

**STANDARDIZATION OF METRIC MEASUREMENTS MENTIONED IN SIDDHA
GUNAPADAM MOOLIGAI, THADHU, JEEVA VAGUPPU.**

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ABSTRACT

Siddha system of medicine had a wide variety of medicinal uses in treating life challenging diseases. The great spiritual researchers called *Siddhar's* offered this medicine to the World. The medicinal preparations of this system comprises of *Chooranam, Maathirai, Vadagam, Rasayanam, Pittu, Manapaagu, Legium, Theenooral, Kudineer, Ooral Neer, Parpam, Chendhooram, Padhangam, Kattu, Karpam, Kazhangu* etc. The efficacy of these medicines depends on dosage. Due to the lack of knowledge toward metric measurements in the period *Siddhar's*, they fixed the dosage of medicine in form of sizes of pulses, cereals, seeds, grains etc. The main hallmark of the medicine was dosage. The lack of proper standardization of *Siddha* measurements, there was a confusion in fixing the dosage of medicine. Thus there was a need for proper standardization of measurements mentioned in *Siddha* classical literatures. Thus an attempt was made in this paper to standardize the *Siddha* measurements into metric measurements. The novelty of this paper will provide useful information for *Siddha* students, *Siddha* physician, *Siddha* researchers regarding the dosage of medicine. This preliminary work had provoked the young researchers to concentrate more on measurements mentioned in *Siddha* classical literatures.

KEYWORDS: *Siddha*, Standardization, Metric Measurements, *Siddha Alavugal. Alavai, Gunapadam Mooligai, Thaathu Seeva Vaguppu.*

INTRODUCTION

Siddha system of medicine was a unique system of medicine, originated from South India particularly in Tamil Nadu.^[1] The origins of Siddha system had attributed from the ancient spiritual scientist called Siddhars.^[2]

Whenever the art of medicine is loved, there is also a love of humanity. – Hippocrates

The main objective of Siddha system of medicine was to attain safety of the patient's health and hygiene life.^[3] The medicinal preparations of Siddha system of medicine was obtained from flora, fauna, metals and mineral origin.^[4]

In Siddha system of medicine, the doses were mentioned in terms of sizes of seeds, pulses etc. In ancient times due to the lack knowledge about metric measurements, the supernatural scientists *Siddhar's* fixed the dosage of medicine in the sizes of pulses, seeds, grains, cereals etc. Sometimes due to overdosing of drugs may create some

toxicity in patients due to the presence of some heavy metals in higher order siddha formulations. In current modern World in order to prevent the confusion among the Siddha physician in fixing doses of medicine in clinical trail and also to prevent the adverse effects of the medicine regarding dosage, there was a need in the field of standardization of Siddha measurements into metric measurements which was globally accepted. In this paper with the preliminary work an attempt was made to standardize the siddha measurements. This paper will provide useful information's regarding measurements in siddha medicine for Siddha students, Siddha researchers, and Siddha physicians.



Fig. 1: An Eagle View of This Paper.

MATERIALS AND METHODS

In this research the preliminary small work was made in standardising the siddha measurements into metric measures which was most commonly accepted by all over the World. The measurements mentioned in Siddha books were as Seeds, Pulses etc. These products were bought from the commercial Siddha raw drug store from R.N. Rajan country drug store, Parrys corner, Chennai and some drugs were collected from the area in around Chennai.

Identification and Authentication of the drug

The raw materials were identified by the experts of *Gunapadam*, Government Siddha Medical College, Arumbakkam, Chennai- 106.

The specimen sample of each raw material has been kept in the PG *Gunapadam* department individually for future reference. The measurements were done at the *Gunapadam* lab in Government Siddha Medical College, Arumbakkam, Chennai- 106, using Digital electronic weighing machine.

All the raw drugs were measured by using electronic machine, many sample were measured in order to get the average weight of a raw drug and average weight was noted as a standard weight. Like wise all the samples were measured and average value was noted. The results observed during the study was mentioned in the tabular column.



Fig. 2: During experimental procedure in laboratory.

Table 1: Measurements of Siddha Medicine.

| S. No | Measurements mentioned in <i>siddha</i> books | Metric measurements |
|-------|--|---------------------|
| 1. | <i>Thuthulangai Alavu (Climbing brinjal)</i> | 0.5402gm |
| 2. | <i>Sundaikaai Alavu (Solanum verbacifolium)</i> | 0.793gm |
| 3. | <i>Naavalkottai Alavu (Syzygium cuminii)</i> | 492mg |
| 4. | <i>Kundri Alavu (Jequirity Abrus precatorius)</i> | 120mg |
| 5. | <i>Thuvarai Alavu (Dholl Cajanus indicus)</i> | 0.206gm |
| 6. | <i>Kollu Alavu (Horse gram Macrotyloma uniforum)</i> | 0.350gm/350mg |
| 7. | <i>Kalarchi Alavu (Trichoderma indicum)</i> | 2.682gm |
| 8. | <i>Avarai Vithai Alavu (Dolichos lablab)</i> | 0.640gm/640mg |
| 9. | <i>Kottai Pakkalavu (Areca nut Areca catechu)</i> | 6.022gm |
| 10. | <i>Elumichai Alavu (Citrus limon)</i> | 38.45gm |
| 11. | <i>Nilakadalai Alavu (Ground nut Arachis hypogeal)</i> | 400mg |
| 12. | <i>Thetran Kottai Alavu (Clearing nut Strychnos potatorum)</i> | 0.96gm/96mg |

| | | |
|-----|---|------------|
| 13. | <i>Jadhikkai Alavu (Nut mug Myristica fragrans)</i> | 5.932gm |
| 14. | <i>Thandrikkai Alavu (Terminalia bellarica)</i> | 5.39gm |
| 15. | <i>Illanthai Kottai Alavu (Ziziphus mauritina)</i> | 780mg |
| 16. | <i>Nell Alavu (Orayza sativa)</i> | 18mg |
| 17. | <i>Kothumalli Vithai Alavu (Coriander seeds Coriandrum sativum)</i> | 0.010gm |
| 18. | <i>Milagu Alavu (Pepper-Piper nigrum)</i> | 52mg |
| 19. | <i>Kadalai Alavu (Cicer arietinum)</i> | 168mg |
| 20. | <i>Payar Alavu (Vigna radiaton)</i> | 40mg |
| 21. | <i>Paruthi Vithai Alavu</i> | 46mg |
| 22. | <i>Verugadi Alavu</i> | 1350mg |
| 23. | <i>Suraikkai Alavu (Lagenariam siceraria)</i> | 0.78kg |
| 24. | <i>Nellikai Alavu (Phyllanthus emblica)</i> | 12mg |
| 25. | <i>Kaasu Alavu</i> | 800mg |
| 26. | <i>Omam Alavu (Trachyspermum ammi)</i> | 2mg |
| 27. | <i>Ell Alavu (Sesamum indicum)</i> | 2mg |
| 28. | <i>Ulunthu Alavu (Black gram-Vigna mungo)</i> | 62mg |
| 29. | <i>Thinai (Setaria italic)</i> | 2mg |
| 30. | <i>Maangai Alavu (Mangifera indica)</i> | 198gm |
| 31. | <i>Yavvam</i> | 30.2mg |
| 32. | <i>Kadugu Alavu (Black mustard seed Brassia juncea)</i> | 5mg |
| 33. | <i>Panavedai</i> | 488mg |
| 34. | <i>Varagan Edai</i> | 4.16gm |
| 35. | <i>Mahaani Padi</i> | 85ml |
| 36. | <i>Manjaadi</i> | 260mg |
| 37. | <i>Palam</i> | 35gm |
| 38. | <i>Sombu</i> | 1300 gm |
| 39. | <i>Ounce</i> | 30ml |
| 40. | <i>Rooba Edai</i> | 12gm |
| 41. | <i>Padi Alavu</i> | 1.34litres |
| 42. | <i>Aazhakku Alavu</i> | 168ml |
| 43. | <i>Kuppi Alavu</i> | 706ml |
| 44. | <i>Kazhanju Alavu</i> | 5.12gm |
| 45. | <i>Ullakku Alavu</i> | 332ml |
| 46. | <i>Nei Karndi</i> | 4ml |
| 47. | <i>Paalaadai</i> | 30ml |
| 48. | <i>Ucchi Karandi Alavu</i> | 16ml |

DISCUSSIONS

In Siddha system of medicine dose fixation was found to be like the sizes of grains, seeds, pulses, cereals etc. That's what the Siddha physicians decided to fix the dose depends upon the patient's strength and also based on the severity of disease. However the fixation of dose was said to be much more important in clinical patients.

Various measurements was mentioned in "Gunapadam Mooligai, Thaadh Jeeva Vaguppu" as in the sizes of grains, seeds, pulses, cereals etc. So there is need to standardize the siddha measurements to metric measurements in order to avoid the confusions to the Siddha physicians in fixing dosage to the clinical patients.

The dose level became complicated in certain higher order formulations due to the presence of heavy metals. The presence of these metals may create toxicity to the patients. So it is necessity to standardize the siddha measurements.

Statement 1

In the above observed metric measurements may show some variations, as the size mentioned by the Siddhars in classical literatures. These variations were the due the new varieties with hybrid ones as years passed by, these gradual dramatically changes were seen in the hybrid products.

Statement 2

Certain weights of raw ingredients showed minor differences as mentioned in classical literature, while others showed major differences in weight. However certain weights weren't mentioned in the siddha literature, they were mentioned in the name of seeds, pulses etc, these measurements were clarified by this research work.

Statement 3

Thus an attempt was made in this article to standardize the siddha measurements in metric measurements to avoid confusions in fixing dosages. We the authors did this work with great effort for giving the accuracy. This

preliminary work will pave many useful informations for the students of 2nd year B.S.M.S, CRRRI Students, Research scholars, Siddha Physicians. This article will also provoked the new research students to focus on siddha measurements in future.

CONCLUSION

Metric measurements were essential for fixing dose for clinical and pre clinical trails. The lack standardization of these measurements made confusions in fixing dose. Thus an attempt was made by this authors in standardization of measurements mentioned in Siddha literatures to metric form. This preliminary small work paved a major resources in the field of measurements in Siddha system. This will very useful for Siddha students, physicians, researchers etc.

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