

RESEARCH ARTICLE

Chemical composition of organically produced variety of *Kulath* (*Macrotyloma uniflorum*) and incorporation into commonly consumed legume based recipes

■ Priyanka Joshi and Arti Sankhala

SUMMARY

Horse gram (*Macrotyloma uniflorum*) also known as *Kulath* in Hindi, is one of the lesser known beans of India. The whole seeds of *Kulath* are generally utilized as sprouts, or as whole meal particularly in southern Indian states. The chemical composition is comparable with more commonly cultivated legumes. The present investigation was an attempt to analyze proximate and mineral composition and antioxidant property of *Kulath*. Commonly consumed legume based recipes viz., soup, cutlets, *Cheela*, *Khichdi* and *Sev* were also prepared with previously processed *Kulath*. Results revealed that 100 g *Kulath* contained 22.4 g crude protein, 0.7 g crude fat, 3.4 g total ash, 4.8 g crude fibre, 59.4 g carbohydrates, 334 kcal energy, 173.22 mg calcium, 153.08 mg magnesium, 4.76 mg iron and 4.49 mg zinc, respectively. Protein digestibility *in-vitro* of *Kulath* was found to be 59.3 % whereas iron bioavailability was observed to be 0.18 mg/100g that pertaining to 3.8 % availability of iron in the body. Anti-nutritional factors *i.e.* tannin and phytate content of *Kulath* was found to be 0.33% and 1.3%, respectively and had a good antioxidant property (53.5%). Acceptability of recipes was assessed on 9 point hedonic scale by a group of 10 panel members. Mean scores for overall acceptability varied from 7.9 to 8.5 indicating that recipes were highly acceptable by the panel members. It can be concluded that organically produced variety of *Kulath* were found to contain all essential nutrients and thus, can be recommended for daily household consumption to contribute various nutrients.

Key Words : *Kulath*, Chemical composition, Antioxidant property, Value added products, Sensory evaluation

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