

EVALUATION OF QUALITY ATTRIBUTES IN COMMERCIALY AVAILABLE UNBRANDED CHILLI POWDER IN *MIHINTALE* URBAN AREA

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Chili powder, derived from the ground dried fruit of *Capsicum annuum* L., is used as a spice to add a pungent flavour to food. Unbranded sources of chili powder available in the market raise concerns regarding quality and authenticity due to potential adulterants. This study assessed the quality attributes of commercially available unbranded chili powder samples obtained from the *Mihintale* urban area. Three branded and ten unbranded chili powder samples were subjected to a comprehensive quality evaluation, each tested in triplicate. The evaluation included qualitative tests to detect added colour, starch, and brick powder, alongside quantitative tests to determine extraneous matter, degree of fineness, colour value (L^* , a^* , b^*), and heavy metals (Lead (Pb), Cadmium (Cd), Arsenic (As)) by following the established procedures outlined in SLSI, and ISO standards. According to the results, added synthetic colours and starch were detected in five and two unbranded chili samples, respectively, while brick powder was not detected in any of the samples. Further, eight unbranded chili samples contained extraneous matter, and three of them exceeded the recommended 1% m/m level. Nine samples did not meet the recommended degree of fineness (10% m/m, 500 μm sieve). Colour value comparisons indicated that the seven and two unbranded chili samples were nearly identical to the L^* (52.84 ± 0.20) and a^* (21.76 ± 0.17) values of the SLSI-certified branded chili samples. All samples complied with permissible Pb levels (2 mg kg^{-1}). However, nine unbranded samples exceeded the permitted Cd level (0.1 mg kg^{-1}), while no traces of As were found in any sample. This study highlights the need for greater vigilance regarding the quality of unbranded chili powder and emphasizes the necessity of regulatory measures to ensure consumer safety.

Keywords: Adulterations, Extraneous matters, Heavy metals