

Dating Kitab Tibb MSS 3290: Watermark analysis and orthographic evolution in Malay medical manuscripts

Mohd Azmi Mohd Razif 

Islamic Science Institute, Universiti Sains Islam Malaysia, Bandar Baru Nilai, 71800 Nilai, Negeri Sembilan, Malaysia

Corresponding author: mohd.azmi@usim.edu.my

DOI: <https://doi.org/10.33102/ujj.vol37no03.691>

Abstract

This study establishes the provenance and approximate date of Kitab Tibb MSS 3290, a Malay medical manuscript held at the National Library of Malaysia, through codicological and paleographic analysis. Malay Kitab Tibb manuscripts are critical to understanding pre-modern Southeast Asian medical and cultural history, yet many remain undated due to scribal anonymity and fragmented records, limiting their scholarly utility. This study addresses this gap by analyzing Kitab Tibb MSS 3290, a manuscript catalogued as lacking a watermark, to demonstrate how interdisciplinary methods—codicological watermark analysis and paleographic Jawi orthography—can resolve dating ambiguities and illuminate colonial-era knowledge networks. Combining physical examination of European laid paper, watermark identification via Churchill (1965) and Heawood (1969) indices, and comparative orthographic assessment with dated manuscripts, the study revealed a previously undocumented Dutch lion watermark (c. 1683–1750) and transitional Jawi features, including the omission of syaddah, limited vowel insertion (e.g., [دالم]), and numeral-based reduplication ([راج٢]). These findings align MSS 3290 with late 18th-century texts like Hidayah al-Salikin (1778) and situate it within the VOC’s paper trade networks, underscoring synergies between Malay medical traditions, Islamic scholarship, and European material culture. The results challenge archival cataloguing practices, advocate for re-evaluating undated manuscripts, and highlight adaptive literacy practices in colonial contexts. By integrating material and linguistic evidence, this study offers a replicable model for dating Malay manuscripts, enriching narratives of Southeast Asia’s intellectual heritage and reaffirming MSS 3290 as a bridge between indigenous knowledge and colonial commerce. These insights urge renewed efforts to preserve and reinterpret regional manuscripts, emphasizing their role in global historical discourse.

Keywords: Malay manuscripts, Jawi orthography, Malay intellectual heritage, Kitab Tibb, VOC paper trade

The manuscript that is analysed in this study is called “Kitab Tibb” (MSS 3290), accessed from the National Library of Malaysia. There are in fact around 4,000 manuscripts called “Kitab Tibb”, which generally refers to “Book of Medicine”, all written in Jawi. Each Kitab Tibb is identified by its own catalogued code name designated by the hosting archive or library collection. The name of the author is typically not recorded, as is the case with many other “Kitab Tibbs” that have been studied by other scholars. The writing conducted in this manuscript is entirely neat and readable, using riq’ah styled calligraphy.

In this study, a comprehensive codicological analysis was conducted, focusing specifically on watermark identification, paper type, script style, ink composition, and binding condition. This approach was adopted to accurately establish the approximate dating and provenance of manuscript MSS 3290:

Manuscript Received Date: 23/07/25

Manuscript Acceptance Date: 09/09/25

Available online: 24/11/25

©The Author(s) (2025). Published by USIM Press on behalf of the Universiti Sains Islam Malaysia. This is an Open Access article distributed under the terms of the Creative Commons Attribution Non-Commercial License (<http://creativecommons.org/licenses/by-nc/4.0/>), which permits non-commercial re-use, distribution, and reproduction in any medium, provided the original work is properly cited. For commercial re-use, please contact penerbit@usim.edu.my



C O P E COMMITTEE ON PUBLICATION ETHICS

Parts

Cover:	Leather cover
Colophon (publication information):	Not inscribed
Incipit (the first few words of the text):	In the wisdom section of the manuscript, each advice starts with ادفون “adapun” meaning “as for...” (PRPM, 2022) written in red ink. Each medical prescription typically starts with سباكيلاكي “ <i>sebagai lagi</i> ” meaning “and” (PRPM, 2022) written in red ink.
Decoration; illustrations:	No
Dimensions:	17 x 11 cm
Shelfmark or Signature in holding library (as opposed to printed Catalog number):	No
Works/compositions included in same MS:	No
Deletions method:	Does not have any mark of deletion
Headers/footers:	No
Page format/layout:	15 – 16 lines written in Jawi from right to left
Interpolations (passage not written by the original author):	No
Owners' marginal notations/corrections:	No
Owner signatures:	No
Dedication/inscription:	Yes, “for the benefit of all”
Collation (quires) (binding order):	Not applicable
Foliation / pagination:	Yes, however paging numbers seemed written not by the author
Binding:	Pages dismantled probably due to damage of the binding
Manuscripts bound together in a single volume:	fascicle: this is an individual manuscript, a convolute

Materials

Page material:	European laid paper
Ink:	Natural materials such as soot, tree rubber, fruit skins, flowers, salt and so on (PNM, 2022).
Writing implement (instrument) used:	The pen most notably used by the traditional Malay community is believed to be made from areng palm (<i>Arenga pinnata</i>) thorns. Other materials that are often used to make pens are Old World forked fern (<i>Dicranopteris linearis</i>) and goose feathers and bird feathers.
Pastedown (blank paper for inside cover):	Available

Paleographic elements

Script:	Malay Jawi using riq'ah styled Arabic calligraphy, neat
Dating:	Not written, watermark however is detected
Rubrication (red ink text):	Available, in the wisdom section of the manuscript, each advice starts with ادفون

Table continued

	“adapun” meaning “as for...” (PRPM, 2022) written in red ink. Each medical prescription typically starts with سبباكيلاكي “sebagai lagi” meaning “and” (PRPM, 2022) written in red ink.
Ruled lines:	No
Catchwords:	Yes
Historical elements of the MS:	Water stains, dust stains, torn edges of page
Condition:	Wormed, mold
Facsimile (reproduction):	Not available

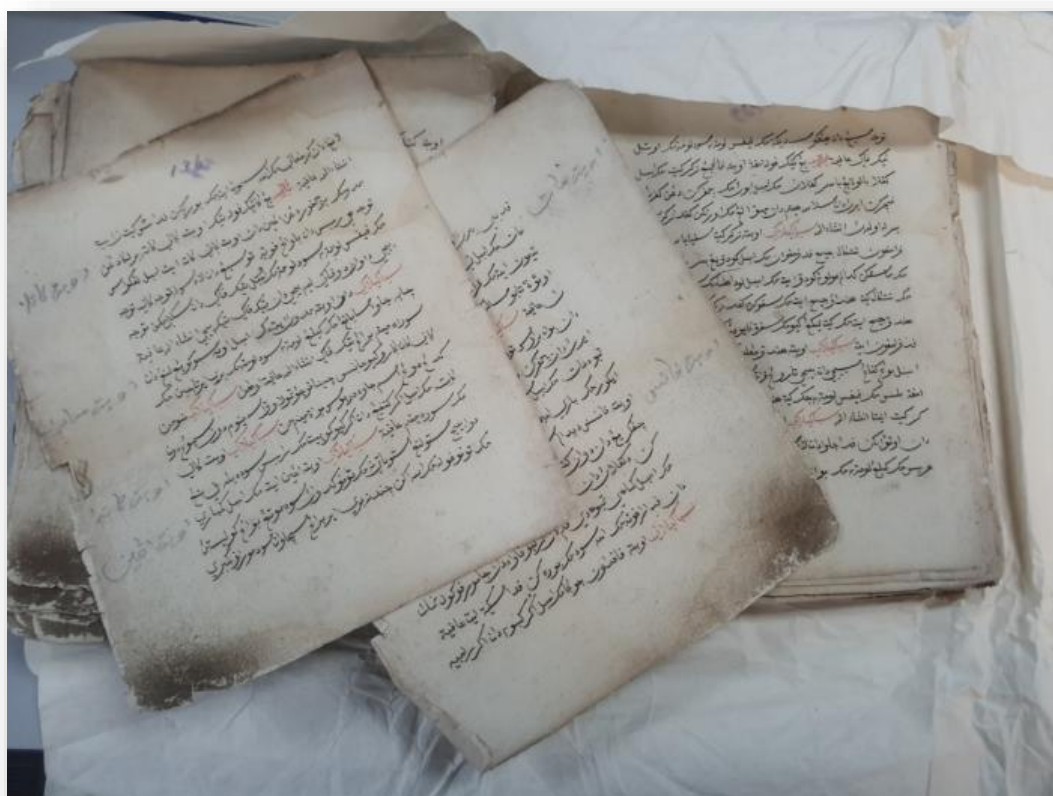


Figure 2: A preview of the physical manuscript Kitab Tibb MSS 3290. Note that the pages are arranged accordingly without binding.

The description of the manuscript as translated from the National Library of Malaysia’s catalogue (2nd Edition) is as follows:

Written on white, greyish, laid paper, with water stains visible on all pages. Its text is written on white ink. The rubrication uses certain Malay words and Arabic sentences. The text is neat, interesting and consistent. Its pages are not bonded neatly however a leather overcoat with blind stamp is used as its cover. Content of the manuscript contains a several prescriptions of traditional Malay medicine among them in curing eye pain, diuretic drugs, apoplexy and charms such as charms to hinder quarrel among spouses. Some pages from this manuscript are missing making it incomplete. No watermark is detected.

Next, in order to obtain the exact date or an approximate idea of when this Kitab Tibb is written, watermark identification process remains an essential method. This upcoming section explains what the technical methods were used and its references.

3.1 Watermark Identification Methods

In the field of codicology where manuscripts are physically studied, laid papers that consisted in these manuscripts typically bear watermarks in its structure. Laid paper is a type of paper consisted of ribbed texture exposed by the manufacturing process. This type of paper was the major paper produced from 12th century into the 19th century in Europe during its pre-mechanical period. It is correct to assume that until the 1750s, all paper manufactured was laid paper, based on a mesh consisting of strong wires about an inch apart, with finer wires laid close together across them. In the 19th century, however, wove paper was introduced and eventually diminished the usage of the predominant laid paper (Hunter, 1947).



Figure 3: Laid paper (left), next to woven paper (right).

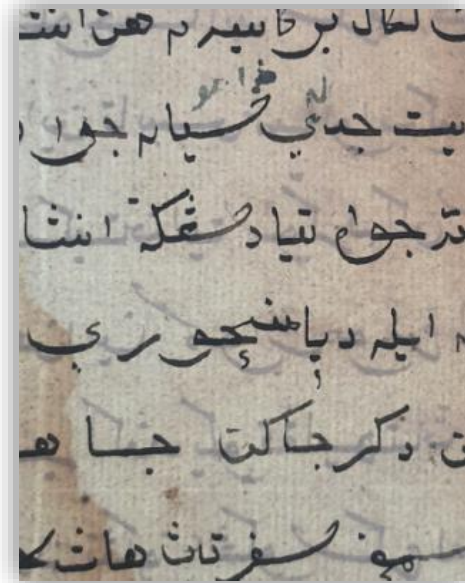


Figure 4: Note the visible lines on a typical laid paper used in Malay Manuscript MSS 3290

The next trait of the manuscript is the watermark which are distinctive designs embedded into paper during the manufacturing process. Manufacturers of the European paper industry normally certify their papers using their mark or symbol, insuring its authenticity, quality, and most importantly, their date of production. Using this, it is possible to identify each paper, or a manuscript when it was written, or where it was distributed during that period of time. This is useful in the context of this study, or Malay manuscripts in general, because most of the writers believe that it is unholy to reveal their names on their works, while using humble pseudonyms expressing their modesty such as “al-faqir ilallah” meaning the poor servant of Allah, or the one found in the final pages of the manuscript *Taj Al-Salatin* (Crown of Kings) written كته الفقير الحقير بالذنب والتقصير meaning: “written by the poor and humble servant of flaws and sin”.



In determining watermarks of this manuscript MSS 3290, an empirical process of identifying the watermark physically was done. This is by visiting the location of the manuscript in the National Library of Malaysia, although the catalogue published by the library stated that it has no watermark to be identified. Determined for a hopeful result in discovering this manuscript's production period, a careful observation and investigation were done on every inch of the pages, using the tools provided including projecting lamps and magnifying glass.

After detection the manuscript's watermark, the image was captured via 36 MP Telephoto Camera, Auto Focus (F2.4 OIS) which was skimmed through two main indexes of European watermark catalogue mainly: W. A. Churchill's "Watermarks in paper in Holland, England, France, etc. in the XVII and XVIII centuries and their interconnection" (1965), and "*Monumenta Chartae Papyraceae Historiam Illustrantia* or Collection of Works and Documents Illustrating the History of Paper: Watermarks Mainly of the 17th and 18th Centuries" by Edward Heawood (1969).

Another concrete method was used after referring to these two indices, I initiated contact of experts from European organization of paper history: The International Association of Paper Historians based in Denmark and Belgium. This novelty of MSS 3290 watermark discovery will be further elaborated in the next section.

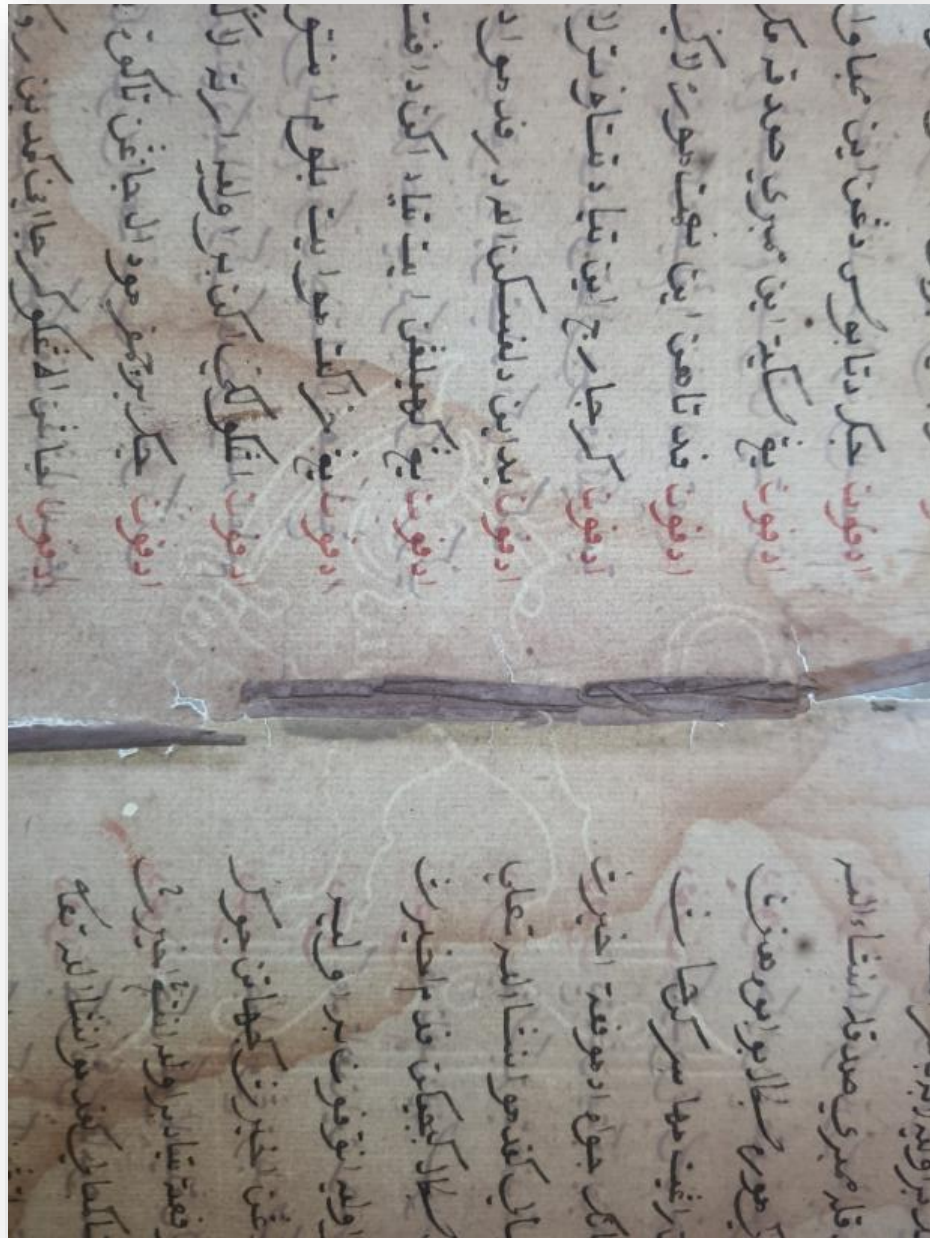
4.0 Results and Discussion

A novelty was discovered regarding the watermark of this manuscript as this study was being conducted: while the official catalogue of the National Library stated that there was no watermark on the pages of the manuscript (Perpustakaan Negara Malaysia, 2016), after careful observation, there were in fact several pages containing a distinctive watermark, which may be a breakthrough discovery that can help identify the age of this manuscript more concretely. The watermark detected was a vague symbol of a rampant lion, bearing a sword. The symbol, however, does not contain the words "PRO PATRIA", as is commonly found in watermarks with a lion. The image of the watermark was captured using a 12 mega-pixel high definition autofocus smartphone camera, then a specific software called Matlab 7 (via the plugin Automatic Watermark

Detection Tool application) was used to enhance the image of the watermark.

Figure 6 and 7 show the illustration of the watermark taken from the manuscript. The image is arranged horizontally to clearly exhibit the symbol:

Figure 6: A watermark was discovered in the manuscript MSS 3290: an image of a lion bearing a sword, a clearer version is shown below.



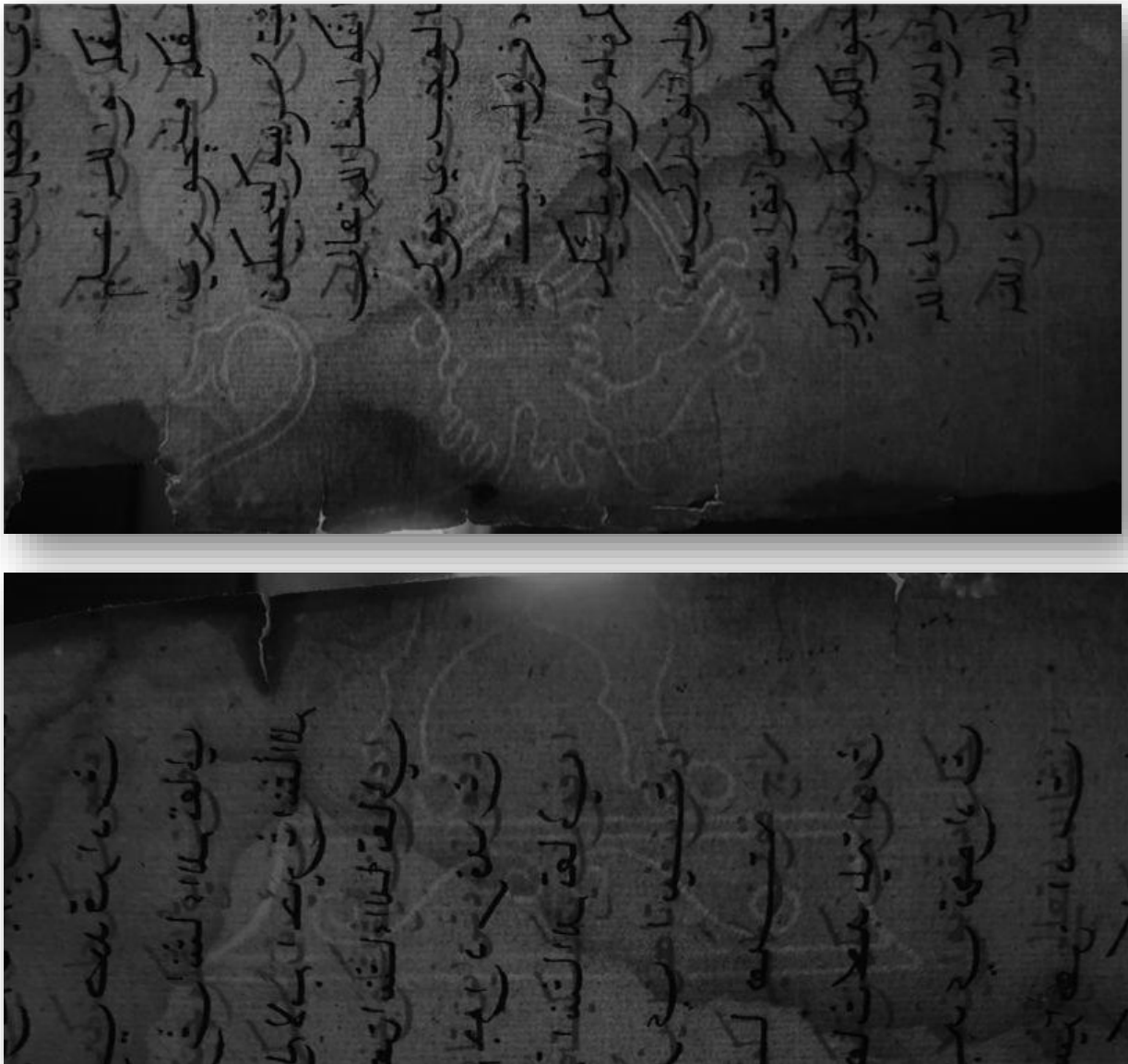


Figure 7: A monochrome version of the image is generated for a clearer view

Figure 6 shows the symbol of the Dutch lion, which was commonly found on manuscripts dating between 1635 and 1720 (Churchill, 1965). Note that the Dutch during those years excelled in the paper making industry (Churchill, 1965) thus garnering wide consumption throughout Europe, and eventually in their colonial territories including the Nusantara region. Watermarks from the Dutch paper making company were symbols that guaranteed their quality (Churchill, 1965), ensuring their dominance in the market. The Dutch lion, such as the attached above were one of the chief Dutch watermarks used traced from as early as 1635. Within the period between 1635-1720, typical Dutch watermarks include the Arms of Amsterdam, “VRYHEYT” in Wreath, Lion, Spear and seven darts, “VRYHEYT” in crowned circle written “Pro Patria ejusque Libertate”, Arms of the Seven Provinces, Lion, sword and seven darts in crowned shield, then a similar lion symbol but with the inscription “Eendraght maakt maght”, “Tuin”, Garden of Holland, or Maid of Dort (Dordrecht) with the inscription “PRO PATRIA” meaning “for the fatherland”.

Figure 8 shows some of the examples containing the typical Dutch watermark used throughout 1635-1720:

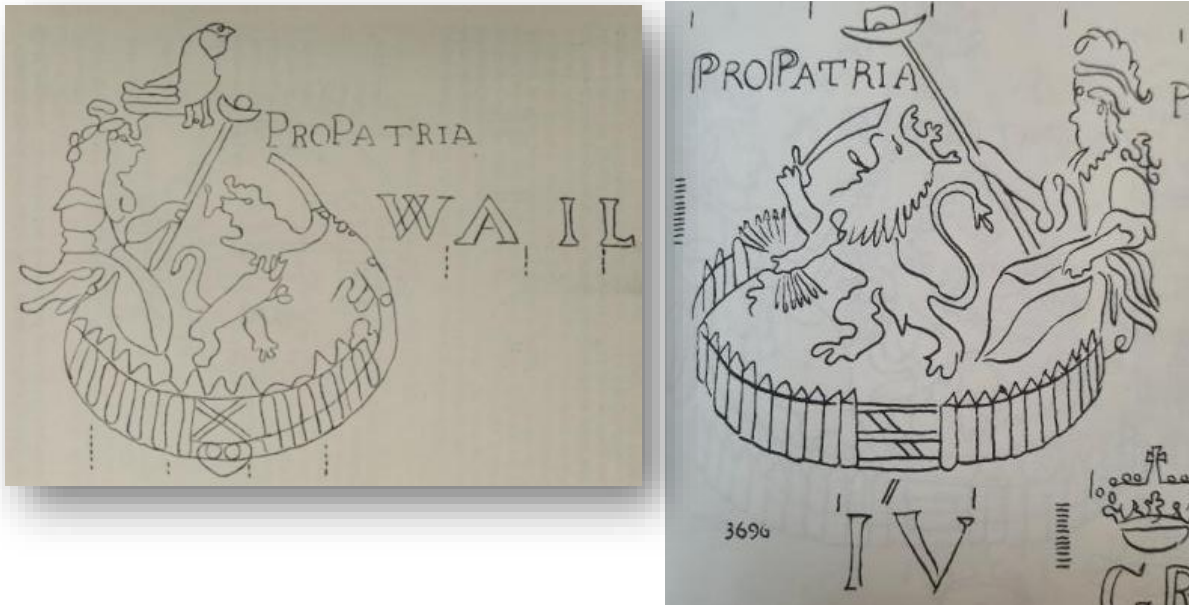


Figure 8: The Garden of Holland insignia which typically consists of the Maid and the Lion.

After narrowing down these watermarks produced by the Dutch, it is most probably certain that this Dutch lion watermark detected in MSS 3290 is among the Garden of Holland watermark which was used as early as 1683 until late 1750s (Churchill, 1965). As according to Churchill, “there are three varieties of the Garden of Holland watermark, viz. (1) maid alone in the garden; (2) maid and lion together, and (3) the lion alone, like the tiger of Niger in the Limerick” (1965).

What matches are the lion bearing a sword such as in Figure 9 (A – F) respectively, refer Figure 4.4 for example:

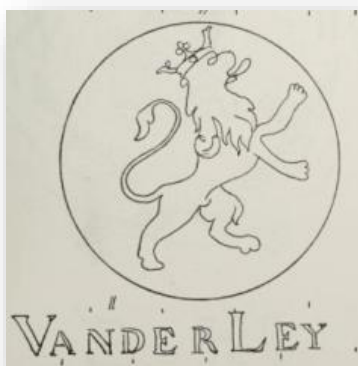


Figure 9. A



Figure 9. B



Figure 9. C

Figure 4. 1: These example of six images (4. 4. A – F) of a lion bearing a sword was used as early as 1683 until late 1750s, extracted from the catalogue “Watermarks in paper in Holland, England, France, etc. in the XVII and XVIII centuries and their interconnection” by W.A. Churchill (1965).



Figure 9. D



Figure 9. E



Figure 9. F

Figure 9: These example of six images (9. A – F) of a lion bearing a sword was used as early as 1683 until late 1750s, extracted from the catalogue “Watermarks in paper in Holland, England, France, etc. in the XVII and XVIII centuries and their interconnection” by W.A. Churchill (1965).

Considering Malaya was also colonized by the Portuguese in the 16th century, it is possible that the Portuguese – and, later, the Dutch themselves – introduced Dutch paper to the region during the Dutch East India Company movement. The trading activity and their rule in Malacca and regions of Nusantara lasted for 183 years (De Witt, 2008), signifying the dominance of Dutch papers in many Malay manuscripts.

Throughout this investigation, I have had the chance to contact the *Internationale Arbeitsgemeinschaft der Papierhistoriker* (International Association of Paper Historians). This organization comprises experts in the field of paper history from around the world co-operating with regional and international organizations including archives, libraries, art historians, conservatories, printing companies and artistic elements in connection with paper (Wenger, n.d.). One of the members, António Jorge Marques, (A. J. Marques, Watermark Identification Help, September 5, 2020) directed me to similar watermarks I discovered in MSS 3290, his vast experience extended research on manuscripts of an 18th century musicologist in Portugal. In the manuscripts that Marques has examined in his work, he frequently encountered a watermark that was distinctively Dutch: a crowned lion with sword (*leão coroadado com espada*). This shows that paper produced by the Dutch was widely used in the Europe during this time – a testament to its quality, widespread popularity, and possibly its accessibility.

Attached with the e-mail response (A. J. Marques, Watermark Identification Help, September 5, 2020) were an image of the same watermark resembling with what I have found, in which he referred to the Memory of Paper Database (<https://memoryofpaper.eu/marcosmus/marcosmus.php?id=65>):

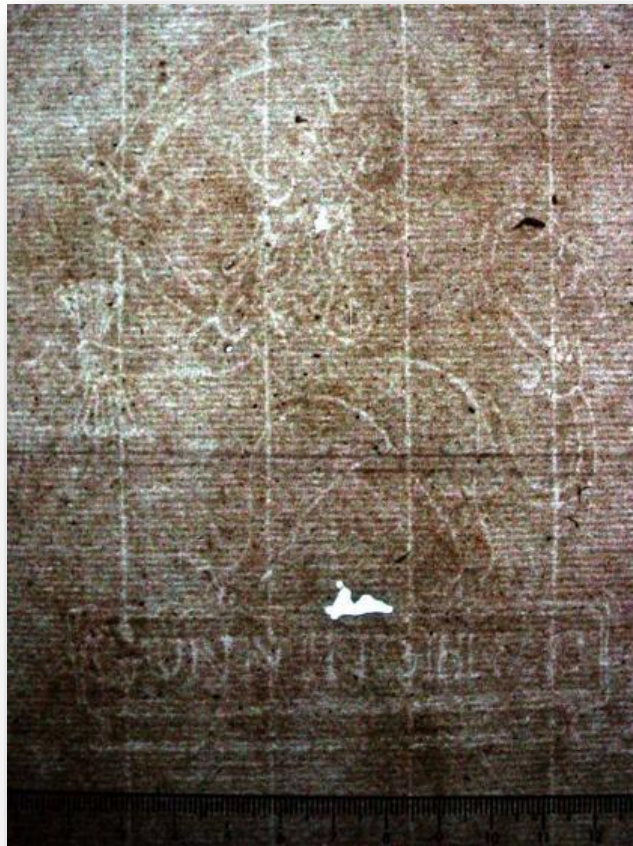


Figure 10: A watermark of a lion bearing a sword which A. J. Marques sent as an example, matching the ones he discovered during his research.

It can be concluded that this watermark was used during the first three decades of the 19th century (A. J. Marques, Watermark Identification Help, September 5, 2020), perhaps as early as 1817, as the database informed us.

The fact that this manuscript MSS 3290 Kitab Tibb has been catalogued by the national library of Malaysia as part of its manuscript collection strongly indicates that it is an authentic historical text. The discovery of this watermark further attests to its authenticity by providing a strong identification of the historical context of its production, which we can date to as far back as the late 18th century. This confirms that this Kitab Tibb is a valuable body of knowledge that is more than two hundred years old, yet still well-preserved and, as later chapters demonstrate, still very much relevant.

4.1 Textual and Jawi Spelling Analysis

In confirming this manuscript's period of publication, a brief language analysis is compared with other prominent Malay manuscripts to highlight the usage of spelling and its style of language. Jawi writing has built a tradition of knowledge in the Malay world which consists of 30,000 islands with more than 1,000 dialects and languages that vary between or ethnic groups with one ethnic group to another. One thing that is interesting and certain is that Jawi writing has been used in at least 72 palaces. All of the palaces were centers of government, administration, culture, economy, education and thought, although not all of them produced manuscript works. According to Ding (2009) only about 30% of the 10,000 Malay manuscripts have been studied. This gives the impression that there is still a lot of knowledge and information of the indigenous Malays in various fields is not yet known. Among other things, the main reason for this situation is of course as stated by Ab. Razak Ab. Karim (2006) in general admits that old Malay manuscripts are very difficult to

read because they are written in Jawi script with various styles and forms.

The pronunciation and spelling of Jawi writing 300 years ago is not only very different from now but also varies from one place to another. No matter what the differences and changes have been experienced by Malay speakers in the past, what is interesting is that Malays from the 19th century can still understand Jawi writing from the 18th century, and even Malays from the 18th century may understand Jawi writing from the 17th century and so on. Their understanding enabled the manuscripts from the 15th century and others to be copied continuously so that we can inherit about 10,000 Malay manuscripts, including the letters. That is the main problem of the old text not attracting the attention of the new generation. That is also one of the main reasons why the old text are considered as antiques, decorative items in libraries and museums, making it a source of information of the indigenous Malays in the Malay World for 500 years (Ding 2009).

Scholars' debate on the form of Jawi spelling can be used as a guide in understanding the Jawi spelling in old Malay manuscripts. According to Md. Said Haji Suleiman (1936) the Jawi spelling is divided into five, namely:

- I. Old spelling, i.e. spelling that does not use witness letters. The spelling referred to is actually a second-degree Arabic influence spelling. For example مك (then) and سوده (already).
- II. Old spelling, i.e. spellings that uses vocal letters (ا، و، ي) and those that do not use vocal letters. The spelling referred to is the first period Malay influence spelling. For example- اين (this), ايت (that) and others.
- III. New spelling, i.e. a spelling that uses the complete vocal letter in each word.
- IV. Arabic spelling; which follows the original spelling of Arabic for Arabic words. There are some exceptions, namely on words that have less or more use of vocal letters or vowels in them.
- V. Fully transformed of Malay spelling towards Arabic words. The word is spelled by adding or subtracting the vocal letters. Depending on the suitability of the pronunciation used in Malay.

Kang (1990 & 1995), Amat Juhari (1996 & 2009) and Hashim Musa (2006) argues that the development of Jawi spelling are as follows:

- I. The first level is according to the Arabic spelling system completely, namely the Jawi spelling using line marks and *syaddah*.
- II. The second level is influenced by the Arabic spelling system which retains the existing spelling and letters but eliminates lines and other diacritical marks.
- III. The third level is the Malay-influenced Jawi spelling system, namely the creation of vocal letters. There are three true Arabic letters used as vocal letters in addition to maintaining them as true letters, namely the letters alif (ا), wau (و) and ya (ي). Vocal letters are only included in the first syllable.
- IV. The fourth level is the Malay -influenced Jawi spelling system with the addition of the letter witness in the second syllable while maintaining it in the first syllable.

According to Ismail Abd. Rahman (2008) the early stage used the syllable vowel method of Jawi words either line marks or shaddah marks. Later, this way of spelling changed when receiving local influences, namely experiencing the Malay process with the Malay language. A significant influence is the method of vowel syllables of Jawi words alphabetically by using the vowel letters alif (ا), wau (و) and ya (ي). Through the influence of the Malay language, the method of vowel syllables of Jawi words in a line is fully used with line marks and shaddah and the alphabetical vowel is done by using the vowel letters alif (ا), wau (و) and ya (ي). It is clear here that, the method of vowel syllables of Jawi words by using the vowel letters alif (ا), wau (و) and ya (ي) and the method of vowel syllables of Jawi words by using line marks have been used since ancient times until now. The difference is that the use of line marks in the Jawi spelling system is no longer as common as in the past.

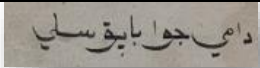
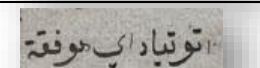
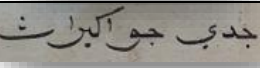
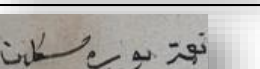
With this, we will be comparing MSS 3290's Jawi writing style with two Malay manuscripts that have its date labelled which are the Sultan Iskandar Muda's letter from Aceh written for King James I (1615 A.D) and Hikayat Raja Handak MS172 (1832M). This is to obtain certainty of its antiquity. We may find differences with that of its spelling used in the Sultan's letter, the most significant distinguisher is the use of diacritical marks or the *syaddah*:

One may find that the earliest period of the Jawi spelling structure uses the *syaddah*, extracted from the letter

is an example:

17th Century Jawi	Romanized
سني	Seni
فجین	Pujian
جو	Jua
اي	Ia
ملي	Mulia
تعلق	Ta'alluk / takluk
سکلين	Sekalian

We find that by comparison the MSS3290 does not use the *syaddah* in any of its spelling structure, writing most words mentioned above without the *syaddah*:

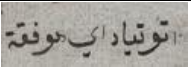
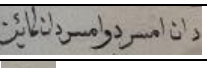
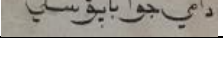
MSS 3290 Jawi Image	MSS 3290 Jawi Word	17th Century Jawi (Sultan's Letter)	Romanized
	سلي		Sali
	اي	اي	Ia
	جو	جو	Jua
	سکلين	سکلين	Sekalian

Next, the 17th Century Jawi (Sultan Iskandar's Letter) exclude lines and diacritical marks in its writing, affected by the Arabic spelling system i.e., retaining the existing spelling as well as letters. Neither vowel letters nor diacritical marks are used in 17th century Jawi writing. This can be formulated as the form of the spelling is heavily influenced by the Arabic spelling level, maintaining the absence of diacritical marks and lines.

17th Century Jawi	Romanized
دلم	Dalam
اتو	Atau
دو	Dua
بهو	Bahawa
در	Dari

Dating Kitab Tibb MSS 3290: Watermark analysis and orthographic evolution in Malay medical manuscripts

By contrast, the MSS 3290 inserts lines and diacritical marks:

MSS 3290 Jawi Image	MSS 3290 Jawi Word	17th Century Jawi	Romanized
	دالم	دلم	Dalam
	اتو	اتو	Atau
	دو	دو	Dua
	در	در	Dari
	جوا	جو	Jua

There exist several similarities in the spelling of ، دو ، در ، اتو however the words ، جوا ، دالم in MSS 3290 has started using a later spelling system, showing certain elements of transition towards the early 18th century spelling system.

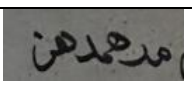
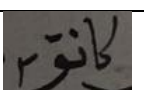
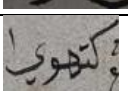
The next element is the double word or repeated word concept. It is a word that is repeated to enhance or indicate a specific meaning. This type of word involves the use of a double digit (٢) which means the word is repeated twice in its reading. Doubling is a process of repeating a base word that applies to all or part of an action (Tan 2009).

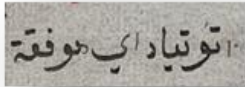
A 17th century writing system as according to the Sultan's letter studied above, uses double words without using hyphens, by repeating the spelling of the word twice. Examples are as follows:

MSS 3290 Jawi Image	MSS 3290 Jawi Word	17th Century Jawi (Sultan's Letter)	Romanized
	راج ٢	راجراج	Raja-raja
	كانق ٢	N/A	Kanak-kanak
	لومة ٢	N/A	Lumat-lumat

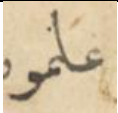
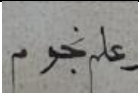
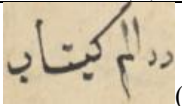
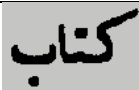
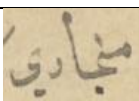
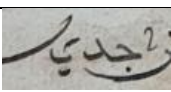
Notice that the word Raja-raja meaning Kings (plural) was simplified by inserting the number 2 in contrast of the 17th century spelling style that assimilates both words راجراج. This shows that the MSS 3290 is written during a later period than that of 17th century, early 18th century to be precise.

In order to confirm MSS 3290's 18th century trait, let us compare it with the manuscript *Hidayah al-Salikin fi Suluk Maslak al-Muttaqin*, a late 18th century manuscript dated 1192 Hijri (1778 A.D.), showed significant similarities in its many aspects of Jawi spellings:

Hidayah al-Salikin manuscript	MSS 3290 Kitab Tibb	Remarks
مد همداهن		Note that the late 18 th century has added the <i>alif</i> in the spelling <i>mudah-mudahan</i> , while the MSS 3290 has not adapted it yet.
بايك ٢		Both manuscript has started to adapt the number ٢ in writing double words, indicating the 18 th century style
مغهوى		Similar spelling in its diphthong

ای		Both manuscripts dismisses the usage of <i>syaddah</i> for <i>Ia</i>
----	---	--

As a final example, this study will present a 19th century manuscript named *Syair Makrifat and Syair Dagang* projecting its newer version of 19th century Jawi spelling:

19 th century <i>Syair Makrifat and Syair Dagang</i> (Or 6899 British Museum)	Early 18 th century MSS 3290 Kitab Tibb	Romanized
 (و) is added	 absent of (و)	Ilmu
 (ي) is added	 absent of (ي)	Kitab
 (ل) is added	 absent of (ل)	Jadi

During a later period, more vowels of ا, و, ي was introduced as argued by Kang (1990 & 1995), Amat Juhari (1996 & 2009) and Hashim Musa (2006) making this the third and fourth period of Jawi's spelling evolution as written above. Hence, this is one of the indicators that we can use to determine the age of the MSS 3290 which is the early 18th century.

4.2.1 Location Determination

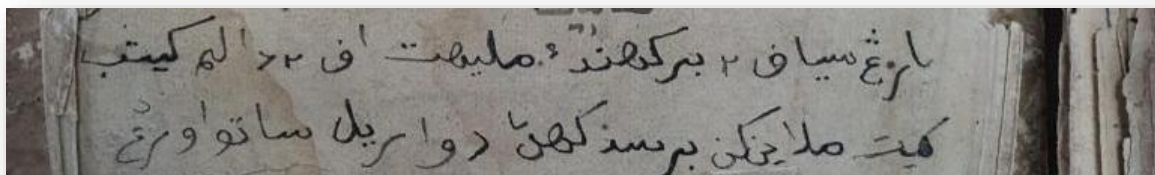


Figure 4.6 at the end of MSS 3290 reads “whoever is in need to look (read) what is in this book shall donate two Riyals per person.”

The location of where this manuscript is written can be interpreted in the written text which mentions ریاں or Riyal; for instance, at the beginning of the manuscript highlighted a note encouraging readers to donate 2 Riyals to the book keeper (the common name of the currency at that region). Investigating this, a prominent work regarding the origins and chronology of the currency interchangeability in the Malay world was referred to. According to Eong (1974), the word rial or riyal though Spanish in origin was introduced in the States of Kedah, Kelantan and the East Coast of the Malay Peninsula by early Arab traders who no doubt used only Spanish Pillar Dollars in their dealings with local merchants. The word "rial" (and not ringgit) was used to translate the English word "dollar" in the Jawi version of the Laws of the State of Kedah - 1934 - Kellagher Edition. This accounts partly for the word rial being occasionally used in the States of Kedah and Kelantan up till today instead of the word ringgit (Eong, 1974).

4.3 Strength of this Manuscript

This manuscript was selected for this study due to its notable orthographic consistency, well-preserved physical

condition, and rich paleographic features that reflect the scribal practices of its time. The script demonstrates clear and deliberate handwriting, with ligatures, diacritics, and punctuation marks that align with traditional Malay manuscript conventions. The layout of the text, including the use of rubrication, marginalia, and spacing; suggests a skilled and knowledgeable scribe, likely trained in classical Islamic manuscript traditions.

In addition to its textual clarity, the manuscript's material aspects such as the type of ink, paper quality, and binding techniques offer valuable insight into the historical context of its production. These elements collectively point to a manuscript compiled by an individual with considerable expertise not only in content but also in the aesthetics and technicalities of manuscript creation.

Furthermore, while the content spans cosmological themes such as planetary movements, eclipses, and astral navigation, the way these are organized within the folios underscores the manuscript's function as a multi-purpose reference text. This versatility, combined with its sophisticated visual presentation, enhances its value as a historical artifact for the study of Southeast Asian Islamic manuscript culture.

5.0 Conclusion

The discovery of a watermark within MSS 3290 provides a critical breakthrough in dating the manuscript. Although previously catalogued by the National Library of Malaysia as having no watermark, careful investigation revealed the presence of a rampant lion bearing a sword, a distinctive watermark historically associated with Dutch papermaking.

Comparative analysis with known Dutch watermark catalogues, particularly W.A. Churchill's 1965 compilation, confirms that the watermark matches those from the "Garden of Holland" series, notably used between 1683 and the late 1750s. Further support comes from expert correspondence with António Jorge Marques of the International Association of Paper Historians, who affirmed that a similar watermark appears in European manuscripts as late as 1817–1830, based on the *Memory of Paper* database.

Taking into account:

- I. The lion-with-sword watermark's historical use (especially post-1683),
- II. Dutch colonial presence and trade in the Malay world (especially Malacca),
- III. The extended use of Dutch paper well into the early 19th century,
- IV. And cross-validation with international paper history experts,

It is most plausible that MSS 3290 was produced between the late 18th century and the early decades of the 19th century (c. 1780–1830).

This dating aligns with the linguistic and orthographic characteristics observed in the Jawi spelling and textual style, which reflect transitional features typical of manuscripts copied or composed during this period. Consequently, the manuscript's physical and textual evidence combine to position MSS 3290 as an authentic, over-200-year-old Malay medical text, preserving valuable indigenous knowledge from the classical Malay-Islamic intellectual tradition.

References

- Ab. Razak Ab. Karim. (2006). *Warkah Melayu Lama*. Dewan Bahasa dan Pustaka.
- Al-Attas, S. M. N. (1969). *Islam dalam Sejarah dan Kebudayaan Melayu*. Dewan Bahasa dan Pustaka.
- Al-Attas, S. M. N. (1972). *Islam dalam Sejarah dan Kebudayaan Melayu*. Kuala Lumpur: Universiti Kebangsaan Malaysia.
- Al-Attas, S. H. (1977). *The Myth of the Lazy Native: A Study of the Image of the Malays, Filipinos and Javanese from the 16th to the 20th Century and Its Function in the Ideology of Colonial Capitalism*. London: Frank Cass.
- Churchill, W. A. (1965). *Watermarks in Paper in Holland, England, France, etc. in the XVII and XVIII Centuries and Their Interconnection*. Amsterdam: Menno Hertzberger & Co.
- De Witt, D. (2008). *The VOC in Malaysia and Indonesia*. Leiden: KITLV Press.

- Ding, C. M. (2009). *Pengantar Kajian Manuskrip Melayu*. Kuala Lumpur: Penerbit Universiti Kebangsaan Malaysia.
- Eong, T. K. (1974). *The Currency Interchangeability Agreement Between Malaysia, Singapore and Brunei*. Southeast Asian Affairs.
- Freely, J., & Lyons, J. (2010). *Light from the East: How the Science of Medieval Islam Helped to Shape the Western World*. I.B. Tauris.
- Gallop, A. T. (2013). *Golden Letters: Writing Traditions of Indonesia*. London: The British Library.
- Hamid, A. F. (1985). *Teks Durr al-Manzum dan Syarahnya oleh Shaykh Abd al-Rauf al-Fansuri*. Kuala Lumpur: Dewan Bahasa dan Pustaka.
- Haris, A. (2014). *Syeikh al-Jawi dan Sumbangan Ilmu di Tanah Arab*. Kuala Lumpur: Institut Terjemahan dan Buku Malaysia.
- Hashim Musa. (2006). *Bahasa dan Pemikiran Melayu: Satu Analisis Falsafah*. Kuala Lumpur: Dewan Bahasa dan Pustaka.
- Heawood, E. (1969). *Monumenta Chartae Papyraceae Historiam Illustrantia: Watermarks Mainly of the 17th and 18th Centuries*. Hilversum: Paper Publications Society.
- Hunter, D. (1947). *Papermaking: The History and Technique of an Ancient Craft*. New York: Alfred A. Knopf.
- Ismail Abd. Rahman. (2008). *Perkembangan Tulisan Jawi: Kajian Kes dalam Teks Klasik Melayu*. Shah Alam: Karisma Publications.
- Jaafar, S. M. (2004). *Tulisan Jawi: Asal Usul dan Perkembangannya di Alam Melayu*. Kuala Lumpur: Dewan Bahasa dan Pustaka.
- Jones, R. (2016). *Hikayat Raja-Raja Pasai: A Study of the Chronological Framework*. Singapore: NUS Press.
- Kang, K. T. (1990). *Perkembangan Ejaan Jawi dan Masalah Pembakuannya*. Kuala Lumpur: Dewan Bahasa dan Pustaka.
- Kang, K. T. (1995). *Struktur dan Sistem Tulisan Jawi Lama*. Kuala Lumpur: DBP.
- Maidin, M. A. (1995). *Amalan Perubatan Islam Tradisional di Nusantara: Satu Kajian Awal*. Jurnal Usuluddin, 3(1), 57–76.
- Md. Said Haji Suleiman. (1936). *Ejaan Jawi: Sejarah dan Perkembangannya*. Singapura: Al-Ahmadiyah Press.
- Mohd Azmi, M. R. (2019). *Reviving Prophetic Medicine in the Malay World: A Study on Kitab Tibb Traditions*. [Unpublished manuscript or article].
- Mohd Noor, M. R. (2011). *Teks Melayu dan Islam: Kajian Terhadap Durr al-Manzum dan Pengaruhnya dalam Kesusasteraan Melayu*. Kuala Lumpur: Dewan Bahasa dan Pustaka.
- Perpustakaan Negara Malaysia. (1990). *Manuskrip Melayu: Satu Pengenalan*. Kuala Lumpur: PNM.
- Perpustakaan Negara Malaysia. (2014). *Dasar Pemeliharaan dan Pemuliharaan Manuskrip Melayu*. Kuala Lumpur: PNM.
- Perpustakaan Negara Malaysia. (2015). *Manuskrip Melayu dalam Koleksi PNM*. Kuala Lumpur: PNM.
- Perpustakaan Negara Malaysia. (2016). *Katalog Manuskrip Melayu: Edisi Kedua*. Kuala Lumpur: PNM.
- PRPM. (2022). *Pusat Rujukan Persuratan Melayu*. <https://prpm.dbp.gov.my>
- Tan, C. B. (2009). *Understanding the Structure of Reduplicated Words in Malay Grammar*. Jurnal Bahasa, 9(2), 33–48.
- Wenger, S. (n.d.). *Internationale Arbeitsgemeinschaft der Papierhistoriker (International Association of Paper Historians)*. Retrieved from <https://paperhistory.org>
- Zakariah, H., & Ali Mohd, M. (1998). *Traditional Malay Medicine: A Review of Manuscript Sources*. Journal of the Malaysian Branch of the Royal Asiatic Society, 71(1), 1–14.