

Standardization of the Poly Herbal Formulation “Palakalyana Ghrita”.

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Pala Kalyana Ghrita (PKG) is a poly herbal formula used in Ayurveda medical system to enhance fertility and immunity of both males and females. As issues related to fertility and immunity are significantly related to youth, this study, which attempted to standardize the PKG, is an important step in Ayurveda medicine. Standardization is necessary in order to assess the quality of an herbal formula. World Health Organization (WHO) has laid down guidelines for standardizing any herbal formula prior to use for patient management. As per available literature, a PKG formula has not been standardized, although it is a commonly used drug by traditional practitioners. Therefore, this study was carried out to evaluate the physiochemical properties, nutritional composition, microorganisms and possible toxic elements of the PKG formulae. All the measures were carried out according to the WHO guidelines.

Physiochemical properties tested include refractive index, total ash, and acid in soluble ash, water soluble ash, moisture content, acid value, iodine value, peroxide value and Saponification value. Carbohydrate, protein, fatty acids, vitamin and mineral composition were assessed as nutritional parameters of PKG. As per WHO guidelines, heavy metals tested, included Mercury, Lead, Cadmium and Arsenic. E coli, Coliform and staphylococcus aureus were the microorganisms tested that are recommended by the WHO.

Unsaturated fatty acids namely Palmitoleic acid (0.26%), Oleic acid (40.36%) and Linoleic acid (9.19%) were presented in PKG. Saturated fatty acids as Capric acid

(0.63%), Myristic acid (1.68%) Pentadecyclic acid (0.23%) Palmitic acid (42.25%) Margaric acid ((0.26%) and Stearic acid (4.85%) are presented in this formulation. Carbohydrate, protein and fat content of PKG is 0.40, 0.68 ± 0.004 , and 98.76 ± 0.167 respectively when expressed % weight per 100gm of PKG. Heavy metals and microbes were not present in PKG formula tested. Presence of the raw materials in the Palakalyana Ghrita was confirmed by TLC fingerprints. These parameters are essential for standardization of herbal formula.

The results of the study indicate that a property of PKG formula tested was in consistence with the composition of original formula published in the Ayurvedic Pharmacopeia and comply with WHO requirements that are essential for standardization of herbal formula. Therefore, the findings of this research can bring in pivotal changes in the field of Ayurveda.

Key words: *Herbal formulation, Palakalyana Ghrita, Physico-chemical, Standardization.*