714 *Specificatio*. Stadtarchiv Regensburg.

ambergrease (*Ambra grysea*). Notably, the document does not include any ready-made pigments or dyes. However, some of the raw materials listed could have been used to make coloring matter. Page three of the *Specificatio*, for example, includes *Arsenicum citrinum* (Fig.6), a mineral that was used to make the pigment orpiment.

Minerals like azurite and malachite, commonly used for producing blue and green pigments, do not appear in the document. Page three names eleven different precious stones (*Lapides pretiosorum*) (Fig.7). The most significant among these is *Lazul*, as it likely refers to the semi-precious stone lapis lazuli. Lapis lazuli was used to produce the expensive blue pigment ultramarine.

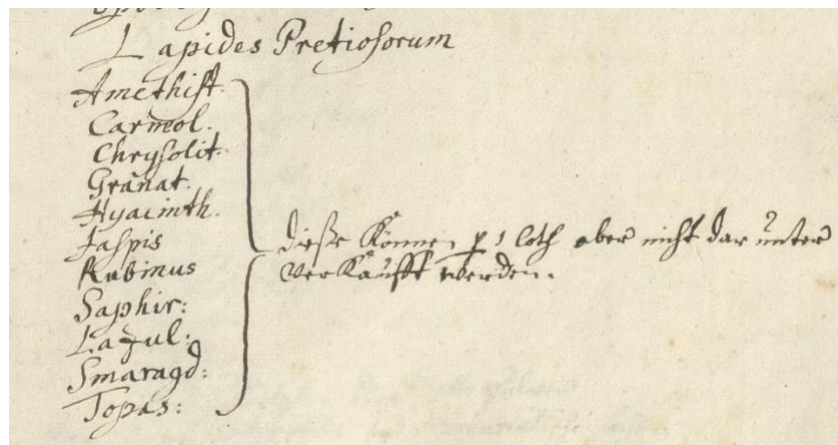


Fig.7: Detail of page two of the 1714 *Specificatio* showing the list of *Lapides Pretiosorum* (precious stones). Stadtarchiv Regensburg.

In addition to grocery items, medicinal products, and raw materials, the *Specificatio* also lists diverse types of spirits (*Spiritus*). Of the five spirits listed, nitric acid (*Spiritus Nitri*) is the most relevant to the discussion about art materials. Nitric acid appears in Wittich's list more than once: first as *Spiritus Nitri* and then as *Aqua fortis*. While the product functioned as a medicine, it was also one of the components of tin chloride, which was used as a mordant in dyeing.<sup>102</sup> It is unclear

<sup>99</sup> The spices and herbs appear on page three of the document.

<sup>100</sup> "Spermaceti," Science & Tech, Britannica, accessed July 9, 2023, <https://www.britannica.com/topic/spermaceti>.

<sup>101</sup> "Cetaceum, Spermaceti," Worcester Medical Museums, accessed July 9, 2023, <https://medicalmuseum.org.uk/spermaceti-2>.

<sup>102</sup> Susan Fairlie, "Dyestuffs in the Eighteenth Century," *The Economic History Review* 17, no.3 (1965): 492, <https://doi.org/10.2307/2592624>.

why the same material appears twice. Among the eleven different oils (*Olea*) that appear in Wittich's list is turpentine oil (*Oleum terebinthina*), which was used by painters as solvent.<sup>103</sup>

Although previous research has proven that grocers were involved in the sale of art materials – one example being Stephanie Correll's research on the Würzburg *materialist* Carl Antonio Venino, which was discussed in chapter one – this document contains only a handful of products that would have been of use to artists and craftsmen. It must be taken into consideration, however, that the *Specificatio* is not an inventory of Wittich's shop. It is a legal document that establishes the conditions of sale for a particular selection of products. The fact that the materials on the list were not to be sold under three lot likely had to do with the commercial rivalry that existed between grocers and apothecaries and the legal disputes that frequently ensued between the two professions.<sup>104</sup> Grocers typically travelled to trade fairs, purchased large quantities of materials, and supplied pharmacies with the necessary products. However, they sometimes also sold goods directly to consumers (*Endverbraucher*) and, therefore, were in competition with apothecaries.<sup>105</sup> As a result, trade associations frequently imposed strict regulations on grocers, which prohibited them from selling the same materials as apothecaries.<sup>106</sup> A document issued in 1716, for instance, decreed that grocers in Regensburg were not permitted to sell cinnabar, antimony, tartar and spiritus vini.<sup>107</sup> Interestingly, restrictions also affected other retailers in the city. An item that is held in the StdA with documents concerning the Chandler's guild (*Kramerinnung*), for instance, specifies the legal action that was taken against a *Pfragner*, a type of tradesman or retailer of groceries, in 1757.<sup>108</sup> According to the document, a *pfragner* with the surname Schönamsgruber was unlawfully selling red colors (*Appendix II*).<sup>109</sup> Despite these impediments, grocers were counted among 18th-century Regensburg's wealthiest citizens.<sup>110</sup> In 1753, the Regensburg-based notary and chamberlain Johann Carl Paricius even included the profession of the grocer in his list of a laudable merchant community (*Löbliche Kaufmannschaft*).<sup>111</sup> The elevated status of grocers suggests that they led successful businesses – perhaps this is what inspired Johann Adam Wittich to switch professions. Before becoming a grocer, Wittich worked as an apothecary at the *Adler-Apotheke* in Regensburg from 1675 until 1683.<sup>112</sup> Whether the grocer sold the materials directly to customers or he supplied pharmacies and other retailers is unclear. The fact that the items listed

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<sup>103</sup> In the *Steuerprojekt*'s glossary (which can be found on the project website), it is explained that many *Taxae* use turpentine oil synonymously with turpentine.

<sup>104</sup> Many documents concerning such legal matters between apothecaries, grocers, and other merchants in Regensburg, survive in the *Stadtarchiv Regensburg*.

<sup>105</sup> "Geschichte: Naturheilmittel in Apotheke und Industrie," *Deutsche Apotheker Zeitung*, accessed July 9, 2023, <https://www.deutsche-apotheker-zeitung.de/daz-az/2003/daz-43-2003/uid-10828>.

<sup>106</sup> Krekel and Burmester explain that a legal document from 1586, forbade the sale of lead white, orpiment, and verdigris to grocers (*Materialisten*) in the city of Passau because of the toxicity of these materials, see: Christoph Krekel and Andreas Burmester, "Das Münchner Steuerprojekt: Apothekentaxen als neuer Quellentyp für die Erforschung historischer Künstlermaterialien," *Restauro* 107, no.6 (2001): 451.

<sup>107</sup> Rainer Krämer, *Die Geschichte der Regensburger Apotheken vom 13. bis 19. Jahrhundert* (Berlin: epubli GmbH, 2013), 226.

<sup>108</sup> "Pfragner," *Frühneuhochdeutsches Wörterbuch*, accessed May 15, 2023, <https://fwb-online.de/lemma/pfragner.s.0m>.

<sup>109</sup> "Bitte um Deklaration der Sentenz vom 6. Juni 1757 unsere bürgerlichen Kramerinnungsverwandten gegen Schönamsgruber wegen des Handels mit roten Farben, 6. Juni 1757 (Akte)," *Kramerbruderschaft 221, Stadtarchiv Regensburg*. We know that Schönamsgruber was a *Pfragner* because a document from 1760, which is held in the *Stadtarchiv Regensburg*, refers to him as such; "Kramerinnung gegen den Pfragner Schönamsgruber wegen Handels mit roten Farben, 21. April 1760,"

*Kramerbruderschaft 224, Stadtarchiv Regensburg*.

<sup>110</sup> Fürnrohr, "Das Patriziat der Freien Reichsstadt Regensburg," 263.

<sup>111</sup> Johann Carl Paricius, *Allerneueste und bewaehrte Nachricht Von der des Heil. Roem. Reichs Freyen Stadt Regensburg* (Regensburg: Seiffart, 1753), 137.

<sup>112</sup> Krämer, *Die Geschichte der Regensburger Apotheken*, 297.

were not to be sold under three lot in addition to the raw state of most materials, however, suggest that Wittich acted as a supplier.

In summary, the contents of the 1714 *Specificatio* suggest that grocers were involved in the trade and sale of art materials. The document is a productive source because it offers insight into the laws that governed the 18th-century Regensburg market of art materials and alludes to the commercial relationships (or rivalries) that existed between different professions in the city. Due to the nature of the document, the prices of individual materials as well as Wittich's clientele are not available.



#### 4.2: A Pharmacy Price List (*Taxa*) from 1727

The second art-technological source that will be analyzed is a pharmacy price list from 1727 (Fig.8). It is held in the *Staatliche Bibliothek Regensburg* (SBR) and appears to be the city's only surviving 18th-century *Taxa*.<sup>113</sup> It is also the only physical copy of the document to survive in the SBR.<sup>114</sup> The price list, titled *Pretium Medicamentorum Simplicium & Compositorum, in Officinis Pharmaceuticis Ratisbonensis Venalium*,<sup>115</sup> was published by Johann Conrad Peetz, a book printer, bookseller, and publisher as well as an assessor of the Hanseatic court in Regensburg.<sup>116</sup>

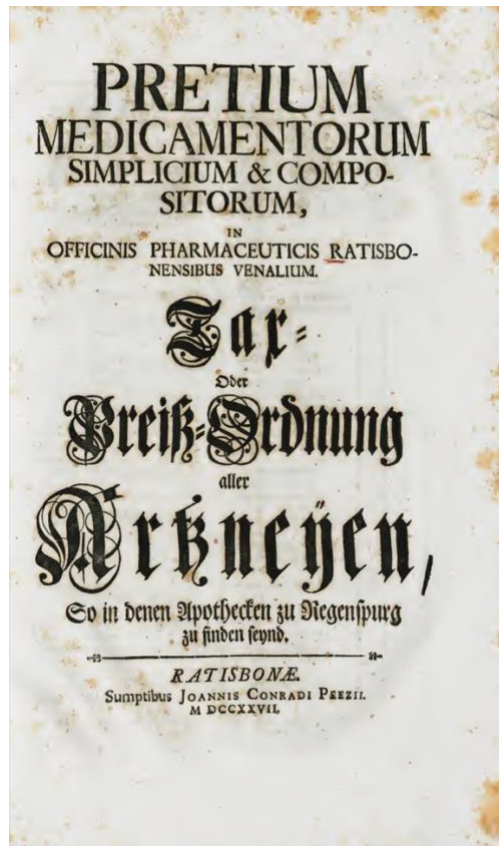


Fig.8: Johann Conrad Peetz, *Pretium Medicamentorum Simplicium & Compositorum, in Officinis Pharmaceuticis Ratisbonensis Venalium* (1727), title page. Staatliche Bibliothek Regensburg. Picture credit: Internet Archive, Bibliothèque interuniversitaire de santé (Paris).

<sup>113</sup> It is highly likely that other pharmacy price lists were issued for Regensburg in the 18th century. Yet, until now, no other *Taxae* of this period have been discovered in German archives or libraries.

<sup>114</sup> At the time of writing this thesis, no other copy of the 1727 Regensburg *Taxa* could be located in the Staatliche Bibliothek Regensburg.

<sup>115</sup> German title: *Taxa oder Preiß-Ordnung aller Arzneyen, So in denen Apotheken zu Regensburg zu finden seynd*; English translation by author: tax or price regulation of all medicines (raw and composed) to be found in the pharmacies of Regensburg.

<sup>116</sup> "Peetz, Johann Conrad," Die Porträtsammlung der Herzog August Bibliothek Wolfenbüttel, accessed June 3, 2023, <http://portraits.hab.de/person/8863/>.

Before the *Taxa*'s structure and contents are discussed, it must be noted that the 1727 Regensburg pharmacy price list has been recorded in the database of the Munich Taxae Project in addition to one other Regensburg *Taxa* from 1490.<sup>117</sup> As it is customary for the Taxae Project to analyze all discovered German *Taxae*, the art-technologically relevant materials of the 1727 *Taxa* have been compiled in a list. This condensed version of the pharmacy price list will serve as a useful tool in the analysis and contextualization of the document's contents. The list is published on the website of the *Taxenprojekt*, which, at the time of writing this thesis, has not yet been made available to the public.<sup>118</sup> In what follows, the structure and art-relevant contents and the 1727 Regensburg pharmacy price list are examined. Additional images of the *Taxa* are provided in *appendix III*.

#### 4.2.1: Structure

The 1727 Regensburg *Taxa* is a printed book of fifty-eight pages. The title page displays the complete title in Latin and German and provides the document's publishing information. This includes the name of the author and publisher, Joannis Conradi Peezii (Johann Conrad Peetz), as well as the city (Regensburg) and year (1727) in which the price list was issued. The year is written in Roman numerals (MDCCXXVII). The *Taxa* itself is composed of three separate sections:

*Section 1*: A price list of all products available in Regensburg's pharmacies (p.1 – p.41)

*Section 2*: A price list detailing the costs of special requests (p.42)

*Section 3*: An index of the products mentioned in section 1 (unnumbered: p.43 – p.58)

Section 1 lists all products available in the pharmacies of Regensburg and discloses the price of each item. The materials are listed in alphabetical order and the start of a new section is indicated by a letter of the alphabet. No materials are listed for the letters J, K, Q, W, Y, and Z. The materials that were used for artistic purposes are therefore dispersed across the entire document. In terms of structure, the 1727 *Taxa* is similar to the majority of *Taxae* that have been analyzed, but differs from those that group art materials into sections (*Sectiones*) such as the Leipzig *Taxa* from 1669, which contains a chapter on metals, minerals, and pigments.<sup>119</sup> However, the Regensburg price list is also structurally different from price lists such as the Liegnitz *Taxae* from 1568, 1584, 1614, and 1662, which contain chapters that are specifically dedicated to pigments (*Pigmenta*) and colors (*Colores*) (*Fig.9*).<sup>120</sup> The fact that the Regensburg *Taxa* does not separate artists' materials from pharmaceutical drugs and everyday products supports the idea that many items served more than one purpose. This structure makes it difficult – at least for the untrained eye – to decode which items were used by artists. Each page of section 1 is divided into five columns. The first column provides the name of the material in Latin.<sup>121</sup> The second column contains the German translation of the term and specifies the units of weight for each product, which is either given in the base unit lot (*Loth*) or in its subunit quent (*Quint* or *Quintlein*).<sup>122</sup> Some products are also measured in ounce

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<sup>117</sup> The *Taxae* from 1490 and 1727 are currently the only two pharmacy price lists that have been found for Regensburg. See: "Gefunden," Museumsbau.de, accessed July 3, 2023, <https://museumsbau.de/gefunden/>.

<sup>118</sup> Prof. Dr. Andreas Burmester shared the transcribed list of 1727 with the author and provided access to the still unpublished project website.

<sup>119</sup> Krekel and Burmester, "Das Münchner Taxenprojekt," 452.

<sup>120</sup> Burmester, Haller, and Krekel, "*Pigmenta et Colores*," 314.

<sup>121</sup> Krekel and Burmester contend that because Latin (i.e., the technical language in the pharmaceutical field) did not change much over time, the language is a useful analytical tool for comparing terms in pharmacy price lists from different centuries, see: Krekel and Burmester, "Das Münchner Taxenprojekt," 452.

<sup>122</sup> 1 lot (*Loth*) = 4 quent (*Quint/Quintlein*).

(*Untz*), piece (*Stuck*) or grain (*Gran*). Here one lot = ca. 14.9 grams, one quent = ca. 3.73 grams, one ounce = ca. 29.8 grams, and one grain = ca. 0.062 grams.<sup>123</sup> Columns three, four, and five disclose the price of the given item in *Florin* (fl.), *Kreuzer* (kr.), and *Pfennig* (pf.), respectively.

8.		fl.	kr.	pf.
Creca preparata	gerieben Krebde	6	2	
Lazurina hemicæ	Blau Brech Erde	2		
Terra lemnia	Rothe Lemnische Erde	3		
preparata	bereit Lemnische Erde	2		
Turc. vulg.	gemein Türckisch Erde	1	6	
Terra Strig. lutea	Gefigete Strigisch Erde	1	6	
Goldblut.	gelb gefigete Goldberg. Erde	1	6	
cinerica	Leberfarb Goldbergische Erde	1		
alba	Weis Goldbergische gefigete Erde	1		
argentea	Silberfarb Goldberg. Erde.	1	6	

**Caput. VI.**  
**DE PIGMENTIS SIVE COLORIBUS**  
PICTORUM CRUDIS ET PRÆ-  
PARATIS.

Von rohen vnd zugerichten Mahlern  
farben/ sol. Lort gegeben  
werden.

		fl.	kr.	pf.
<b>A</b> uripigmenti crudi	Unberett Operment	4		
	subtilis. criti wolgerieben Operment	9		
Boli armenj	Armenisch Bolus	3		
	vulgaris gemein Bolus	3		
Cerulei cineriti	Bergsch/ Eschblaw	2		
	subalbidi Lichtblaw	2		
Cerulei nativi fini	beste Bergblaw	3		
	mediani mittel Bergblaw	2		
Cerulei factiti opt.	Lunckel Lasur	4		
	vulgaris lichte Lasur	4		
Fein Delblaw	is j. ein Pfund 4 Thal.	3		
Gemein Delblaw		1	6	

Cerulea

**Fig.9:** A page in the 1614 Liegnitz *Taxa* (Nicolaum Schneider, *Der Fürstlichen Stad Liegnitz Apoteken Ordnung und Taxa*) showing the separate section of pigments and colors. Picture credit: Niedersächsische Staats- und Universitätsbibliothek Göttingen.

Section 2, titled *Taxa laborum*, consists of only one page and specifies the prices that apothecaries could charge for customers' requests that required extra effort or labor. The requests are described in Latin and German and included, for instance, the production of pills (*pilularum massa conficienda*) or the making of decoctions in small or large quantities (*decocto majori/minori in diplomate*). Section 3, titled *Teutsches Tax-Register* (German Tax Index), is an index of all items that appear in the *Taxa*. The products are arranged in alphabetical order and are accompanied by the page numbers on which they appear in the document. Going forward, sections 2 and 3 will not receive more attention, as section 1 already contains all the information that is relevant for this investigation.

<sup>123</sup> Krekel and Burmester, "Das Münchner Taxenprojekt," 453-454.



#### 4.2.2: Contents

It is beyond the scope of this thesis to discuss all items listed in the 1727 pharmacy price list and only some of the materials used by artists will be examined more closely. The transcribed and edited version of the *Taxa*, which was created for the Munich Taxae Project, summarizes all materials that would have been of use to artists or craftsmen and thus serves as a useful reference material. The document contains 149 materials, which are named in Latin and German, and provides three different prices for each item. This includes the price of a given item per lot (*Loth*), the price per gram (*Gramm*), and the price relative to the value of verdigris (*Grünspan*). The currency used is *Pfennig*. The price relative to verdigris is used within the Taxae project to facilitate price comparisons across different pharmacy price lists.<sup>124</sup> Although the prices are interesting for the fields of Art History, Economic Studies, and Technical Art History, the scope of this thesis does not permit a further analysis of these. The condensed list illustrates the broad selection of art-related products that were sold in pharmacies. These include, for example, different types of wax<sup>125</sup>, gold leaf (*Auri folia*) and silver leaf (*Argenti folia*), and Turkish galls (*Gallae Turcicae*).

The names of several pigments and raw materials that are used in the production of pigments and dyes appear in the 1727 *Taxa*. Yet, the document does not explicitly name them as such. This has likely to do with the fact that many materials that were used as pigments were also used in medicine. The following four examples attest to this. The first “pigment” to appear in the price list is verdigris (*Aerogu*). Verdigris is a copper containing pigment that was in use as green paint as early as the 9th century.<sup>126</sup> In the 18th century, however, the material was also added to pharmaceutical preparations. Ephraim Chambers' 1728 *Cyclopædia* acknowledges that verdigris was of great use among painters, but also describes the material's medicinal use:

The Apothecaries use to dissolve *Verdegrease* in distill'd Vinegar, and then filtrate, and evaporate it in the Cellar; upon which it shoots into Crystals. These Crystals are used among Chirurgeons, &c. to eat off the fungous Flesh.<sup>127</sup>

A second example is the material cinnabar, of which three different types appear in the pharmacy price list: artificial cinnabar (*Cinnabaris factitia*)<sup>128</sup>, (natural) Hungarian mountain cinnabar (*Cinnabaris nativa Hungarica*), and prepared Hungarian mountain cinnabar (*Cinnabaris nativa Hungarica rectificata*).<sup>129</sup> Cinnabar was used to produce the bright red pigment vermilion but was

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<sup>124</sup> Making price comparisons based solely on the prices provided in the *Taxae* be challenging due to yearly variations in buying power and because of the problems that are encountered when converting the currencies of different cities, see: Krekel and Burmester, “Das Münchner Taxenprojekt,” 454.

<sup>125</sup> Listed in the pharmacy price list (original document) under the letter “C” on page 6: white wax (*Cera alba*), yellow wax (*Cera citrina*), red wax (*Cera rubra*), green wax (*Cera viridis*), and tree wax (*Cera arborea*).

<sup>126</sup> “Grünspan, Pigment,” Material-Archiv, accessed July 4, 2023,

[https://materialarchiv.ch/de/ma:material\\_952/?maapi:f\\_all\\_groups=ma:group\\_43&q=Gr%C3%BCnspan](https://materialarchiv.ch/de/ma:material_952/?maapi:f_all_groups=ma:group_43&q=Gr%C3%BCnspan).

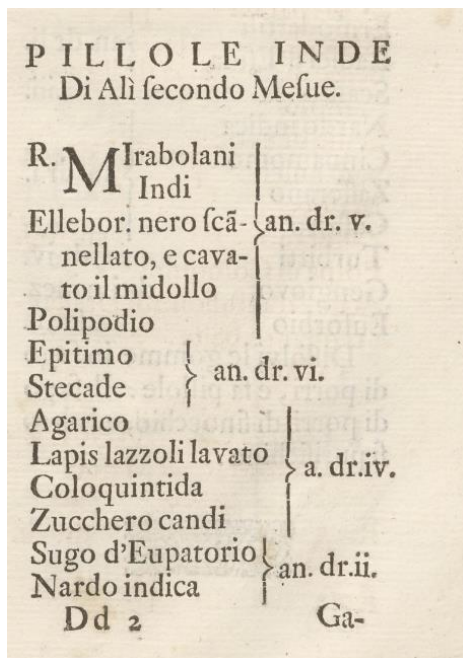
<sup>127</sup> Ephraim Chambers, *Cyclopædia, or, An Universal Dictionary of Arts and Sciences* (London: 1728), 295.

<sup>128</sup> Nicolas Lémery, *Vollständiges Materialien-Lexicon* (Leipzig: Johann Friedrich Braun, 1721), 312.

<sup>129</sup> While the term mountain cinnabar refers to the unprepared mineral, prepared cinnabar refers to the powder that is obtained by grinding the raw material. The descriptive term also provides insight into the origin of the material (here: Hungary). For more information about the terminology and the occurrence of cinnabar in German pharmacy price lists see: Laura Resenberg, *Zinnober – zurück zu den Quellen*, ed. Erwin Emmerling and Andreas Burmester (Munich: Siegl, 2005) – here within also: Andreas Burmester, Ursula Haller, and Christoph Krekel, “Zinnober im Spiegel von Apothekenpreislisten,” 7-11.

also utilized for pharmaceutical purposes.<sup>130</sup> It was used, for instance, for its therapeutic effects and is still employed in traditional Chinese medicine today.<sup>131</sup> A third example is the semi-precious stone lapis lazuli (*Lapis lazuli*), which is listed in the *Taxa* alongside other rocks such as pumice (*Lapis pumex*) or diatomite (*Lapis tripolis*). As was mentioned in the analysis of the 1714 *Specificatio*, lapis lazuli was used to produce the expensive pigment ultramarine. However, the material was also used for medicinal purposes and appears in historical medical and scientific writing. DeLancey provides more insight into the topic:

At the same time, he also discusses the efficacy of lapis lazuli – more commonly known as the pigment ultramarine – in pill form for the treatment of melancholy; indeed, the recipe for these pills appears in the well-known and popular “Ricettario Fiorentino”.<sup>132</sup>



**Fig.10:** Excerpt of the recipe for *Pillole Inde Di Ali secondo Mesue*, in: *Ricettario fiorentino: Di nuovo illustrato* (1696), 211. Picture credit: Technische Universität Braunschweig.

The *Ricettario Fiorentino*, a compendium first published in 1498, specified the medicines to be kept in pharmacies and laid out the rules that had to be followed in their preparation processes.<sup>133</sup> The ingredients that were required to make pills against melancholy appear in the second part of the book, which is dedicated to recipes. It lists *Lapis lazzoli lavato* – washed lapis lazuli – among the ingredients needed to produce the medicament *pillole inde* (Fig.10).<sup>134</sup> The fourth example of a pigment that doubled as medicine (or vice versa) is the material mummia (*Mumia vera*). Mummia is a powder consisting of ground mummies and “was considered an omnipotent medicine for a broad spectrum of diseases.”<sup>135</sup> But, as of the 16th century, European artists also began using the product as a brown pigment.<sup>136</sup> Mummia is often mistakenly referred to in literature as *Caput mortuum*, which is a violet pigment and byproduct of the production of sulfuric acid.<sup>137</sup>

Although these materials are not defined as pigments, there are indications for their use as art supplies. The *Taxa*, for example, contains an extensive selection of powders (*Pulveres*, Fig.11).<sup>138</sup> Among this list, one finds verdigris in powdered form (*Pulveres*

<sup>130</sup> Burmester and Correll, “72 Florin for Colours, White and Glue,” 67.

<sup>131</sup> Ella Man-Wai Un et al., “Cinnabar is a naturally occurring mercuric sulfide that induces cardiotoxicity in zebrafish larvae” *Longhua Chinese Medicine* 5 (2022): 1, doi: 10.21037/lcm-21-44.

<sup>132</sup> DeLancey, “In the Streets Where They Sell Colors,” 196.

<sup>133</sup> Glenn Sonnendecker, “The Florentine Pharmacopeia,” *Pharmacy in History* 36, no.4 (1994): 176, <http://www.jstor.org/stable/41112600>.

<sup>134</sup> “Pillole Inde,” Parte Seconda: Delle Pillole, *Ricettario Fiorentino: Di Nuovo Illustrato* (Florence: 1696), 211-212.

<sup>135</sup> Barbara M. Scholz-Böttcher, Arie Nissenbaum, and Jürgen Rullkötter, “An 18th century medication “Mumia vera aegyptica” – Fake or authentic?” *Organic Geochemistry* 65 (2013): 1, <https://doi.org/10.1016/j.orggeochem.2013.09.011>.

<sup>136</sup> “Mumienbraun,” Material-Archiv, accessed July 4, 2023,

[https://materialarchiv.ch/de/ma:material\\_2172/?maapi:f\\_all\\_groups=ma:group\\_43&q=Mumien](https://materialarchiv.ch/de/ma:material_2172/?maapi:f_all_groups=ma:group_43&q=Mumien).

<sup>137</sup> “Caput mortuum PR 101/PR 102,” Material-Archiv, accessed July 4, 2023,

[https://materialarchiv.ch/de/ma:material\\_1765?maapi:f\\_all\\_groups=ma:group\\_615](https://materialarchiv.ch/de/ma:material_1765?maapi:f_all_groups=ma:group_615).

<sup>138</sup> Different types of powders are listed on pages 27, 28, and 29 of the *Taxa*.

*simplices viride aeris*) or mummia powder (*Pulveres simplices mummiae*). Similar observations can be made about the material minium, which appears in the price list twice; first as the mineral minium (*Minimum*) and later as powdered minium (*Pulveres simplices minii*), likely referring to the bright orange-red pigment red lead. Another noteworthy observation is that some materials are described as *preparatis*, meaning prepared. One example of this is prepared hematite (*Lapis haematitis preparatis*). Hematite is a mineral that, if ground, yields a gray or red powder, which can be used as pigment.<sup>139</sup> Raw materials that are listed in the *Taxa*, but do not have additional specifications, include the minerals orpiment (*Auripigmentum*) as well as yellow arsenic (*Arsenicum citrinum*) and red arsenic (*Arsenicum rubum*). The fact that these products are listed as unprepared suggests that artists (or their apprentices) might have had to grind them themselves to produce the colors they desired.

P.		fl.		fr.	pf.
Pulvis: sympatheticus.	-	1. Quintl. Sympathetisch Pul-			3
contra vermes.	-	ver			4
vitz caeſaris.	-	Kuerm-Pulver			2
		Kayſerlich-Lebens-			
		Pulver.			
Pulveres simplices:					
alchimilla.	-	I. Loth Sinau-Pulver			2
aloës focoterinae.	-	Moe-Pulver			8
althæa.	-	Eibiſch-Pulver			3
ammoniaci gummi.	-	Amoniac-Pulver			6
angelica.	-	Angelick-Pulver			4
anifi.	-	Aneiß-Pulver			2
Arabici gummi.	-	Geſtoſſen Gummi.			2
ari.	-	Aron-Pulver			3
aurantiorum corti-	-	Pomeranſchenſchaalen-			
cum.	-	Pulver			8
baccarum lauri.	-	Lorbeer-Pulver			1
bdellii.	-				12
bryonia.	-	Zaunrüben-Pulver			1
calminaris lapidis.	-	Gallmey-Pulver			2
calami aromatici.	-	Gallmüß-Pulver			
cancharidum.	-	Spaniſch-Mücken-Pul-			
		ver			12

Fig.11: Detail of a page in the 1727 Regensburg *Taxa* showing a list of powders (*Pulveres*).  
Staatliche Bibliothek Regensburg. Picture credit: Internet Archive, Bibliothèque interuniversitaire de santé (Paris).

The examples provided above demonstrate that a broad range of artists' pigments was sold by Regensburg apothecaries. Although many of the listed materials could be used to produce yellow colors, common yellow pigments such as lead tin yellow and yellow ocher are missing from the list.<sup>140</sup> It must be noted that apart from lapis lazuli, no other blue pigments appear in the list from 1727. These observations raise the following two questions: What other blue pigments and yellow were traded and sold in Regensburg? And where could artists buy them if they were not available in pharmacies?

The price list contains a large selection of gums and resins. This includes gum Arabic (*Gummi Arabicum*), white and mean gum tragacanth (*Gummi tragacanthi albi* and *Gummi tragacanthi*

<sup>139</sup> "Hämatit PBk 11/PR 101," Material-Archiv, accessed July 5, 2023, [https://materialarchiv.ch/de/ma:material/1711/?maapi:f\\_all\\_groups=ma:group/615&q=Hematite](https://materialarchiv.ch/de/ma:material/1711/?maapi:f_all_groups=ma:group/615&q=Hematite).

<sup>140</sup> This has been observed by Burmester et al. in their preliminary assessment of the 1727 *Taxa*, which is published on the project website. The assessment is very brief and encompasses only a short paragraph. They also note that smalts (*Smalte*) and mountain blue/azurite (*Bergblau*) are not present in the Regensburg pharmacy price list.

*communis*), and pure and regular mastic (*Gummi ammoniacum depuratum* and *Gummi ammoniacum simplex*), all of which were historically used as binding media.<sup>141</sup> What is more, several types of oils, which were also used as binders in painting, are itemized in the list. Most notably, these include linseed oil (*Olea lini expressum*), poppy oil (*Olea papaveris expressum*), and nut oil (*Olea expressum nucum iugianum*).<sup>142</sup> Finally, the 1727 *Taxa* lists various kinds of vitriol, including white vitriol (*Vitriolum album nativum*), which was utilized as a siccative in oil painting, and blue/copper vitriol (*Vitriolum veneris*), which is found in recipes for ink.<sup>143</sup>

Apart from supplies used in painting, the price list contains various raw materials that were used in textile dyeing. Cochineal (*Cochinilla*), madder root (*Radix rubiae tinctorum*)<sup>144</sup>, turmeric (*Radix curcumae*), saffron powder (*Pulveres croci*), dragon's blood powder (*Pulveres sanguis draconis*)<sup>145</sup>, and red and yellow sandalwood powder (*Pulveres santili citrini/rubri*), for example, would have been used as dyes. Another item on the list is kermes (*Grana chermes*), which is often measured in grains and used to produce a rich red dye. Notably, the plant *Indigofera tinctoria*, from which the pigment and dye indigo is made, is not found in the 1727 *Taxa*. Historical records, however, attest to the presence of this material in the city during the 18th century. One example is a collection of decrees issued in Regensburg between 1754 and 1802 and published in 1802. Decree XV specifies the goods for which local shipmasters sailing to Vienna were to be paid in ship wage (*Schiffslohn*) and notes that the materials were also available in Regensburg.<sup>146</sup> Apart from listing products such as sheep's wool and silk, the document also lists coloring matter such as indigo.<sup>147</sup>

Metals such as alumn (*Alumen crudum*) and potash (*Cineres clavellati*), which also appear in the *Taxa*, were commonly used as mordants. A document that is held in the StdA demonstrates that there was a demand for such products in the city. The notebook of an anonymous 18th-century Regensburg dyer contains several recipes and detailed instructions for dyeing techniques. Several references are made to pigments, coloring matter, and related materials, some of which also appear in the 1727 *Taxa*.<sup>148</sup> One recipe, for example, calls for alum and orpiment, another for red sandalwood, and a third for bluewood (*Appendix IV*).

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<sup>141</sup> The gums are listed under the letter 'G'. In total, 29 different types of gums appear in the *Taxa* on pages 14 and 15.

<sup>142</sup> The nut oil likely refers to walnut oil. According to the edited version of the *Taxa* (Munich Taxae Project), a total of 7 oils from the price list would have been of use to artists and artisans.

<sup>143</sup> Vitriols were also used in the production of the pigment Caput mortuum, in the production of lakes, and used in medicine as hemostatics, see: Christoph Krekel, Andreas Burmester, and Ursula Haller, "Vitriol," *Restauro* 111, no.8 (2005): 562.

<sup>144</sup> Cochineal also was used to make the bright red lake pigment carmine, and madder root was also used to produce the deep purple-red madder lake.

<sup>145</sup> Dragon's blood is a palm resin and was primarily used in medicine or as a varnish or dye, see: "37000-37016 Dragon's Blood, Resina Dracaena," Kremer Pigmente, accessed July 5, 2023, <https://www.kremer-pigmente.com/elements/resources/products/files/37000-37016e.pdf>.

<sup>146</sup> "Specification derer feinen und gemeinen Waaren, wie selbige allhier in Regensburg denen Schiffmeistern, bey denen ordinairen Führen nach Wien, im Schiffslohn zu bezahlen, Anno 1708 den 6. Martii Obrigkeitlich verwilliget, Anno 1735 renoviret, und Anno 1765 den 25sten April, neu revidirter publiciret worden sind." F.W. Wiesand, *Sammlung derer von einem Wohledlen Hoch- und Wohlweisen Herrn Stadt-Kammerer und Rath der des Heil. Röm. Reichs Freyen Stadt Regensburg vom Jahr 1754 bis 1802 im Drucke erlassenen Decrete* (Regensburg: Wiesand and Zeidler, 1802), 23.

<sup>147</sup> Within the decree, another section also lists madder (*Krapp*), which yields the ruby-red alizarine madder lake, as well as whole and uncut colored wood (*Farbholz*).

<sup>148</sup> "Notizbuch eines Färbers über Techniken seines Handwerks und Farbrezepte," HVOR, MSR, 489, Stadtarchiv Regensburg.



#### 4.2.3: Limitations of the Pharmacy Price List

The contents of the pharmacy price list show that 18th-century Regensburg pharmacies stocked and sold an impressive range of art materials. Yet, there are also limitations to the amount of information this art-technological source can provide about the art market.

Similar to what was observed in the analysis of Johann Adam Wittich's 1714 *Specificatio*, the pharmacy price list does not make reference to suppliers or customers. This is because *Taxae* were official documents, to be published by local authorities, and had the sole purpose of recording the prices of the materials sold in pharmacies.<sup>149</sup> Retracing commercial relationships calls for the analysis of archival documents such as invoices, quotations, and annual accounts that were issued by apothecaries and specifically mention their suppliers or patrons. Doing this in the context of Regensburg requires knowledge of the number and names of the pharmacies that operated in the city in the 18th century. Secondary sources maintain that the following six pharmacies existed at the time: the *Löwen-Apotheke*, the *Adler-Apotheke*, the *Engel-Apotheke*, the *Elefanten-Apotheke*, the *Mohren-Apotheke*, and the *St.-Emmerams-Hofapotheke*.<sup>150</sup> This number is congruent with the number of pharmacies recorded by Johann Carl Paricius in 1753 as well as other contemporary publications. Paricius first lists the names of Regensburg's five civil apothecaries<sup>151</sup> and names the sixth, who worked for the Saint Emmeram's Abbey (*Reichsstift St. Emmeram*), in a later section of the book.<sup>152</sup>

Knowledge of the pharmacies present in Regensburg facilitated the search for pertinent documents in the SBR and the StdA. The only item in the SBR that relates to Regensburg pharmacies from the 18th century – apart from the 1727 *Taxa* – is an annual account from 1741.<sup>153</sup> The document was issued by Peter Escherich, apothecary at the *St.-Emmerams* pharmacy, and discloses the names of customers and the amounts they owed for the preparation of various medications. Art materials do not seem to appear in the list. Similar observations were made about documents from the StdA. Although the StdA has a vast collection of historical records that pertain to Regensburg pharmacies, none of the consulted items contained references to art supplies.<sup>154</sup> Instead, most documents were receipts that specify the names of customers and list medicinal products, their prices, and instructions for their use (*Appendix V*). There are at least three reasons for why artists' supplies do not appear in these records. First, pharmacies did not issue receipts for the purchase of art materials. Second, documents containing this information have not survived in archives. Third, only a fraction of the items in the StdA were analyzed and a more wholistic and meticulous study of the surviving archival materials is necessary.

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<sup>149</sup> Burmester, Haller, and Krekel, "*Pigmenta et Colores*," 314.

<sup>150</sup> Otto Fürnrohr, "Altregensburger Apotheken und Apotheker," *Verhandlungen des Historischen Vereins für Oberpfalz und Regensburg* 94 (1953): 111, [https://www.heimatforschung-regensburg.de/1654/1/1076871\\_DTL889.pdf](https://www.heimatforschung-regensburg.de/1654/1/1076871_DTL889.pdf); Fürnrohr provides detailed information about the founding, locations, names, and owners of the six pharmacies that were operating in Regensburg until about 1900.

<sup>151</sup> Paricius lists the names of the apothecaries (i.e., the names of individuals), not the pharmacies.

<sup>152</sup> Paricius, *Allerneueste und bewaehrte Nachricht*, 139, 255.

<sup>153</sup> "Pro Plurimum Reverendis Dominis Dominis Patribus ord: Sti Patris Augustini somit nach gesezte Medicamenta ergeben worden," Staatliche Bibliothek Regensburg, IM/Rat.ep.843.

<sup>154</sup> The consulted items are part of a more comprehensive file in the *Stadtarchiv Regensburg* that contains a vast selection of documents from Regensburg pharmacies dated between 1645 and 1719; see: "Apotheker-Angelegenheiten der Stadt Regensburg von 1645 bis 1719," Stadtarchiv Regensburg, Dekrete, 23.

It can be concluded that the 1727 pharmacy price list is a valuable art-technological source that benefits the investigation into the Regensburg art market in two ways. First, it offers insight into the broad range and prices of pigments, binding media, raw materials, and various other artists' supplies that were available in 18th-century Regensburg. While this preliminary analysis of the *Taxa*'s contents showed that many of the medicinal products sold in pharmacies doubled as art supplies, the diverse selection of materials stocked by apothecaries would have catered to the needs of painters, dyers, and other craftsmen alike. However, it would have not completely satisfied them, as some commonly used materials do not appear in the *Taxa*. This includes but is not limited to indigo, azurite, smalt, lead tin yellow, and yellow ocher, but also general artists' supplies such as paintbrushes, canvases, panels, and stretchers. The fact that the latter category of materials is not itemized in the pharmacy price list is self-evident, given the nature of the profession that sold the products. Second, the document proves that Regensburg pharmacies still played a leading role in selling artists' materials in the first half of the 18th century. Yet, the incompleteness of the list suggests that the city's pharmacies did not hold a monopoly in the sale of art supplies.

### 4.3: A Material Invoice (*Materialrechnung*) from 1752

The third art-technological source that will be examined is a material invoice (*Materialrechnung*) from 1752, which was issued for the reworking of the interior of the Basilica of the Nativity of Our Lady to the Ancient Chapel (*Alte Kapelle*) in Regensburg.<sup>155</sup> The original handwritten document is held in the BZA together with a collection of receipts that detail the expenditures made by the church in 1752.<sup>156</sup> However, a transcription of the archival record also exists in the archives of the BLfD and was consulted as well.<sup>157</sup>

#### 4.3.1: Structure

The *Materialrechnung* in question is found in a section of the collection of receipts titled 'Stuck and Fassung (Langhaus)'. This refers to the stucco and paint work that was carried out in the nave (*Langhaus*). Here within is a subsection with the title "Materialien und Handwerker/Kaufleute" – materials and artisans/merchants. The material invoice from 1752 is the first entry. It consists of only one sentence that reads:

In the Leybold: and Allkoffischen shop for spices, which the tingirer needed for their paint work 65 fl.<sup>158</sup>

#### 4.3.2: Contents

Compared to the 1714 *Specificatio* and the 1727 *Taxa*, the material invoice does not disclose information such as the type or price of individual art materials. It only mentions that 65 florins (fl.) worth of materials were purchased for the paint work of the *tingirer*. The term "tingirer" – from Latin *tingo*, *tinxi*, *tinctum* meaning moisten, tinge, dip, color – refers to the profession of the *Fassmaler*.<sup>159</sup> This was a craftsman who complemented the work of sculptors and carvers by decorating and painting plastics made of different materials.<sup>160</sup> Based on this, it is reasonable to assume that the supplies to be acquired included pigments, ready-made paint or other coloring matter.

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<sup>155</sup> "Between 1747 and 1797 [...] when in accordance with the practice of those times, an attempt was made, in the course of the first far-reaching refurbishment, to emphasize the medieval origins of the building by giving it an appropriately dark colour scheme. The walls and altars were painted with heavy oil paint, the frescoes made darker by partly painting over them." *The Collegiate Church of Our Lady at the Alte Kapelle* (Regensburg: Schnell & Steiner, 2017), "Restoration," 6. The refurbishment of the church was also briefly discussed in chapter two (2.1.2: The Flourishing of Art and Culture).

<sup>156</sup> Amtsbuchserien 191; 1752/53, p.73r, Alte Kapelle, Bischöfliches Zentralarchiv Regensburg.

<sup>157</sup> When the *Alte Kapelle* was being restored by the company Preis&Preis in the 1990s, the Regensburg-based art historian Dr. Xaver Luderböck was hired to transcribe the 18th and early 19th-century documents that detail the projects and expenditures of the church. These do not only pertain to renovation/redecoration projects, but also detail, for example, the costs of having gravestones cleaned or the church bells fixed.

<sup>158</sup> "In die Leybold: und Allkoffischen handlung vor species, welche die tingirer Vonnöhten gehabt zur stuckodor Fass arbeit 65 fl." Original document: Amtsbuchserien 191; 1752/53, p.73r, Alte Kapelle, Bischöfliches Zentralarchiv Regensburg. Transcription: Archiv für Restaurierung des Bayerischen Landesamts für Denkmalpflege, Dokumentation Firma Preis, Parsberg, 1.2.3, 25 (29/f. 73r, No.43). The translation of this sentence from German to English is not optimal.

<sup>159</sup> Michael Kühnlenthal, "Die Raumbfassung der Alte Kapelle," *Arbeitsheft des Bayerischen Landesamtes für Denkmalpflege* 114 (2001): 40.

<sup>160</sup> "Fassmalerin und Fassmaler – Vergolderin und Vergolder," Ausbildungs-, Studien- und Berufsberatung, Autonome Provinz Bozen – Südtirol, accessed May 16, 2023, [https://berufsberatung-studieninfo.provinz.bz.it/de/suche-berufe/berufe-abi?abi\\_action=4w&abi\\_workid=264](https://berufsberatung-studieninfo.provinz.bz.it/de/suche-berufe/berufe-abi?abi_action=4w&abi_workid=264).

What makes this document particularly interesting is that it explicitly names the suppliers of artists' supplies – the Leybold and Allkofischen shop for spices (*die Leybold: und Allkoffischen handlung vor species*). The surnames Leybold and Allkofer appear frequently in 18th-century Regensburg address books. This makes it challenging to identify the individuals mentioned in the document with absolute certainty. One possibility is that the name Leybold refers to the apothecary Johann Georg Leipold who started working at the *Adler-Apotheke* in 1752.<sup>161</sup> The material invoice for the paint work carried out in the *Alte Kapelle* is dated to the same year. This would suggest that passage refers to two different suppliers – a pharmacy and a spice trader's shop – yet it has been noted in secondary literature that, as of 1752, a shop in Regensburg was called *Leupold & Alkofer*.<sup>162</sup> The material invoice therefore likely only refers to one establishment.

The name Allkoffer can be found in numerous documents in the StdA. This likely has to do with the fact that the Alkofer family was one of the most well-connected merchant families in 18th-century Regensburg.<sup>163</sup> A marriage contract between Elisabeth Isabelle Fuchs and Johann Gottlieb Alkofer from 1748 describes Alkofer<sup>164</sup> as a citizen of Regensburg and a tradesman (*Handelsmann*).<sup>165</sup> Biographical information for Johann Gottlieb Alkofer also exists and solidifies the suspicion that this is the man referenced in the document from 1752; Alkofer was born in 1721 and died in Regensburg in 1782.<sup>166</sup> Interestingly, he is also the recipient of a dedication in a book by Georg Gottlieb Plato published in 1762.<sup>167</sup> The contents discuss the origins of Regensburg's *Hansgrafen-Amt* (Office of the Hansgrafen) whereby the term *hansgraf* refers to

[...] a judge among merchants, especially in matters relating to fairs, who was responsible for observing existing commercial laws and for the safety of merchants. In Regensburg and other German cities such as Bremen, Middelburg, etc., this dignity already existed in the 12th century [...].<sup>168</sup>

On the first page of Plato's book, Johann Gottlieb Alkofer is listed alongside eleven other men, who, like him, held an important position in the city's merchant guild. The direct association with trade increases the likelihood that Johann Gottlieb Alkofer's shop is the one mentioned in the contract. However, there is also a possibility that the contract refers to Johann *Christoph* Alkofer, another merchant active in Regensburg in the first half of the 18th century and Johann Gottlieb Alkofer's younger brother.<sup>169</sup> An address book from 1722 refers to Alkofer as spice trader and chandler (*Specerey- und Kramhändler*).<sup>170</sup> A later edition simply refers to him as merchant

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<sup>161</sup> Krämer, *Die Geschichte der Regensburger Apotheken*, 298.

<sup>162</sup> Schönfeld, *Studien zur Wirtschaftsgeschichte*, 49.

<sup>163</sup> *Ibid.*, 48.

<sup>164</sup> The spelling of the name varies between 'Alkofer' and 'Allkofer'.

<sup>165</sup> "Ehevertrag zwischen Herrn Alkofer, Johann Gottlieb (Allkofer, Johann Gottlieb); Bürger, Handelsmann, Regensburg und Frau Fuchs, Elisabeth Isabella (Fuchs, Elisabetha Isabella)," Stadtarchiv Regensburg, Eheverträge, 7.

<sup>166</sup> "Alkofer, Johann Gottlieb," Deutsche Biographie, accessed June 13, 2023, <https://www.deutsche-biographie.de/pnd123511976.html>.

<sup>167</sup> Georg Gottlieb Plato, *Ursprung des Regensburgischen Hansgrafen-Amtes* (Regensburg: Montag, 1762), 4.

<sup>168</sup> "[...] ein Richter unter Kaufleuten, bes. in Meß- u. Jahrmarktsangelegenheiten, welcher für die Beobachtung der bestehenden Handelsgesetze u. für die Sicherheit der Kaufleute zu wachen hatte. In Regensburg u. andern deutschen Städten, wie Bremen, Middelburg etc., bestand diese Würde schon im 12. Jahrh. [...]" Heinrich August Pierer, *Pierer's Universal-Lexikon der Vergangenheit und Gegenwart oder Neuestes encyclopädisches Wörterbuch der Wissenschaften, Künste und Gewerbe*, vol. 8 (Altenburg: H.A. Pierer, 1859), 25.

<sup>169</sup> Schönfeld, *Studien zur Wirtschaftsgeschichte*, 49.

<sup>170</sup> Georg Heinrich Paritius, *Das jetzt-lebende Regensburg, Oder Kurtz-gefaste Nachricht Vom Gegenwärtigen Zustand der des H. Röm. Reichs freyen Stadt Regensburg* (Regensburg: G.H.P., 1722), 102.



(*Kaufmann*).<sup>171</sup> That the artists (*tingirer*) working in the *Alte Kapelle* used colors from Johann Christoph Alkofer's shop is plausible, considering that it was seen among Regensburg's citizens as an important and respected business.<sup>172</sup> The fact that other primary sources refer to him as spice trader aligns with the description of the shop being "vor species", meaning for spices. The identities of the individuals who led the shop also remain speculative. This also is because, at this stage, no archival records relating to the shop have been located in the Regensburg archives.

The fact that the name of the shop is specifically mentioned in the invoice is significant. This could mean, for instance, that the spice traders sold particularly high-quality materials, that the shop was one of the few businesses selling such supplies in the city, or that commercial relationships existed between the *Alte Kapelle* and Leupold and Alkofer's business. This is supported by the fact that the same shop is repeatedly mentioned in archival records concerning the church. An invoice from 1754, which can be found in the same section as the document from 1752, reads:

Leupold and Allkouerische shop for various tingir and other painting colours and materials 60fl. 50x.<sup>173</sup>

In addition, 65 and 60 florins were quite substantial sums of money that would have allowed the church to acquire a large quantity of materials.<sup>174</sup> The significance of the document specifying the name of the shop becomes more apparent when these examples are compared with other archival records of the *Alte Kapelle* that are held in the BZA. Documents concerning the 1750 remodeling of the church exterior, for instance, also record the craftsmen involved in the project and detail various expenditures. One of the material invoices (*Materialrechnungen*) from this collection reads:

Franz Joseph Brunemaÿr painter for painting colors, and oil for gutters 2fl. 36x.<sup>175</sup>

Unlike the examples from 1752 and 1754, this material invoice does not mention the name of a shop. Instead, it reveals that the artist purchased the colors and that the church owed him two florins and thirty-six kreuzer. It was common practice to hold artists responsible for purchasing the required materials. A commission contract between the *Alte Kapelle* and the artist Georg Caspar Zellner from 1768 explicitly states this. The document is held in the BZA and specifies the conditions for the paint work carried out on the Briccus and the Johannes altars:

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<sup>171</sup> Georg Heinrich Paritius, *Das jetzt-lebende Regensburg, Oder Kurtz-gefaste Nachricht Vom Gegenwärtigen Zustand der des H. Röm. Reichs freyen Stadt Regensburg* (Regensburg: G.H.P., 1724), 108.

<sup>172</sup> "[...] bedeutende und angesehene Handlung seines Schwagers Joh. Christoph Alkofer [...]" Schönfeld, *Studien zur Wirtschaftsgeschichte*, 43.

<sup>173</sup> "Leupold und Allkouerische Handlung Vor Unterschidliche Tingir: und andere Anstreich Farben: und Materialien 60fl: 50x:" Archiv für Restaurierung des Bayerischen Landesamts für Denkmalpflege, Dokumentation Firma Preis, Parsberg, 1.2.3, 26 (131/f. 64r, No.35).

<sup>174</sup> This becomes evident when comparing the sums to other amounts in the archival records of the *Alte Kapelle*. Other material invoices typically list amounts under 10 florins. The large expenditures of 60 and 65 florins suggests that the spice traders were the church's trusted suppliers of art materials,

<sup>175</sup> "Franz Joseph Brunemaÿr Mahlern vor anstreich farben, und Öehl zu Dachrinnen 2 fl. 36 x." Archiv für Restaurierung des Bayerischen Landesamts für Denkmalpflege, Dokumentation Firma Preis, Parsberg, 1.2.2, 14 (27/f. 69 v, No.36).

Thirdly, he is also obliged and required to provide all the necessary gold, colors, varnish, and whatever materials are necessary for the setting and gilding of these altars at his own expense.<sup>176</sup>

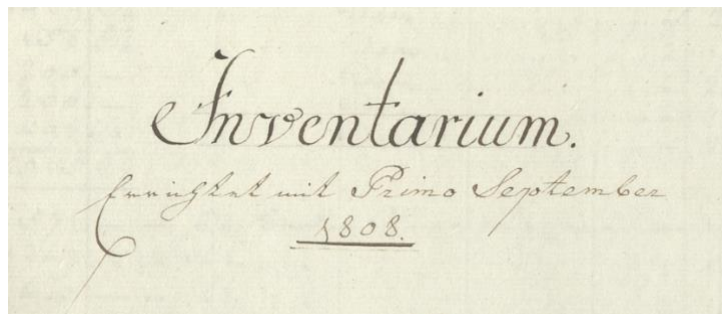
In conclusion, the material invoice from 1752 is another useful source for studying the professions involved in the 18th-century Regensburg art market. Although the identities of Leypold and Alkofer cannot be determined with absolute certainty due to the lack of archival evidence (or because relevant materials have not been discovered yet), the description of the business as being “vor species” suggests that they were operating as spice traders. The *Materialrechnung* does not provide further information about the art materials that were sold by Leupold and Alkofer, but the recurrence of the shop's name in the records of the *Alte Kapelle* implies that fixed commercial relationships existed between Regensburg institutions and suppliers of art materials.

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<sup>176</sup> “Worzue drittens er auch verbunden, und gehalten ist, alles erforderliche: gold, farben, vierneiß, und was immer materialien zur fassung, und vergoldung | dieser beeder altären nottwendig auf seine eigenene kösten beÿzuschaffen” “Vertrag mit Georg Caspar Zellner über die Fassung des Briccius- und des Johannes-Altars,” Bischöfliches Zentralarchiv Regensburg, Alte Kapelle.

#### 4.4: An Inventory (*Inventarium*) from 1808

In the last decade of the 18th century, Albrecht Franz Braunold moved from Bayreuth<sup>177</sup> to Regensburg and purchased the property and warehouse of the deceased wholesaler Michael Friedrich Keim. In the years leading up to the turn of the century, Braunold's business flourished and was regarded as one of the city's most important trading companies.<sup>178</sup> It was involved in the trade and sale of a broad range of goods, including spices, groceries, minerals, and chemicals, but it also offered a respectable assortment of art materials.<sup>179</sup> It appears that no records of the shop or warehouse inventory from the 18th century have survived. A document held in the StdA and dated to the early years of the 19th century, however, sheds light on the products that were available in the store. Because the shop was already trading and selling art materials in the second half of the 18th century, it is reasonable to assume that some if not all materials listed in the 19th-century document were also part of the standard inventory just few years prior. Furthermore, the company's success in the 18th century suggests that its business relations were already well-established and that these also remained intact at least up until 1808.<sup>180</sup> The fact that the date of the document does not fall within the period examined in this thesis is therefore tolerated. When Braunold died in 1807, a man by the name of Stoll took over the company.<sup>181</sup> In 1808, Stoll created an *Inventarium*, a document that, in essence, is a summary of the company's warehouse stock (*Fig.12*). It records the quantities and prices of the materials that were present in the warehouse, names the company's debtors and creditors, and includes balance sheets of the total financial gains and losses of that year.<sup>182</sup> In what follows, the structure and contents of the document are analyzed.



*Fig.12:* Detail of the title page of the 1808 *Inventarium*. Stadtarchiv Regensburg.

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<sup>177</sup> Bayreuth is a city Northwest of Regensburg.

<sup>178</sup> In secondary sources, different terms are used to refer to the business; company (*Firma*), store/shop (*Handlung/Geschäft*).

<sup>179</sup> Schönfeld, *Studien zur Wirtschaftsgeschichte*, 87-88.

<sup>180</sup> Schönfeld argues that the Regensburg companies Dittmer (Georg Friedrich Dittmer), Dibold (Christian Carl Dibold), Ritter (Johann Christoph Ritter), and Braunold (Albrecht Franz Braunold) entered the new century as the city's most successful businesses, see: Schönfeld, *Studien zur Wirtschaftsgeschichte*, 87.

<sup>181</sup> Only the surname is mentioned in secondary sources and archival records. Following Braunold's death, the shop was called "Albrecht Franz Braunold Wittwe" = "Albrecht Franz Braunold Widow" because Braunold's wife was originally meant to take on a managing position, see: Schönfeld, *Studien zur Wirtschaftsgeschichte*, 88.

<sup>182</sup> The balance sheets are not further considered in the analysis, as they are not relevant to this discussion.

#### 4.4.1: Structure

The *Inventarium* is a paper booklet that consists of a title page and eleven unnumbered pages of handwritten lists.<sup>183</sup> The first three pages specify the products stocked in the company's warehouse. These range from various types of coffee (*Domingo Caffé*, *Surinam Caffé*, *Cichorien Caffé*), tea (*Pecco Théé*), tabaco (*Marocco Tabac*), spices such as ground turmeric (*gemahlener Curcuma*) and food items such as rice (*Reiß*) and carrots (*Carrotten*) to chemicals such as tin (*Zinn*) and manganese dioxide (*Braunstein*). The materials that are relevant for this investigation are listed on the second and third page of the document. The section heading reads “an Transport” (*Fig.13*), which likely refers to the transfer of the total sum from the previous page to the current one. The list with the products is structured as follows. Each line is separated into four columns. The first column always contains a number that specifies the quantity of a material. The second column names the product, the third column specifies the price of each product, and the fourth column details the total monetary value of each material listed.<sup>184</sup> The currency is florin, as is indicated by the letters “fl” in the top right-hand corner of the page.

Quantity	Product Name	Unit Price	Total Value
an Transport			
18	Macis Stück in Dyalen	2	36
21	Häuten 6 Stück	5 3/4	113 1/4
140	Reiß	20	28 3/4
1. Part mit Netto			
575	f. Provencer Pfeffer	89	511 1/2
2. In Thone Hof Maninga			
117	Cichorien Caffé	90 1/2	140 1/2
60	ordinari Pfeffer	10 1/2	29 1/2
1. offe Indigo			
344	in 16. Stück in Montpe Grimpfage	8	8
80	Senegal Gomi	172 1/2	14 3/4
22	Arabische Detto	22 1/2	594 1/2
			500
			22

Fig.13: Detail of the 1808 *Inventarium* showing the section with the materials sold by the company. Stadtarchiv Regensburg.

#### 4.4.2: Contents

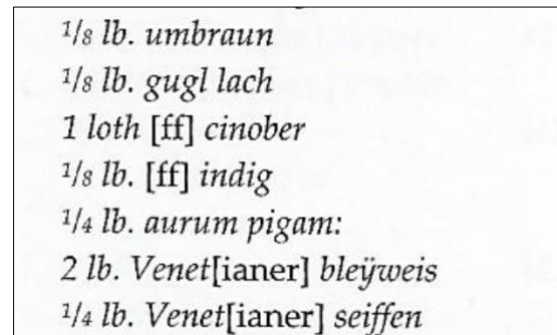
The list contains several ready-made pigments as well as raw materials that are used for the production of pigments, dyes, and binders. The complete list of products on pages two and three of the *Inventarium* was transcribed by the author. The original document as well as the transcribed list can be found in *appendix VI*. The transcription of the document was facilitated by comparing it with transcribed pharmacy price lists from other German cities that carried the same products. In addition to the information found in the original document, the table contains an English translation of the German terms. The products compiled in *appendix VI* show that Stoll's company traded in a broad range of art materials. It carried synthetic pigments such as Prussian blue (*Berliner blau*), natural pigments such as orpiment (*Aurum Pigmentum*) and mountain green (*Berg*

<sup>183</sup> Some of the document's pages are now numbered (in pencil). This was likely done by employees of the archive (StdA).

<sup>184</sup> The total monetary value is calculated from the quantity and price of each product.

grün), materials for dyeing such as cochineal (*Silvester ou feausse Cochenille*) and several types of colored woods (*Campeche Holz* and *Roth Holz*), as well as different types of gum Arabic (*Senegal Gomi* and *Arabischer Gomi*).

Like the 1727 *Taxa*, the document provides additional information for some of the materials. One example is the use of the letter “f”. The letter, which generally precedes the name of the material, is probably a quality designation, whereby “f” stands for fine and “ff” signifies very fine.<sup>185</sup> The same quality designations are used in other documents of that period, including a receipt (*Materialrechnung*) for the materials purchased by a convent in Amberg from the second half of



**Fig.14:** Detail of the transcription of a *Materialrechnung* from 1759-1761 that includes the letters “ff” as a quality designation, in: Eva Eis, *Marmorierungen der Fassmalerfamilie Zellner* (2009): 61.

the 18th century (*Fig.14*).<sup>186</sup> In this receipt, the letters “ff” are used to indicate the good quality of cinnabar (*cinober*) and indigo (*indig*). In the *Inventarium*, the designation was used for Frankfurt black. Even when quality designations are not used, it is apparent that the *Stoll'sche Handlung* was selling good quality materials. One example of this is Cyprian vitriol (*Ciprischer Vitrioll*), which refers to a very pure type of vitriol.<sup>187</sup>

In addition to the quality designations, the 1808 document uses terms to differentiate between different types of a material. The item *cochenille*, referring to the lice used to produce the natural bright-red dye carmine, for instance, is preceded by

the specification “*Silvester ou feausse*”. While the former term “*Silvester*” is used in 18th-century literature to describe wild cochineal,<sup>188</sup> the latter may be an alternate spelling of the French word “*fausse*”, meaning false. A 19th-century journal discusses the falsification of cochineal (*Verfälschung der Cochenille*). According to the source, falsified cochineal is obtained by steaming the material and mixing it with pulverized talc. This causes the cochineal to swell, giving it a ‘nicer appearance’ (*schöneres Ansehen*) – what exactly is meant by this, however, is not specified. The same source also provides a second formula for producing false cochineal. For this, real cochineal is mixed with ten to twenty percent artificial cochineal.<sup>189</sup> This suggests that false cochineal was an intermediate between real and artificial cochineal. Whether one of the previously mentioned methods was used for the production of the *feausse cochineal* listed in the *Inventarium* remains unverifiable.<sup>190</sup>

<sup>185</sup> This interpretation of the letters was also suggested by Prof. Dr. Andreas Burmester. The letter ‘f’ is also used for the product *Provencer Öl*, olive oil from the French region Provence. Unlike linseed, walnut, or poppyseed oil, olive oil is not suitable for oil painting and is therefore not considered an art material.

<sup>186</sup> Eva Eis, *Marmorierungen der Fassmalerfamilie Zellner: Studien aus dem Lehrstuhl für Restaurierung, Kunsttechnologie und Konservierungswissenschaft: Technische Universität München - Fakultät für Architektur* (München: Anton Siegl, 2009), 161. The original document is held in the *Stadtarchiv Amberg* (StAAM). The document’s archive signature/reference code is: “*Materialrechnung des Klosters von 1759-1761*,” Salesianerinnenkloster Amberg 512, Nr. 790.

<sup>187</sup> Krekel, Burmester, and Haller, “*Vitriol*,” 562.

<sup>188</sup> Johann Christian Schedel, *Neues und vollständiges Waaren-Lexikon* (Offenbach am Main: Weiß und Brede, 1789), 213.

<sup>189</sup> “*Ueber die Verfälschungen der Cochenille*,” *Polytechnisches Journal* 100 (1846): 420,

[http://www.dinglr.de/articles/mi100mi05\\_10.html](http://www.dinglr.de/articles/mi100mi05_10.html).

<sup>190</sup> What adds to this is that the publication in which the “*recipes*” for false cochineal appeared, was published approximately forty years later than the *Inventarium*. Methods of producing false cochineal used in 1808 may have been different from those used in 1846.



Many of the art materials in the *Inventarium* are preceded by the name of a city or region. These specifications can provide more information about the types and qualities of the products. One example is the organic blue pigment and natural dye indigo, which, in the list, is preceded by the word “ost”, meaning “East”. This is likely a reference to the material’s East-Indian origin, as natural indigo is made from the leaves of the indigo plant (*Indigofera tinctoria* L.) that is native to India (Fig.15). The addition of the word “ost” also reveals something about the product’s material qualities. That is, the *Indigofera* species yields more dye than woad and dyer’s knotweed, plants that are native to Europe and used to produce indigo.<sup>191</sup>

It is worth mentioning this aspect because woad was readily available in and around Regensburg at the time. In 1792, the Botanical Society of Regensburg<sup>192</sup> published a book that detailed its history and included contributions by members in the form of treaties, speeches, and articles. Chapter VII contains a description of a “botanical” excursion by David Heinrich Hoppe on April 28th, 1790. Therein a passage reads:

We went back home via Wünzer \*\*\*\*\*). In the last village, dyer’s willow was blooming on the walls<sup>29)</sup>. It would be worth the effort to make experiments and see whether it would be advantageous to cultivate this plant here, where it already gives the natural impulse to do so. Its use for dyeing is well known.

\*\*\*\*\*) A village near Regensburg  
29) *Isatis tinctoria* L.<sup>193</sup>



Fig.15: Illustration of the *Indigofera tinctoria* plant, in: Jean-Jacques Rousseau, *La botanique de J.J. Rousseau: ornée de soixante-cinq planches, imprimées en couleurs d'après les peintures de P.J. Redouté* (Paris: Delachaussee, XIV, 1805), Plate 19.

In this paragraph, Hoppe recalls sighting dyer’s willow (lat.: *isatis tinctoria* L.; germ.: *Färberweide*) in Winzer, a village near Regensburg.<sup>194</sup> He acknowledges its use for dyeing and suggests that the conditions for growing the plant in Regensburg are optimal. The fact that the natural material was readily available in the region makes the inclusion of genuine indigo in Stoll’s list particularly interesting. Is this evidence that there was a preference among Regensburg dyers

<sup>191</sup> Apart from using *Indigofera tinctoria*, natural or genuine indigo can be produced from a variety of other plants including woad (*Isatis tinctoria*) and dyer’s knotweed (*Polygonum tinctorium*). Indigo made from *Indigofera tinctoria*, however, was the most common. See: “36000 Indigo,” Kremer Pigmente, accessed June 28, 2023, <https://www.kremer-pigmente.com/elements/resources/products/files/36000e.pdf>.

<sup>192</sup> The Botanical Society of Regensburg was founded by David Heinrich Hoppe on May 14, 1790. It is the world’s oldest still existing botanical society. It advocates for the care and promotion of botany and conducts research into the native flora. See: Krämer, *Die Geschichte der Regensburger Apotheken*, 175.

<sup>193</sup> “Wir gingen über Wünzer \*\*\*\*\*) nach Hause zurück. Im letzern Dorfe blühte auf den Mauern die Färberweide <sup>29)</sup>. Es wäre wohl der Mühe werth, Versuche anzustellen, ob es nicht vorteilhaft wäre, diese Pflanze hier anzubauen, wo sie schon von der Natur Winke dazu gibt. Ihr Gebrauch zum Färben ist bekannt. \*\*\*\*\*) Ein Dorf unweit Regensburg 29) *Isatis tinctoria* L.” Regensburgische Botanische Gesellschaft, *Schriften der Regensburgischen Botanischen Gesellschaft* (Regensburg: R.B.G., 1792), 122.

<sup>194</sup> Winzer (old spelling: Wünzer) is a small village in the Northern outskirts of Regensburg. It is situated along the river Danube.

and artists for the more saturated blue that could be extracted from *Indigofera tinctoria* over the light grey-blue pigment and dye that was made from *Isatis tinctoria*?

In addition, there is also the fact that the *Isatis* species was employed in other disciplines, which may have deterred or prevented artisans from using the material for artistic purposes. The plant is



**Fig.16:** *Isatis sativa vel latifolia*, in: Johann Wilhelm Weinmann's 1717 manuscript *Herbae tam Europaeae quam Orientis et ex omnibus mundi partibus*.

mentioned, for instance, in a book by the 18th-century Regensburg apothecary Johann Wilhelm Weinmann. Weinmann, who owned one of the imperial city's apothecaries, published his *Herbae tam Europaeae quam Orientis et ex omnibus mundi partibus* in 1717.<sup>195</sup> The manuscript, which contains over 9000 beautifully illustrated and annotated items, was meant to aid with the identification of medicinal plants.<sup>196</sup> In the annotation (Fig.16), the plant is described as *Isatis sativa vel latifolia* and translations for the Latin description are provided in Italian (*Guado*), Spanish (*Pastel*), Gallo/French (*Pastel de Languedoc*), English (*Woad*), and German (*Weyd*). The word *sativa* translates to 'cultivated' and the term *latifolia* means 'broad-leaved'. Weinmann thus differentiates between two different species of woad. In Europe, woad extract was widely prescribed as medicine against splenopathy, a disease that affects the spleen.<sup>197</sup> Despite its function as a medicinal product, the inclusion of woad in Weinmann's manuscript links the art material indigo (made of woad) to the profession of the apothecary. Evidence that the plant or pigment was sold by a Regensburg apothecary has not yet been discovered and the 1727 Regensburg *Taxa* also does not list woad. The term *Färberwurtz* (*Radix rubiae tinctorum*) is mentioned but should not be confused with *Färberweide* (*Isatis tinctoria*). While the former is used to produce the red dye stuff alizarin, the latter, when processed, results in the blue dye indigo.<sup>198</sup> Although it is plausible that the word "ost" was used in the *Inventarium* to describe a type of indigo, the three letters could also be read as "opt".<sup>199</sup> This reading is supported by previous research. The abbreviation "opt" is used, for example, in the 1662 Liegnitz *Taxa* for indigo to indicate the optimal quality of the material.<sup>200</sup>

<sup>195</sup> *Herbae tam Europaeae quam Orientis et ex omnibus mundi partibus* = *Herbs both European and Oriental and from all parts of the world*.

<sup>196</sup> "Johann Wilhelm Weinmann," *Unsere schönsten Darstellungen*, Universitätsbibliothek Regensburg, accessed May 16, 2023, <https://www.uni-regensburg.de/bibliothek/ritterstern/darstellungen/weinmann/index.html>.

<sup>197</sup> "Indigo aus Waid NB1," *Material-Archiv*, accessed May 16, 2023, <https://materialarchiv.ch/en/vacuum/>.

<sup>198</sup> "Färberkrapp," *Lexikon, Chemie.de*, accessed May 16, 2023, <https://www.chemie.de/lexikon/Färberkrapp.html>.

<sup>199</sup> This interpretation is suggested because the way in which individual letters are written in the *Inventarium* varies.

<sup>200</sup> Burmester, Haller, and Krekel, "*Pigmenta et Colores*," 319.

Unlike the legal document from 1714, the pharmacy price list from 1727, and the material invoice from 1752, the *Inventarium* lists ready-made pigments such as Prussian blue (*Berliner blau*) and mountain green (*Berg grün*).<sup>201</sup> Prussian blue, a synthetic pigment introduced in the 18th century, “competed with the expensive azurite and ultramarine, especially in green tones.”<sup>202</sup> Interestingly, ultramarine and azurite do not appear in the inventory.

The broad range of artists' materials offered by the *Stoll'sche Handlung* is certainly striking. Yet, caution is advised when interpreting this data to make an argument about the Regensburg art market, as the materials listed in the document were not only sold locally.

#### 4.4.3: Stoll's Business Relations: Debitores and Creditores

In addition to recording the qualities, quantities, and prices of materials, the 1808 inventory also includes lists that document the company's *debitores* and *creditores*. Pages four to seven name the shop's *debitores* and pages eight and nine disclose the *creditores*. *Debitores* is Latin for debtors, a term used in the document to refer to those indebted to the company.<sup>203</sup> The list of *debitores* is thus an overview of Stoll's customers in the year 1808. In the list, Stoll seemingly differentiated between three types of debtors: regular debtors (*Debitores*), wealthy debtors (*Capitals Debitores*), and morose debtors (*Morose Debitores*).<sup>204</sup> All three subsections of the list follow the same structure. While the names of the debtors are provided in the left-hand column, the amounts they owed to the company are noted at the far-right. The currency is *florin* (fl.).

The list of *debitores* includes individuals from various German cities. Vienna, Salzburg, and Strasbourg are the only foreign cities that appear in the list. A city is usually specified after the debtor's name, but for some debtors a place of origin is not provided. Debtors from Regensburg are identified by the word “Dahier”, which is added after the name. The word may be translated to therein, herein or here. Based on this, it can be observed that 19 of Stoll's 160 customers were from Regensburg. In some cases, the debtor's profession is also noted. With regards to Regensburg, four entries that mention a debtor's profession stand out. All four entries can be found on page six of the document. The first entry refers to “Pflanz Apotheker Dahier” (*Fig.17*), who owed the company 157.5 fl. The name, profession, and location strongly suggest that the person listed here is Johann Tobias Pflanz Junior, a Regensburg apothecary, who had owned and run the Löwen-Apotheke since 1779.<sup>205</sup> Did Pflanz purchase any of the art materials that are listed in the *Inventarium*? It was established in the analysis of the 1727 pharmacy price list that many artists' supplies were also used as medicinal products. It is therefore also possible that Pflanz was interested in materials such as isinglass, which was used for pharmaceutical purposes.<sup>206</sup>

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<sup>201</sup> Burmester and Resenberg argue that *Berg grün* is not the same material as malachite and that together with the words *Schiefergrün* and *Steingrün*, the term ‘mountain green’ should be used for the English translation, see: Andreas Burmester and Laura Resenberg, “Von Berggrün, Schiefergrün und Steingrün aus Ungarn. Apothekentaxen verhelfen zu neuen Einsichten,” *Restauro* 109, no.3 (2003): 185.

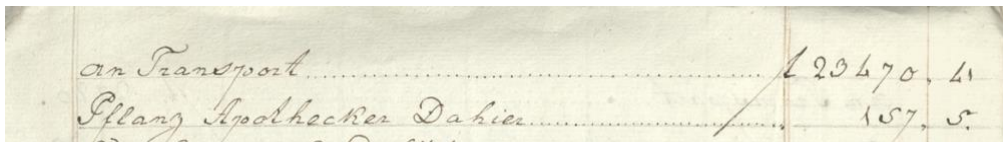
<sup>202</sup> Burmester and Correll, “72 Florin for Colours, White, and Glue,” 58.

<sup>203</sup> “Debitores – Übersetzung und Redewendungen Latein/Deutsch,” Navigium, accessed June 21, 2023, <https://www.navigium.de/latein-woerterbuch/debitores>.

<sup>204</sup> The word “Morose” (from Latin *moros*) can be translated as ill-tempered or moody, but in this case it likely means uncommunicative or unresponsive.

<sup>205</sup> Krämer, *Die Geschichte der Regensburger Apotheken*, 298.

<sup>206</sup> Schedel, *Neues und vollständiges Waaren-Lexikon*, 456.



**Fig.17:** Detail of the 1808 *Inventarium* showing the entry “Pflanz Apotheker Dahier” in the section with the company’s debtors.

The second relevant entry reads “Christoph Hagen Färber Dahier”. Hagen owed the shop *13 fl.* Indeed, it is plausible that a dyer (*Färber*) was one of Stoll’s customers, especially considering that the shop sold indigo, madder lake, cochineal, and colored woods, all of which are used in textile dyeing. The same page lists “G.M. Widman Fragner Dahier”, who owed *27 fl.* and “J.C. Feuchtmeÿr Fragner Dahier” who owed *66.39 fl.* In chapter one it was explained that a “Fragner” (alternate spelling “Pfragner”) was a retailer that sold groceries. The unclear boundaries between professions involved in retail and the overlap in the materials they sold, however, leave room for speculation. Did Widman and Feuchtmeÿr only buy food items from the *Stoll’sche Handlung*? Or might they also have been interested in pigments and the other art materials itemized in the *Inventarium*?

Other business relations are revealed by the list of *creditores* – the company’s creditors (*Fig.18*). Creditors were the individuals and businesses that the *Stoll’sche Handlung* owed money to and presumably those who supplied them with goods. The entries show that the Regensburg company purchased goods from several German suppliers (the list includes individuals from Nuremberg, Augsburg, Cologne, Berlin, and Mainz). Suppliers from Salzburg, Vienna, and Amsterdam are also recorded.



*Creditores*

Bilanz Conto 1749. 06.

Püttel & Sohn in Reutlingen	15	07
Loewe Director in Brückberg	4	05
Geithel & P. in Hof	55	04
Franz Oberlans in Stuhl	180	03
Jacob Passere in Berlin	50	28
Madame Christiane	4000	
J. C. Schmalin in Allämben	7	07
Georg Helm in Saig	276	
Abner in P. Friedrich	1878	20
Geb. Münch in Bayreuth	5	40
H. H. Heiman in Dahn	40	27
Ludwig & Pöschel in Magdeburg	25	44
Dieser Schreyelbain in Deggendorf	1225	41
Wallbain & Georgi in Magdeburg	4	05
Jäger & Mejer in Detto	6	45
J. C. Holmer in Lüneburg	10	48
C. Mauerer in Saarl	1	4
J. C. Allmannthal Sohn in Lüneburg	11	24
H. Heckerman Sohn in Mainz	101	10
C. C. Mejer Sohn in Amsterd.	107	44
Transportat	8064	01

Fig.18: Detail of the first page of the company's *Creditores* (creditors). Stadtarchiv Regensburg.

While the *Inventarium* does not disclose what exactly Pflanz (apothecary), Hagen (dyer), Widman (retailer), and Feuchtmeÿr (retailer), or any of the other customers acquired from the shop, the document is an invaluable art-technological source. It serves as an excellent example of the role that trading companies (traders/merchants) played in Regensburg's 18th-century market of art materials and records the types, prices, quantities, and qualities of artists' supplies. Furthermore, the specification of the debtors' professions is a useful feature of the document. The mention of a dyer (*Färber*), for instance, is a concrete example of the commercial relationships that existed between Regensburg artisans and sellers. In addition, the archival record sheds light on the supply chains in 18th-century Regensburg. Stoll's trading company acquired a broad range of goods, including art materials, through far-reaching trade relations and supplied retailers from Regensburg and elsewhere with an impressive selection of products. The broad range of materials offered by the trading company also aligns with the fact that the role of the pharmacy and other professions as suppliers of art materials began to decline.



## Conclusion

Each of the four art-technological sources that were studied in this chapter contributes unique insights about the art materials and the professions that sold them in 18th-century Regensburg. They attest to the fact that grocers, apothecaries, spice traders, and merchants were involved in the city's market of art materials. The 1714 legal document shed light on regulations concerning the sale of (art) materials through grocers and the 1752 material invoice revealed that specific commercial relationships existed between shops and patrons in the German city. Although two of the consulted documents, namely the 1727 pharmacy price list and the 1808 inventory, disclose the prices of individual materials, a comparative study of these was not carried out. The reasons for this are that the sources do not list enough of the same products and that the inventory was published almost eighty years later than the *Taxa*. Accurate price comparisons would thus warrant the study of currency fluctuations. The analyses showed that the four sources refer to various types of pigments, binders, and coloring matter as well as other supplies used in painting and textile dyeing (and possibly other crafts). While the *Taxa* provides additional information about the state of products (raw/prepared), the merchant's inventory is especially interesting because of the quality designations it includes. However, it was also established in this chapter that there are limitations to the examined documents. This especially pertains to the art materials that do not appear in these sources.

## Conclusion

The aim of this thesis was to identify the professions that traded and sold artists' materials in 18th-century Regensburg.

Chapter one situated this research within the existing body of knowledge by presenting the source types that have been used in art historical and art-technological scholarship to study the movement of art materials. These include exchequer records, port and account books, toll registers, newspaper advertisements, shop inventories, and pharmacy price lists. By exploring the broad range of professions that participated in the art markets of the past, it was established that, in the German context, especially apothecaries and grocers were involved in the trade and sale of artists' supplies. This is substantiated by pharmacy price lists (*Taxae*) and shop inventories, respectively.

Chapter two painted a picture of Regensburg in the 18th century. It discussed how the city's unique political situation as the seat of the Perpetual Imperial Diet brought about a cultural revival and argued that the heightened artistic production, stimulated by the patronage of wealthy individuals and propelled by the ambitions of Regensburg's citizens and (religious) institutions, attests to the necessity of art materials in the city in the examined period.

Chapter three presented the research methodology employed in this project, which was informed by findings from prior studies of early modern art markets. It introduced the archives in which the research was conducted and provided insight into the nature of their collections. Furthermore, it acknowledged the limitations of archival research and disclosed the challenges that were faced while consulting historical records. Describing the methodological approach was imperative, given that no prior studies had been carried out on the market of art materials in 18th-century Regensburg.

Chapter four analyzed the structures and contents of four art-technological sources from the 18th and early 19th centuries. These are held in the archives in Regensburg and included a legal document (*Specificatio*) from 1714, a pharmacy price list (*Taxa*) from 1727, a material invoice (*Materialrechnung*) from 1752, and an inventory (*Inventarium*) from 1808. The preliminary analysis of these archival records revealed that each document is evidence of a different profession's involvement in the trade and commerce of artists' materials in 18th-century Regensburg. The legal document links the grocer to the sale of raw materials, which could have been used in the production of art supplies and alludes to the laws and regulations that retailers in 18th-century Regensburg were subject to. The pharmacy price list ties the apothecary to the market of art materials. The *Taxa* is a particularly profitable art-technological source because it discloses the prices of individual products, thus shedding light on the economic conditions of the market of art materials. The material invoice suggests that spice traders supplied Regensburg artists with colors and related materials and demonstrates that stable commercial relationships existed between shops and their patrons. Finally, the inventory attests to the fact that merchants sold artists' supplies in the city. According to the quality designations provided in the document, many of the products sold by the Regensburg trading company were of good or high quality. Furthermore, the rich selection of art materials including ready-made pigments may indicate that the allocation of roles in the market of art materials was beginning to change at the onset of the 19th century. Whether –

or rather when – specialized color sellers would replace Regensburg grocers, apothecaries, and spice traders as suppliers of art materials warrants further research and analysis.

Although each analyzed document contains (and in the case of the 1752 material invoice hints at) a broad assortment of art materials, the incompleteness of their selections must also be acknowledged. While the 1714 legal document does not list any coloring matter used in dyeing, for instance, and is generally limited to raw materials, the 1727 pharmacy price list lacks common blue and yellow pigments. As was previously mentioned, the products itemized in the 1808 inventory are diverse and plentiful. In this source, too, however, pigments such as yellow and red ochre as well as ultramarine and azurite do not appear.<sup>207</sup> Furthermore, none of the documents contain additional accessories for artists such as supports, frames, or paint brushes.

What emerges from this preliminary study is the revelation that the 18th-century Regensburg market of art materials involved a nexus of professions, whose success in the industry depended on a balanced integration of competition and collaboration. The consulted archival materials confirmed that grocers, apothecaries, spice traders, and merchants participated in the sale of artists' supplies. The research also demonstrated that legal documents, pharmacy price lists, material invoices, and inventories can be useful tools for studying the art market. In the case of Regensburg, they are historical records of the types, prices, and qualities of art materials that were available in the city at the time. Notably, the disparate nature of the primary sources was not a hindrance to the success of this project. Instead, it is the diversity in the information they provide about artists' supplies that paints a more holistic image of the market of art materials in 18th-century Regensburg.

As was explained in the introduction of this paper, this investigation aligns with current trends in Technical Art History. In the last years, the trade and retail of art materials has seen a considerable rise in importance in the discipline. On a larger scale, the analyses of art-technological sources carried out in this project therefore contribute to current research efforts that aim to reconstruct historical art markets. By examining the 1727 Regensburg pharmacy price list, for instance, this project adds to the research initiative of the Munich *Taxae* Project. On a smaller scale, the findings enhance the historiography of Regensburg. Because the city's market of art materials had never been the focus of art historical or art-technological studies, the results of this investigation also lay the groundwork for future research endeavors. As an in-depth analysis of the four art-technological sources presented in chapter four was beyond the scope of this thesis, future studies could carry out more comprehensive assessments of their contents. A focus could lie, for instance, on changes in the prices of art materials. To accomplish this, the pharmacy price list from 1727 could be compared with the Regensburg *Taxa* from 1805 (and, if discovered, with the *Taxae* from 1672 and 1785).<sup>208</sup> Moreover, a comparison of the Regensburg *Taxae*'s contents and cross-referencing this with other German *Taxae* could allow for a better understanding of the materials that are missing from the 1727 pharmacy price list as well as the other analyzed documents. Another research domain could concentrate on reconstructing commercial relationships between Regensburg artists and suppliers of art materials. This could be done by complementing the data recorded in art-

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<sup>207</sup> It was explained in the analysis of the 1808 inventory that Prussian blue (*Berliner blau*), which appears in the list, would have been used as a substitute for ultramarine.

<sup>208</sup> Documentary sources suggest that *Taxae* existed for Regensburg in the years 1672 and 1785. However, they have not been located yet, see: "Gesucht," Museumsbau.de, accessed June 19, 2023, <https://museumsbau.de/gesucht/>.

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technological sources and other archival records with technical evidence from prominent art works created in 18th-century Regensburg.

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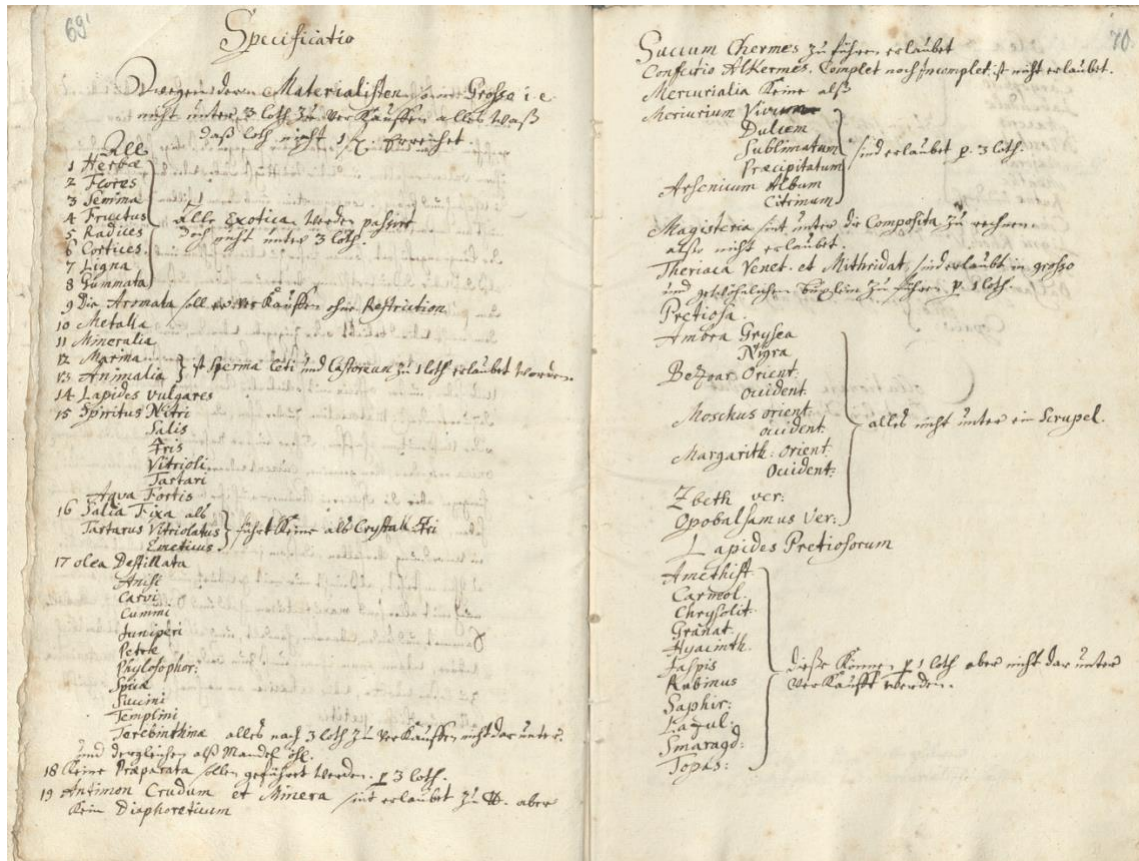
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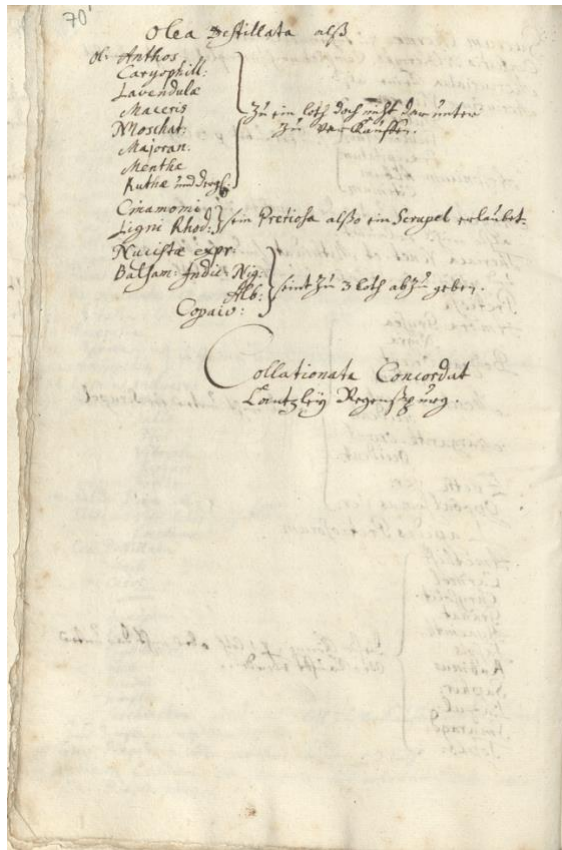
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Appendix I: Scans of the 1714 *Specificatio*



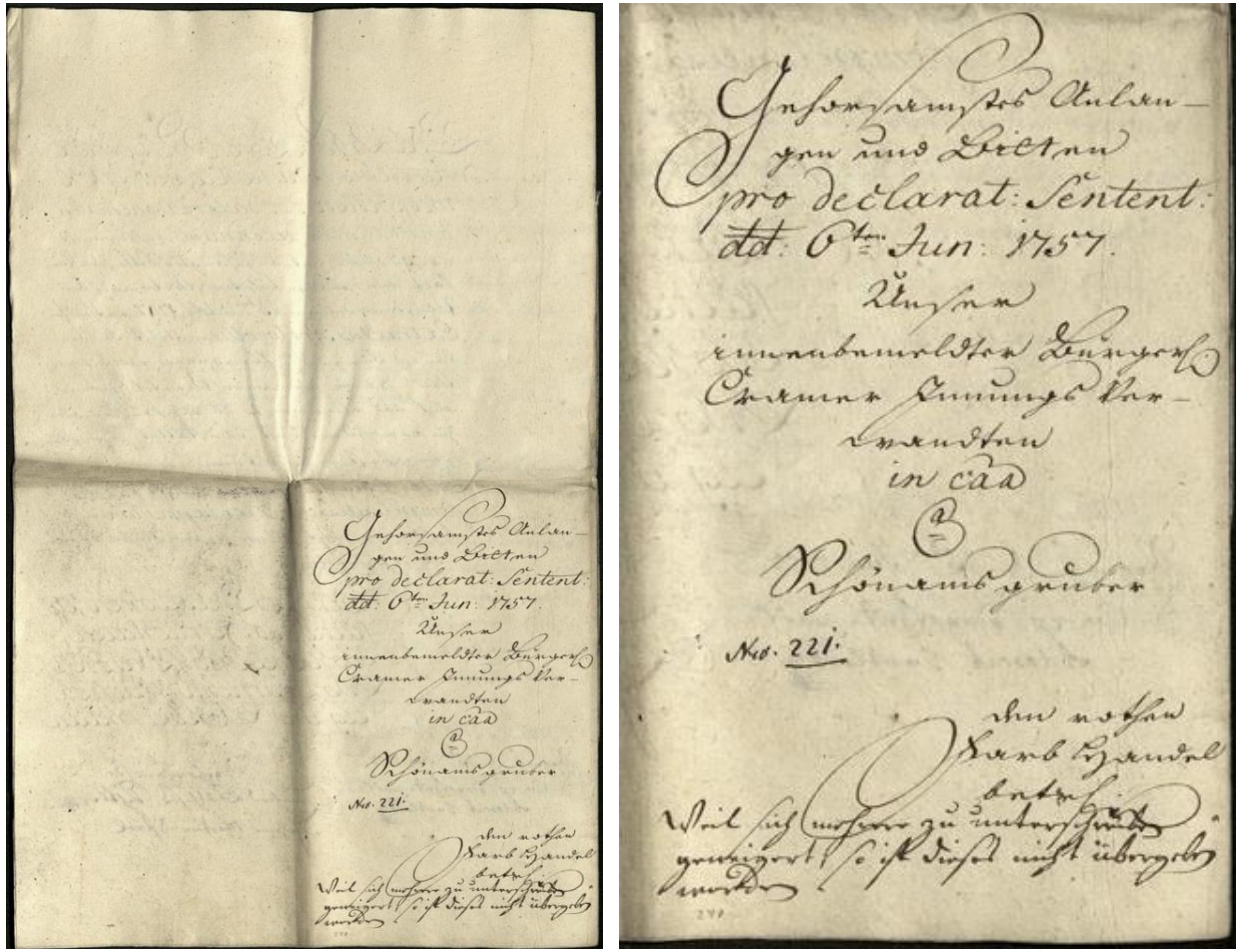
I. 1: Pages one and two of the 1714 *Specificatio*. Stadtarchiv Regensburg (Archiv des Historischen Vereins für Oberpfalz und Regensburg). HVOR, AAR, 46/22, Die Medizinal-Ordnungen und -Akten der Stadt Regensburg von 1659 bis 1719.

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I. 2: Page three of the 1714 *Specificatio*. Stadtarchiv Regensburg (Archiv des Historischen Vereins für Oberpfalz und Regensburg). HVOR, AAR, 46/22, Die Medizinal-Ordnungen und -Akten der Stadt Regensburg von 1659 bis 1719.

## Appendix II: Scan of a Legal Document



**II. 1:** Left: A page of a legal document discussing the disputes between the Chandler's Guild and the *pfragner* Schönamsgruber. Right: Detail of the document. Stadtarchiv Regensburg. Kramerbruderschaft 221. Kramerinnung gegen den Pfragner Schönamsgruber wegen Handels mit roten Farben, 21. April 1760.



### Appendix III: Images of the 1727 Pharmacy Price List

A.

		fl.	fr.	pf.
<b>A</b> ccaciae Aegyptiacae succus.	I. Loth	4		
Accutum bezoardicum Mynsichti.	Erchter ausgetrock-	2		
rosarum.	neter Schlehen: Saft	1		
ruta.	Gift: Eßig	1		
sambuci.	Rosen: Eßig	1		
squilliticum.	Kauten: Eßig	1		
theriacale.	Hollunder: Eßig	1		2
vini simplex.	Meer: Zwißel: Eßig	4		
destillatum.	Theriac: Eßig	1		1
Agagropilz.	Gemeiner Wein: Eßig	1		2
As utum.	Abgezogener Wein: Eßig	4		
Erugo.	I. Quintl. Semjen: Kugel	2		
Ethiops mineralis.	I. Loth Gebrandt Kupffer	3		
Agaricus albus electus.	Grünspan	16		
Album graecum.	Leichenschwamm	4		
Aloë caballina.	Weisser Enßian	1		
hepatica.	Gemeine Aloë	2		
succotrina.	Leber: farbe Aloë	4		
depurata.	Auserlesene rothe Aloë	6		
insuccata.	Gereinigte Aloë	8		
tartarifaca.	Safft: Aloë	12		
Alumina crudum.	Safft: Aloë mit Wein-	12		
plumosum.	stein	12		2
ustum.	Gemeiner Alaun	2		
Ambra grysea vera.	Federweiß	3		
nigra.	Gebrandter Alaun	6		
Amygdala amara.	I. Gran gerechte graue Amber	3		
dulcia.	schwarze Amber	1		1
Amylum.	I. Loth bittere Mandeln	1		2
Anacardia.	Süße Mandeln	3		
Anthera liliorum alborum.	Krafft: Meel	2		
Antihæcticum Poterii.	Elephanten Läuße	12		
Antimonium crudum.	Das Gelbe aus weissen	2		
Antimonii butyrum.	Eifen	8		
	I. Quintl. Dörrfuchts: Pulver			
	I. Loth gemein Spießglas			
	I. Quintl. Spießglas: Del			

III. 1: First page of the 1727 pharmacy price list. Staatliche Bibliothek Regensburg. 999/4Med.209 angeb. Picture credit: Internet Archive, Bibliothèque interuniversitaire de santé (Paris).




42 Regensburgische Arzney-TAXA.

Taxa laborum.	Wie viel die Apotheker vor besondere Müh zu fordern haben.
Pro cataplasmate.	Vor einen Oberschlag 4. 6. fr.
clyfinare parando.	Vor ein Clystier zuzurichten 6. -
applicando.	Vor ein Clystier bezubringen 15. 20. -
decocto majori in diplomate.	Vor eine lange und grosse Zubereitung eines Trankts 6. 8. -
minori	Vor eine kleinere Kochung eines Trankts 4. 6. -
scuto stomachali cum sindone.	Vor ein Magen-Pflaster mit Sendel 6. 8. 15. -
emplastro stomachali sine sindone.	Vor ein Magen-Pflaster ohne Sendel 4. 6. -
emulsiõne parva.	Vor eine Milch abzustossen, nach der Grösse und Kleine 3. 4. -
magna	Vor Pilsen zuzurichten 2. 4. 6. -
pilularum massa conficienda.	Vor Zubereitung der Haupt-Säcklein 10. 12. -
cucuphis parandis & confuendis.	Vor Puls- und Herz-Säcklein 4. 6. 8. -
epithematibus cordis & pulsiuum.	Vor Kräuterwein-Säcklein 6. 8. 10. -
facculis ad vina medicamentosa.	Vor eine Destillation, so Tag und Nacht erfordert 30. -
destillatione per unum diem.	

Teut.

III. 2: Page forty-two of the 1727 pharmacy price list with the *Taxa Laborum* (prices charged for special requests). Staatliche Bibliothek Regensburg. 999/4Med.209 angeb. Picture credit: Internet Archive, Bibliothèque interuniversitaire de santé (Paris).

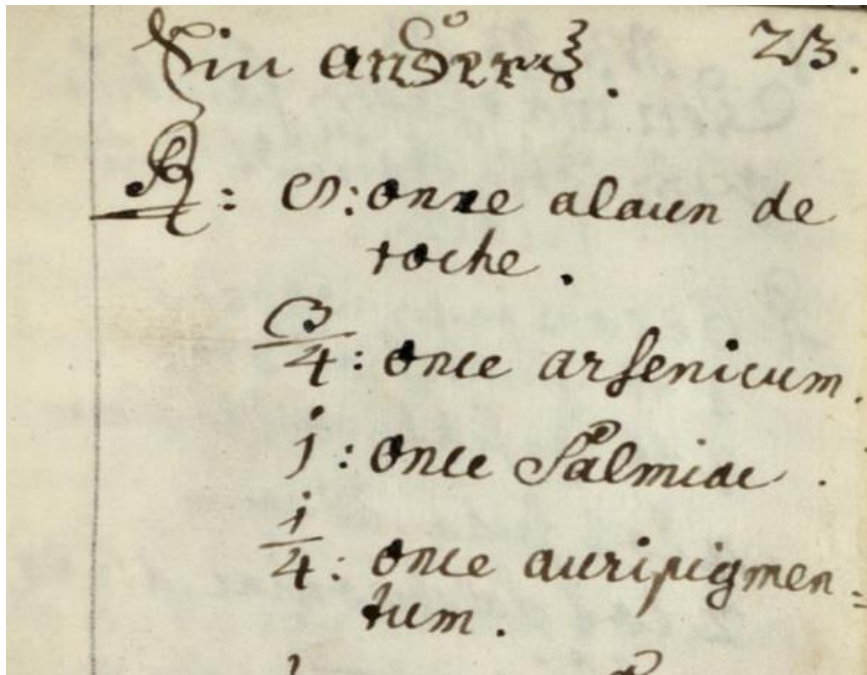


**Teutsches Tax-Register.**

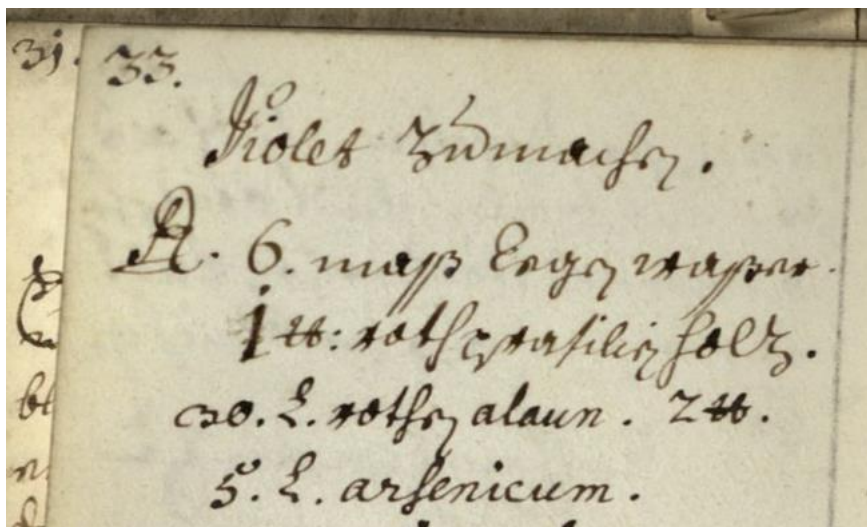
A.	pag.		A.	pag.
Ala/Leber gedörte	15		Ameiffen-Geist	36
Aleferwurcz	29		Harz	14
Adlerstein	18		Del	22
Aegyptiac-Salbe	40		Stärckendes Wasser	3
Agley-Blumen	13		Amerhyß-Stein	18
Saamen	33		Amni-Saamen	33
Agstein gelber und weißer	37		Ammoniac-Gummi	14
bereiteter	37		gereinigte	14
Balsam	5		Del	22
Eßenz	11		Pflaster	10
Del	23		Pillen	24
Pillen	24		Pulver	27
Pulver	28		Andorn weißer	16
Salz	32		Angelickwurcz	29
Zettlein	39		Eßenz	11
Alabasterstein	18		Del	22
Salbe	40		Pulver	27
Alandwurcz	30		Saamen	33
eingemachte	7		Anhaltendes Pulver	26
Eßenz	11		Anhaltisch-Wasser	2
Extract	12		Anetiß	33
Pulver	27		Geist	36
Salbe	40		Del	22
Alaun	1		Pulver gemeines	27
gebrandter	1		vermishtes	26
Alberproß	21		Anstrich blauer und rother	5
Alkermes mit und ohne Bisam	7		Apffel-Salbe	41
Zettlein mit und ohne Bisam	39		Apostel-Salbe	40
Allermannbarnisch langer und runder	31		Aron-Wurcz	39
Aloe auserlesene	1		bereitete	12
gemeine	1		Pulver	27
gereinigte	1		Arsenick oder Ragen-Gift	4
Leber-farbe	1		gelber	4
Holtz-Aloe	19		rother	4
Pulver	28		Asang	14
Eßenz	11		Eßenz	11
Extract	11		Extract	12
Pulver	27		Aschen-Schmalz	24
Saft-Aloe	1		Asiel-Pulver	28
mit Weinstein	1		Atrich-Beer	4
Tinctur	38		Kinde	8
Ambragerechte graue	1		Salz	31
schwarze	1		Wurz	30
Eßenz	11		Außß-Pulver	26
trockne	11		Augentrost	16
Pulver	26		Wasser	3
Amberkraut	16			
Eßenz	11		M	Bach

III. 3: Page forty-three of the 1727 pharmacy price list showing the first page of the Index (*Teutsches Tax-Register*). Staatliche Bibliothek Regensburg. 999/4Med.209 angeb. Picture credit: Internet Archive, Bibliothèque interuniversitaire de santé (Paris).

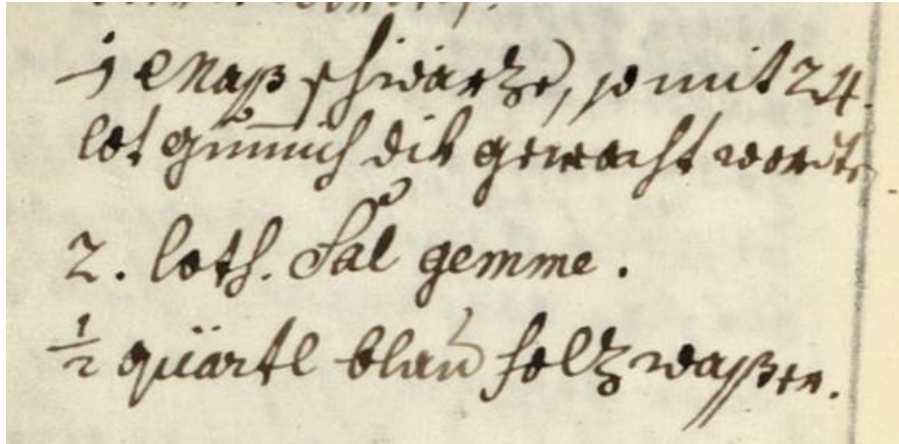
#### Appendix IV: Scans of an 18th-Century Dyer's Notebook



IV. 1: Detail of a recipe in a dyer's notebook. Mentioned in the list of materials are alum (*alau de roche*) and orpiment (*auripigmentum*). Stadtarchiv Regensburg (Archiv des Historischen Vereins für Oberpfalz und Regensburg). HVOR, MSR, 489. Notizbuch eines Färbers über Techniken seines Handwerks und Farbrezepte.



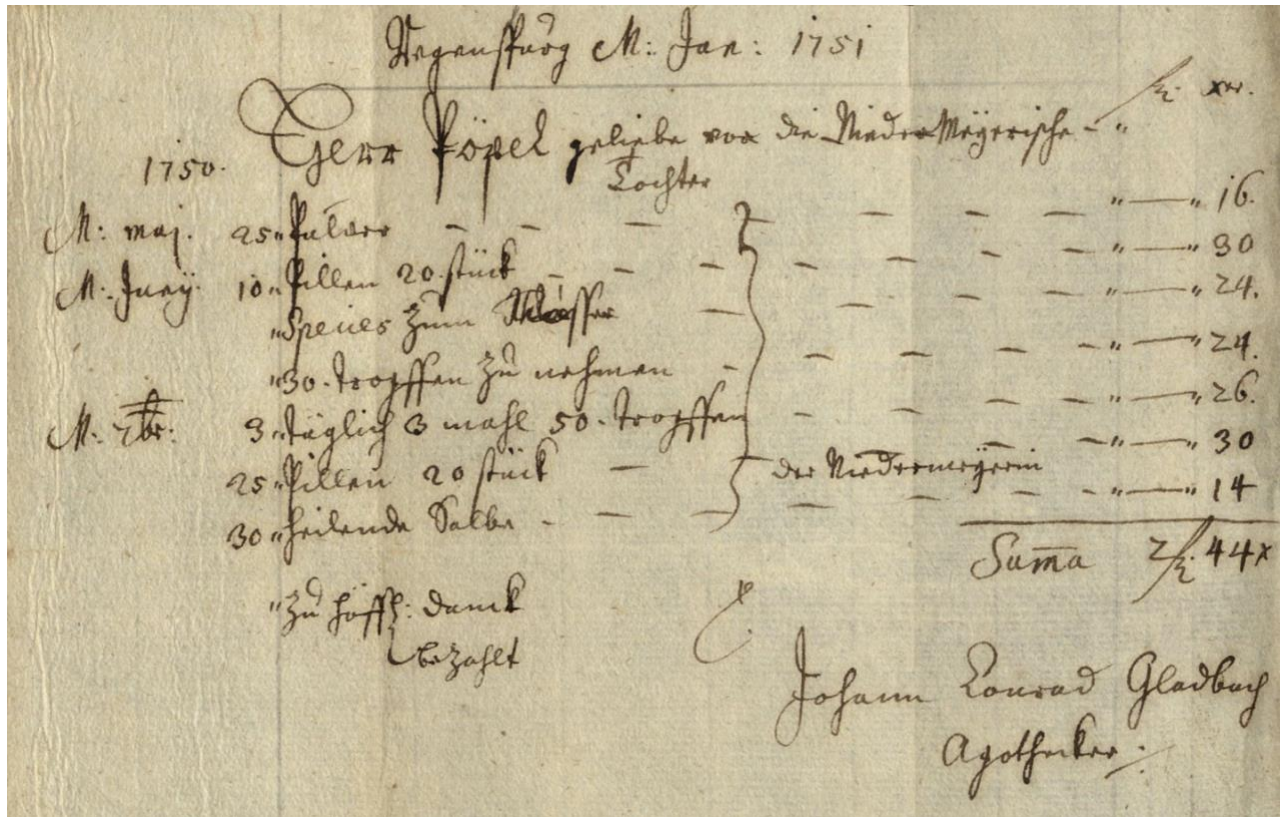
IV. 2: Detail of a recipe in a dyer's notebook, possibly for a violet dye (*Violet zumachen* – to make violet). Included in the list of materials is what appears to be red sandalwood (*rothe santilin holz*). Stadtarchiv Regensburg. (Archiv des Historischen Vereins für Oberpfalz und Regensburg). HVOR, MSR, 489. Notizbuch eines Färbers über Techniken seines Handwerks und Farbrezepte.



IV. 3: Detail of a recipe in a dyer's notebook. The recipe calls for bloodwood water (*blauholz wasser*). Stadtarchiv Regensburg (Archiv des Historischen Vereins für Oberpfalz und Regensburg). HVOR, MSR, 489. Notizbuch eines Färbers über Techniken seines Handwerks und Farbrezepte.



**Appendix V: Scan of an Apothecary's Receipt**



V. 1: A receipt issued by Johann Conrad Gladbach, apothecary at the *Elephanten-Apotheke*, in 1751. Stadtarchiv Regensburg. Dekrete, 23. Apotheker-Angelegenheiten der Stadt Regensburg von 1645 bis 1719.





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Quantity in pound	Material / Product		Price per pound in florin	Total sum of sales in florin
	German/Latin description <sup>209</sup>	English translation		
Page 2				
18	Macis Nüßn in Schallan	Mace (nutmeg) <sup>210</sup>	2	36
21	Haußen blaßen	Isinglass (sturgeon bladder)	5 <sup>2</sup> / <sub>5</sub>	113,24
140	Reiß 1 Faß mit Detto	Rice 1 vat with Rice	20 *	28,36
575	f. Provencer Öhl	Fine oil from Provence	89 *	511,45
[-]	3/2 [?]	3/2 [?]	9 <sup>2</sup> / <sub>5</sub>	143,15
117	Cichorien Caffé	Chicory coffee	15 *	29,15
60	Ordinari [?]	Ordinary [?]	8 *	8
1	ost/opt Indigo	east/optimal indigo	[-]	14,30
344	In 16 Brod an Montp. Grünspahn	In 16 cakes of Montpellier verdigris	1 <sup>3</sup> / <sub>4</sub>	594,15
80	Senegal Gomi	Senegal gum	1 <sup>1</sup> / <sub>4</sub>	100
22	Arabischer Detto <sup>211</sup>	Gum Arabic	1	22
15	Silvester ou feausse Cochenille	Silvester or false cochineal <sup>212</sup>	65 *	9,45
180	Cremor Tartari	Cream of tartar (potassium bitartrate)	44 <sup>1</sup> / <sub>4</sub> *	79,39
287	Gemahlener Curcuma	Ground turmeric	34 *	97,34
32	[?] Gallus	[?] Gallnuts	44 *	14,5
86	Berliner Blau	Prussian blue	45 *	38,42
240	Läpischer Allaun	[?] Alum	22 [?] *	53,16
[-]	8 Fäßal Detto	8 vats of Detto	20 *	160
280	Campeche Holz	Bluewood/bloodwood	82 *	229,36
151	[?] Roth Holz	[?] Red wood/brazilwood	30 *	45,18
565	[?] Detto	[?] Red wood/brazilwood	30 *	169,30

<sup>209</sup> The spelling of words differs from the modern German spelling, which, in some cases, impeded the transcription and subsequent translation of terms into English.

<sup>210</sup> *Macis* refers to mace, which is the thin tissue that covers outermost part of the nutmeg's seed.

<sup>211</sup> The word *detto* means "likewise" and is used in the *Inventarium* when the same material (but a different type) is mentioned successively more than once. The word *idem* is also used for the same purpose.

<sup>212</sup> Schedel, in his 1789 *Waaren-Lexikon*, describes 'Silvester cochenille' as cochineal of the wild type ("[...] Silvester oder wilden Sorte [...]"), see: Schedel, *Neues und vollständiges Waaren-Lexikon*, 213.

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99	gnschnittener Detto	Rasped Red wood/brazilwood	31 *	30,41
155	idem Fernambuck <sup>213</sup>	idem fernambuk	100 *	155
56	Salpeter	Salpeter	35 *	19,36
5	Ciprischer Vitrioll	Cyprian vitriol = copper vitriol	45 *	2,15
600	Bodmeiser Detto in 3 Fäßal	Bodmeiser Vitriol in 3 vats	[-]	45
15	Schmalten	Smalt	12 *	1,48
[?]	Salmiac	Salammoniac	32 *	2,16
62	gnschnitten engl.[?] Holz	Rasped <sup>214</sup> English [?] wood	20 *	12,24
[?]	Engl. Zinn in Stänglen	English tin in rods	72 *	18,5
35	Salzburger Schwafal	Salzburg Sulfur	18 *	6,18
12	Ordinari Blaiweiß	Ordinary lead white	7 *	0,50
900	Hungarischn [?]	Hungarian [?]	7 *	63
543	2 Fäßal Aurum Pigmentum	2 vats of orpiment	18 *	97,44
334	ffurter schwarz	Frankfurt black	4 *	13,21
262	Berg grün	Mountain green	30 *	78,36
587	Braunstein	Manganese dioxide	4 *	23,29
396	[?]	[?]	[-]	22,23
Page 3				
[-]	1 Faß Terpentin / sporco 324	1 vat of turpentine	[-]	[-]
[-]	[?] 45	[?]	[-]	[-]
279	[?]	[?]	10 *	27,54
5800	Ofenfarb	Oven paint (perhaps oven varnish or burnt chalk)	1 ½ *	87
3000	Gestampftn Ofenfarb	Mashed/stomped oven paint	1 ½ *	45
2700	Ordinary Detto	Ordinari Detto	1 *	27
6740	[?]	[?]	7 *	471,84
6	[?] rohn Porcelain [?]	[?] raw porcelain [?]	[41,66]	250

<sup>213</sup> Fernambuk (synonyms Pernambuk, Pernambuoc, Rotholz, Brazilwood) is a colored wood belonging to plant species *Caesalpinia*. It is used to produce a red coloring matter, see: "Pernambuk," Material-Archiv, accessed June 30, 2023, [https://materialarchiv.ch/de/ma:material\\_1953?maapi:f\\_all\\_groups=ma:group\\_43](https://materialarchiv.ch/de/ma:material_1953?maapi:f_all_groups=ma:group_43).

<sup>214</sup> The literal translation of "gnschnitten" (geschnitten) is "cut". But the term "rasped" seems to be more suitable here.

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7	[?] Tannenbaum Stahel [?]	[?] steel	15	105
1	Fäßal Schwarz [?]	vat of black [?]	[-]	30
½	weiß Detto	White Detto	[-]	25
7	[?]	[?]	2 ½	17,30
[?]	Roth A.B. Tabac	Red A.B. tabaco	30 *	11,37
4 ½	[?]	[?]	40 *	3
59 ½	Schwarzer A.A.	Black A.A.	50 *	29,45
26 ½	[?]	[?]	45 *	11,55
19 ½	[?]	[?]	46 *	8,58
78	Marocco Tabac	Moroccan tabaco	32 *	24,57
42	Carotten	Carrots	25 *	10,30
100	Balaguer Crapp	Balaguer madder	[-]	[-]
100	Antimonium Crudum	Crude antimony	[-]	[-]
4800	Porcelain Erdn	Kaolin clay	[-]	[-]

**VI. 2:** Transcription of the information included on pages two and three of the 1808 *Inventarium*. Terms or numbers that could not be deciphered are marked with a question mark [?]. Information that was also missing in the original document is marked with a dash [-]. The numbers in column four are transcribed as they appear in the original document. In most cases, the price per pound should be understood as decimal (i.e., number/100). The prices to which this applies are marked with an asterisk [\*].