

Analytical study on *Navarathna Kalka* prepared by classical and conventional methods

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Abstract

Navarathna Kalka (NK) which is used for *Sanni*, *Athisara*, *Vamana* and other *Kaphaja* diseases is a key component in popular *Vatikaprakaranaya*. *Navarathnekalka* is said to be a painkiller in traditional and Ayurveda medical practitioners. The ingredients of NK are *Trachyspermum roxburghianum* (*Asamodagam*), *Piper longum* (*Tippili*), *Cuminum cyminum* (*Sududuru*), *Nigella sativa* (*Kaluduru*), *Ferula asafetida* (*Perunkayam*), *Glyzerrhiza glabra* (*Welmee*), *Carum carvi* (*Deuduru*), *Myristica fragrance* (*Sadikka*), *Zingiber officinale* (*Inguru*), *Vernonia anthelmintica* (*Sanninayam*), *Eugenia caryophyllata* (*Karambuneti*), *Picrorrhiza kurrooa* (*Katukarosana*), *Terminalia chebula* (*Aralu*), *Terminalia bellerica* (*Bulu*), mace of *Myristica fragrance* (*Vasawasi*), and Bee honey. After preparing, NK is recommended to be stored in a copper vessel according to the classical method. The objective of the study was to compare samples of NK prepared by conventional methods and classical method. The NK was prepared and divided in to two portions; one was stored in a sterile glass vessel whereas the other portion was stored in a copper vessel for three months. Before doing so, NK were analyzed for general quality control parameters and copper content using atomic absorption spectroscopic technique. The results revealed that initial NK sample contained total ash 2.52 ± 0.13 , acid insoluble ash 0.63 ± 0.31 , water soluble ash 1.7 ± 0.08 , and pH 4.69 ± 0.1 . There was no copper detected in original NK sample. When, the sample which was stored in the copper vessel tested for the same parameters, it was revealed that total ash 2.85 ± 0.32 , acid insoluble ash 0.29 ± 0.021 , water soluble ash 1.49 ± 0.03 , and pH 11.18 ± 0.02 . The amount of Cu was 238 mg/kg after storing in a copper vessel for 3 months. It could be concluded that the all the quality control parameters were changed after 3 months irrespective of their storing container. Moreover, Cu was added to NK when it is stored in cu vessel after 3 months. This may be the reason why NK is recommended to store in a copper vessel as per *Vatikaprakaranaya*. The further studies may be needed to justify these findings by future scholars.

Keywords: *Vatikaprakaranaya*, *Navarathnekalka*, Copper vessel, Conventional Method