

ड्राफ्ट भारतीय मानक
मणिकादाई नूल विश्लेषण (सिद्ध आईसीडी 1.4.2) और के लिए तकनीकी विशिष्टताएँ
अभ्यास के कोड

Draft Indian Standard
Technical Specifications for *Manikadai Nool* (Wrist Circummetric Sign) Analysis
(Siddha ICD 1.4.2) and
Code of Practice
ICS 11.120.10

Siddha Sectional Committee, AYD 05

Last Date of Comments: 03.11.2023

FOREWORD

(Formal Clauses would be added later)

There is a worldwide resurgence of interest in holistic systems of health care, particularly with respect to the prevention and management of lifestyle-related disorders, and chronic, non-communicable, and systemic diseases. It is increasingly understood that no single healthcare system can provide satisfactory answers to all the health needs of modern society. Evidently, there is a need for a new inclusive and integrated healthcare regime that should guide health policies and programmes in the future.

Siddha medicine is an ancient medical system in India and involves a system of regional therapy with geographical significance for the convenience of treatment and comfort of patients. The Siddha system involves the use of herbs, minerals, metals, and any organic material available, and emphasizes patients' physiology, environment, age, gender, race, habits, psychology, habitat, diet, appetite, physical condition, and disease.

In Siddha Medicine, *Agathiyar Soodamani Kayaru Soothiram* provides diagnostic and prognostic predictions correlating with anthropometric values of wrist circumference measured by one's own finger breadths. The treatise gives 96 descriptions under 26 finger breadth measurements and subdivisions. The *Manikadai Nool* (Wrist Circummetric Sign) provides insight into Siddha Anthropometry giving analogues predicting one's current health status and prognosis as well. Standardization of this ancient techniques helps for wider use of this technique will influence ascertaining clinical outcome and physician decision.

This Standard will provide the requirements for the techniques and the practice guidelines. It will help in guidance, Siddha Physicians, Researchers, Academicians, Lifestyle modification trainers etc., to analyse *Manikadai Nool* appropriately and help establish it as a traditional diagnostic tool for Preventive, Personalized and Prophylactic treatment through Siddha Medicine.

For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test or analysis, shall be rounded off in accordance with IS:2-1960*. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

1 SCOPE

This standard specifies general requirements and code of practice details for *Manikadai Nool* (Wrist Circummetric Sign) Analysis (Siddha ICD 1.4.2).

2 NORMATIVE REFERENCES

The standards listed below contain provisions which, through reference in this text, constitute provision of this standard. All standards are subject to revision, and parties to agreement based on this standard are encouraged to investigate the possibility of applying the most recent editions of the standards.

IS No.	Title
IS 2819: 1983 (Reaffirmed 2005)	Specification for braided cotton cord (Second Revision)
IS 4513:1968* (Reviewed in: 2016)	Specification for scissors, surgical dressing and stitch
IS 1481:1970* (First revision) Reviewed in: 2019	Specification for metric steel scales for engineers (First Revision)

3 TERMS AND DEFINITIONS

For the Purpose of this standard, the following terms and definitions shall apply.

3.1 Manikadai Nool - A Unique diagnostic strategy/tool that is used to predict certain clinical features (*Mukutram* level disorders which is reflected in constitutional make (*Saptha thathu*) and as expressed as symptoms, diseases, or incurable signs) occurring in an individual based on the Antebrachial circumference variations correlated with Fingerbreadth measurements.

3.2 Manikkadai - The term “*Mani*” denotes Wrist and “*Kaṭai*” means end measures. The measure of the wrist (circumference) obtained at the Antebrachial point by using a *Nool*.

3.3 Nool – Suitable nonelastic thread/ rope with specifications as mentioned in 4.1.1

3.4 Virar kadai - The term “*Virar*” denotes finger and “*Kaṭai*” means end measures. The measure of the mediolateral breadth/width of individual finger unit using a *Nool*.

3.5 Finger Breadth Units (FBU) - One full breadth of the finger is taken into consideration for FB and the readings of each FB are divided into 4 units, quarter measurement ($\frac{1}{4}$), half ($\frac{1}{2}$), three quarters ($\frac{3}{4}$), and full breadth.

October 2023

- 3.6 Calculation of Finger Breadth:** Unit of measure calculating the Mediolateral width of one extended finger (Palms side).
- 3.7 Nanku virar kadai** - The Mediolateral Width of the 4-extended fingers (palms side) of the patient.
- 3.8 Ideal point of Nanku Virar Kadai measurement** - The middle location of four fingers where the *Nool* is placed to measure the *Nanku Virar Kadai*.
- 3.9 Antebrachial point (ABP)** - The point at the forearm/antebrachium where the circumference is measured using the *Nool*. It is an important point in the forearm (Antebrachial region) which is used to measure the Antebrachial circumference. The length of the four finger breadths is measured back from the wrist line to reach this focus.
- 3.10 Antebrachial Circumference (ABC)** - The circumference of ABP as measured by using the *Nool*. Further, the length obtained in the *Nool* is converted into no of FBU for assessing the readings.

4 REQUIREMENTS:

4.1 DESCRIPTION

4.1.1 Cotton Yarn (Thread) Cord:

The Cord used for measurement shall be made of cotton yarn uniformly braided with 3 strands. The ideal range of length of the cord may be fixed as 150 mm to 200 mm, and width of nominal diameter around 3 mm. The cord shall be free from knots, kinks, broken or loose ends projecting from the cord.

4.1.2 Anatomical Point for Manikadai (Wrist Circummetric) Measurement:

Antebrachial point as referred to in the Operational definitions 3.8.

4.1.3 Anatomical Point for Nanku Virar kadai (4 Finger Breadth) Measurement:

Nanku Virar kadai (4 Finger Breadth) as referred to in the Operational definitions 3.6.

5 CODE OF PRACTICE FOR MANIKADAI NOOL (WRIST CIRCUMMETRIC SIGN)

5.1 METHOD – 1

- 5.1.1 The patient is asked to sit comfortably in the chair provided, by keeping the hand fingers intact and straight. (Fig 1)
- 5.1.2 The participant should hold the wrist anterior surface up and place it on the examination table for easy measuring by the investigators. (Fig.2)

- 5.1.3 The specified *Nool* (Nominal thread) is used to take the measurement.
- 5.1.4 The total Mediolateral width of 4 fingers is measured from the Ideal point of *Nanku Virar Kadai* measurement by using the *Nool* (Fig.3 & 4)
- 5.1.5 The total length obtained is measured back towards the ante brachial part of the arm, by keeping the *Nool* in the middle of the wrist crease. (Fig.5)
- 5.1.6 Reach the point where the total length is met in the ante brachium, point out, mark, and measure the Ante brachial circumference (ABC) by using the same *Nool*. (Fig.6)
- 5.1.7 The length obtained, i.e., ABC is converted into total no FBU and recorded. (Fig.7)
- 5.1.8 Repeat the process twice again for maximum accuracy of the reading.
- 5.1.9 The reading obtained in number of FBU is interpreted with clinical description from the script.

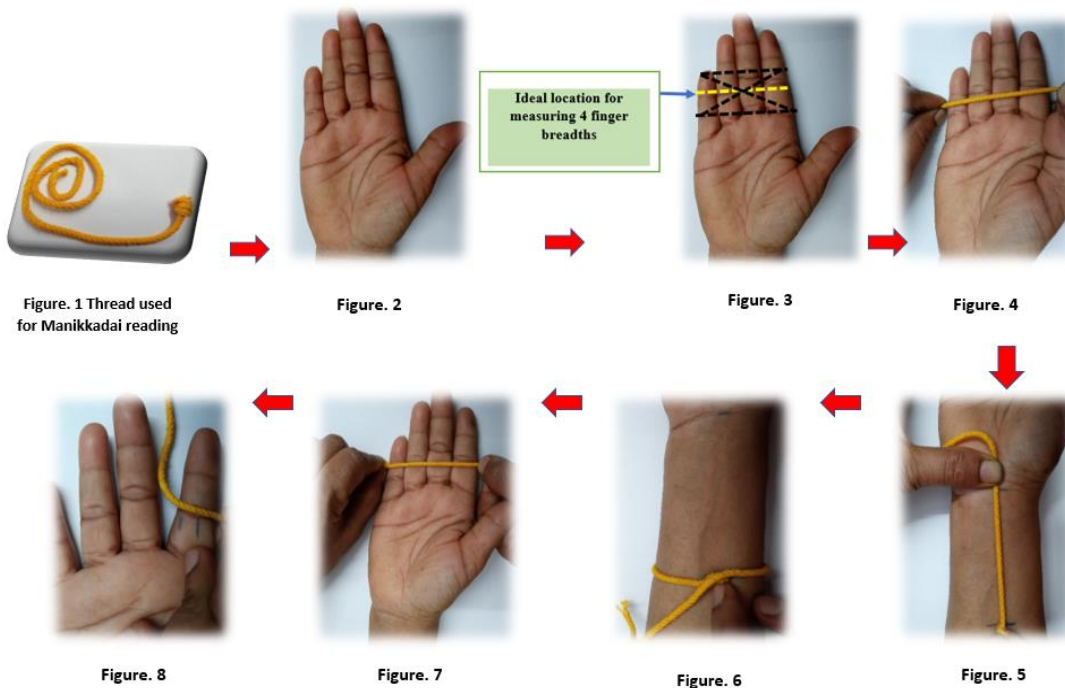


Figure. 1 Thread used for Manikkadai reading

Figure. 2

Figure. 3

Figure. 4

Figure. 8

Figure. 7

Figure. 6

Figure. 5

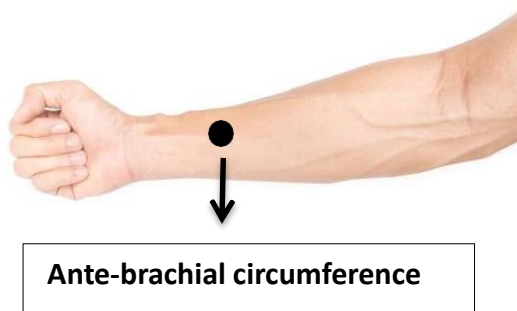


Figure. 9 Anatomical Point for Manikadai Measurement

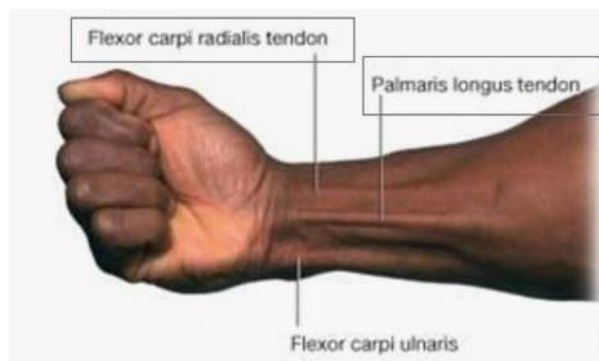


Figure. 10 Anatomical planes of the Forearm

5.2 METHOD – 2

- 5.2.1 The patient is asked to sit comfortably in the chair provided, by keeping the hand fingers intact and straight. (Fig 1)
- 5.2.2 The participant should hold the wrist anterior surface up and place it on the examination table for easy measuring by the investigators. Ask the patient to keep their fingers together (Adduction of fingers).
- 5.2.3 Keep the patients left or right hand over the anterior wrist region so that the little finger is placed in the same plane of wrist line (Fig 1a)
- 5.2.4 Mark the point on forearm where the outer border of index finger lies and that is the Ante-brachial circumference point. (Fig 1b)
- 5.2.5 Measure the Ante brachial circumference (ABC) by using the same *Nool*. (Fig.1 c)
- 5.2.6 The length obtained, i.e., ABC is converted into Total Number of FBU and recorded. (Fig.7)
- 5.2.7 Repeat the process twice again for maximum accuracy of the reading.
- 5.2.8 The reading obtained in Number of FBU is interpreted with clinical description from the script.

5.3 CALCULATION OF MANIKADAI NOOL VALUE

- 5.3.1 The nearest measure of FBU (full breadth, three quarter, half and one fourth) is confirmed based on the consequent reading.
- 5.3.2 The findings are expressed as FBU calculated using the formula (Width of the 4 extended fingers (Palms) of the Patient/4)
- 5.3.3 The observed FBU value is interpreted on basis of the textual references (Annexure A)

5.4 CONDITIONS OF MEASUREMENT:

- 5.4.1 While the measurement can be made on either left or right sides of the forearm, the report shall clearly indicate on which side the measurement has been taken. It is to be considered, while in *Nadi Parisothanai* (Pulse Diagnosis), generally right side is used for men and left side is used for women.
- 5.4.2 Examine and observe for any anatomical deformities, previous fractures of the arm as it may affect the accuracy of readings. If observed try to take readings in the opposite arm.
- 5.4.3 History of foreign bodies (metal rods, plates etc.) in-situ, arteriovenous (AV) fistula should be considered.

6 SPECIAL CONSIDERATION

Conditions such as Congenital abnormality of the wrist, any abnormal swelling, injury or fracture of the wrist, dropsy, malnutrition, foreign bodies in-situ are to be taken into consideration before establishing Manikadai values.

7 EXPRESSION OF RESULTS:

- 7.1.1 Corelate the findings with the patients presenting complaints and note.
- 7.1.2 Ask leading questions, and use logical derivations to interpret the diagnosis.
- 7.1.3 The results are analysed based on the affected *Mukkutram* and the impacted *Udal thathus*, expressed as the subjective signs, and findings as per suitable format (Annexure B).

7.2 REPEATABILITY:

- 7.2.1 The accuracy of the repeatability is obtained by at least three consecutive readings.

8 DATA COLLECTION PROFORMA REQUIREMENTS:

8.1 Basic demographic description of subjects

Fresh data of the participants should be collected through either Case Record Form (CRF), Questionnaires or Case Reports. CRF could be generated according to the expected specific outcome of the studies or in general. Information such as demographic details, clinical history relatable to *Manikadai Nool* measurements and vital data on current clinical status are to be presented in the Data collection proforma. A model CRF for Diagnostic cum Validation studies of *Manikadai Nool* is given in Annexure B for reference.

9 OTHER CONSIDERATIONS

- 9.1 The *Manikadai* analysis can be used to analyse the state of the *thirithodam* and *sapthadhathus*. The analysis can be more productive, when the body constitution as per Siddha Science is also taken into consideration along with other details. This analysis can be used as an effective diagnostic tool to improve the accuracy of the disease prediction and its correlation with appropriate treatment regime.

ANNEXURE A

MANIKADAI NOOL (WRIST CIRCUMMETRIC SIGN – INFERENCE)

PRELIMINARY DRAFT DOCUMENT: FOR COMMENTS ONLY
(Not to be reproduced without permission of BIS or used as Standard)
AYD 05 (23899)
October 2023

Manikadai Nool Measurements (in FB*)	Inference
11 FB	If the finger breadth measurements are shown as 11, it is a healthy sign, otherwise the body may appear obese or heavy.
10 FB	Diseases that are causing pallor (Anaemia); Body and extremities appear shrunken; Cluster of gastrointestinal diseases attended with pain and indigestion
9 ^{3/4} FB	Fistula; Inguinal lymphadenopathy; Cough; Dryness; Diseases of the spleen may occur within a year
9 ^{1/2} FB	Heat affecting the bones with the occurrence of pallor of the body; Dryness of eyes; Fever; Dryness of the body
9 ^{1/4} FB	Oliguria or reduced urinary output; Insomnia due to intense sensation of heat; Pan sinusitis and its associated symptoms
9 FB	Pricking pain inside the ear with ear blockage or dullness; Pain in the low back; Tiredness of lower extremities
8 ^{3/4} FB	Dryness of the body; Skin diseases resembling urticaria; Pricking pain in the abdomen; Bilious disease-causing pallor of conjunctiva, oral cavity, and extremities
8 ^{1/2} FB	Cough; Sensation of heat in the body; Formation of ulcer in a wound; Glandular swelling
8 ^{1/4} FB	Febrile illness of Pitha vayu nature characterized by yellowish discoloration of body, vomiting of in digested matter with colicky pain of the abdomen, and dropsy.; Venereal disease (Sexual transmitted disease); Diseases of the head may occur within one year
8 FB	Flatulence causing stomach growling; Swelling in the body; Chronic Pan-sinusitis; Throat pain; Stomach upset
7 ^{3/4} FB	Ano-rectal diseases (haemorrhoids); Weakening of both lower extremities; Tremor of the head; Enlarged lymph nodes in the cervical region (Cervical lymphadenopathy) may occur within one year, along with bleeding per nose; Over a period of time there will be discharge of blood from the nose
7 ^{1/2} FB	Group of diseases in which there is dryness, softening, soft necrosis, caries, tuberculosis, decay or destructive changes in bones, cartilages or other bony tissues accompanied by general emaciation, muscular dystrophy and fatigue.; Flatulence and abdominal distension; Burning sensation of face; Burning sensation of eyes; Febrile illness; Pain in the legs; Occurrence of abscess in the thigh region

PRELIMINARY DRAFT DOCUMENT: FOR COMMENTS ONLY
(Not to be reproduced without permission of BIS or used as Standard)
AYD 05 (23899)
October 2023

7^{1/4} FB	Low back ache; Bilious aggression in the head region and its associated symptoms; Diseases that are causing pallor (Anaemia); Heaviness of both extremities; Insomnia
7 FB	Bilious aggression in the head region may present the features; Bleeding per oral cavity and tongue; Pulmonary tuberculosis; Bullous eruptions or blisters in the skin; Sensation of heat in the body associated with dryness of the stools
6^{3/4} FB	Swelling or inflammation of the scrotum due to the vitiation of Vatham; Reddish discoloration of eyes; State of stupor or giddiness; Urinary obstruction may occur within a period of 3 years; Pain in both lower extremities
6^{1/2} FB	Febrile conditions or increased body heat; Pricking pain in the body; It may be a death sign
6^{1/4} FB	Anorectal diseases like haemorrhoids; Bloody dysentery; Severe diarrhoea or dysentery; Change in the skin colour or its darkening
6 FB	Severe phlegmatic congestion in the chest; Stupor or giddiness; It may be a death sign
5^{3/4} FB	Delirium and its associated features; Giddiness; Fatigue; It may be a death sign
5^{1/2} FB	Toxemia affecting brain; Pallor of the nose; Tooth becomes blackish in nature; It's a death sign (Death may be predicted within 10 days)
5^{1/4} FB	Severe emaciation (cachexia) of the body; Increased sleepiness; It's a death sign (Death may be predicted within 6 days)
5 FB	Pallor of the body and chillness; Severe phlegmatic congestion of the throat; Features resembling toxemia; It may be a death sign
4^{3/4} FB	Tongue dryness; Tremors in the low back; It may be a death sign (Death is predicted within 7 days)
4^{1/2} FB	Anasarca or general body swelling; Severe Sunken eyes; It may be a death sign (Death is predicted within 9 days)
4^{1/4} FB	Body tremors; Weakness of both hands and legs; Face becomes blackish in nature; Extreme difficulty in breathing; It may be a death sign (Death may be predicted within 2 days)
4 FB	Emaciation of the face; Swooning; Swelling of both extremities; It's a death sign (Death may be predicted within 5 days)

PRELIMINARY DRAFT DOCUMENT: FOR COMMENTS ONLY
(Not to be reproduced without permission of BIS or used as Standard)
AYD 05 (23899)
October 2023

*FB - finger-breadth

ANNEXURE B
SAMPLE CRF DATA PROFORMA

Model Case Record form – Case reports & Diagnostic accuracy studies																			
Name of the participant	Occupation					¹Yakkai (constitution) (Tick)					Date	Day	²Nilam						
															Age	Sex:	Diet: V/NV		
Subject ID No:	Nadi:		Neer/neikuri:			PV		PK		KV		KP		⁴Kalam		V	P	K	
	³Pozhudu		K	KK	MP	PP	IV	M											
Chief: Presenting complaints					Observations from Manikkadai Reading					FB:									
1.					a.														
2.					b.														
3.					c.														
4.					d.														
5.					e.														
H/O Diabetes / hypertension/ kidney disease/heart disease/ others (specify):																			
⁵Examination of Saptha Thathukkal (7 primary constituents)			Saram			Senneer			Oon		Kozhuppu		Enbu		Moolai		Suckilam		
			IF []	RF []	IF []	RF []	IF []	RF []	IF []	RF []	IF []	RF []	IF []	RF []	IF []	RF []	IF []	RF []	
Category of Reading		a. True Positive symptoms (TP) – Clinical presentations coinciding with Manikkadai Reading																	[]
		b. Sequence of True positive symptoms (SqTP) - Clinical presentations coinciding with multiple Finger breadth readings showing a sequence of origin and progress																	[]
		c. False-positive symptoms (FP) - Subjects not presenting, expressing, or having the symptoms even though the features are shown in the particular reading																	[]
		d. False-negative symptoms (FN) - Subject is presenting the symptom or disease that has no description in the obtained reading																	[]
Attachments		▪ Investigations: Serological/ others (specify)																	[]
		▪ Imaging: Xray/Scan/others (specify)																	[]
		▪ Previous Case /medical record (copy)																	[]
		▪ Photographs/images of Neer/neikuri pattern and its reports																	[]