



**Title :** Development of low cost weaning product using *Colocasia esculenta*.

**Author(s) :** Jayashree Salian, Sukhada Bhatte-Paralkar , Ashok Wadiac.

**Institution :** <sup>a</sup> Department of Foods, Nutrition and Dietetics, College of Home Science, Nirmala Niketan, <sup>b</sup> Department of Foods, Nutrition and Dietetics, College of Home Science, Nirmala Niketan/Poshan™ NLS, <sup>c</sup> Department of Microbiology, Jai Hind College.

**Email :** sukhada.bhatte@gmail.com

**Keywords :** *Colocasia esculenta*, low cost weaning foods, Malnutrition, Poi.

---

### **Introduction:**

“Poi” is a fermented dish made from *Colocasia esculenta* that is fed to the babies with problems like low birthweight, pre term babies, difficult to thrive, lactose intolerance and those with the gastro intestinal problems in the Hawaiian region. The use of *Colocasia esculenta* as weaning food is a relatively new concept for the Indian population.<sup>1, 2</sup> The aim of the present study was to develop a low cost weaning product using *Colocasia esculenta* as a source of good quality starch, carrot as a source of vitamin A and red lentils as a source of protein.

### **Methodology:**

Germination, roasting, blanching, dehydration and pressure cooking were the methods adapted to develop the product. The powders of the three ingredients obtained in the processing stage were mixed in the proportion of 2:1:1 (*C. esculenta*, carrot and red lentils) to form the product. The product was named as ‘Rootein’ because the two ingredients i.e. *Colocasia esculenta* and carrot are root vegetables whereas red lentils is rich in protein. So the ‘root’ from the *Colocasia esculenta* and carrot and the ‘ein’ from the protein of red lentils helped to name this product as ‘Rootein’. The product could be reconstituted by diluting it with water or milk. The nutritional, microbiological, and sensory evaluation was carried out to understand the acceptability of the product.

### **Result:**

The energy provided by 10g of the product was 30.9 kcal with macronutrients as 6.2 g of carbohydrate, 0.42 g of fat and 1.6 g of protein. The product provided 0.4 mg of iron and 0.74 mg of calcium. The product had good keeping quality for 3 months and perhaps can last longer but due to shortage of time, the shelf life study was concluded in 3 months. It could be packaged in 10g serving sizes and can be reconstituted either with water or milk. If higher calcium and iron is desired the product must be reconstituted with milk.

### **Conclusion:**

The product Rootein prepared from *Colocasia esculenta* could be a good low cost weaning alternative especially for the children with lactose intolerance and severe acute malnutrition.

### **References:**

- C. A. Ikpeme-Emmanuel, J. Okoi and N. C. Osuchukwu. Functional, anti-nutritional and sensory acceptability of taro and soybean based weaning food. African Journal of Food Science Vol 3.(11) pp. 372-377, November, 2009.
- Amy C. Brown, Ph.D., R.D. and Ana Valiere, M.S. The Medicinal Uses of Poi. Nutr. Clin. Care. 2004; 7(2): 69–74.