NUTRITIONAL EVALUATION OF FATTYACIDS CONTAINED IN OIL FROM PALQUI SEEDS (*Acacia feddeana* Harms*)*

Ramiro Escalera y Francisco Caba

ABSTRACT

A nutritional evaluation of the fatty acids contained in oil extracted from palqui seeds (***Acacia feddeana* Harms*)*** is presented. Palqui is a wild leguminous plant that grows in semiarid temperate regions of southern Bolivia and is traditionally consumed by local producers as cooked or toasted seeds.

The oil extracted from palqui seeds contains mainly oleic acid, 43.4%, a monounsaturated fatty acid (MUFA) and linoleic acid (LA), 35.8%. It also contains small concentrations of α-linolenic acid (ALA), 1.46%. Both polyunsaturated fatty acids (PUFA), linoleic and α-linolenic acids are essential in human diet, as precursors of the well-known ω-6 and ω-3 long chain fatty acids, respectively. Among the saturated fatty acids (SFA), which constitute the remaining 18.3%, palmitic acid (10.3%) and stearic acid (7.3%) are the main components.

The energy percentage, %E, from proteins, carbohydrates and total lipids were: 37.4%E, 34.8%E and 27.7E%, respectively. The energy percentage from total lipids is lower than that recommended by FAO/WHO: 5.08%E from SFA (< 10%E), 12.03%E from MUFA and 10.3%E from PUFA (< 11%E). Nevertheless, the energy percentage from LA is greater than the recommended maximum (9.9 > 9%E) and that coming from ALA is lower than the recommended minimum (0.4 < 0.5%E). This fact indicates that both essential fatty acids are unbalanced and that a combination in the diet is necessary with other AAL and ω-3 PUFA rich oils.

Considering this evaluation, it can be concluded that the consumption of palqui seeds and its oil are beneficial and not deleterious for human health. Thus, palqui seeds can be used by the edible oil industry.

Keywords: Palqui Seeds Oil, Fatty Acids, Nutritional Evaluation.