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Abstract: Crude pressed mahua seed oil obtained from a local mill was refined using chemical method by degumming, neutralization and bleaching. Degumming was done by water and acid degumming (phosphoric acid, citric acid), neutralization was done at temperature 60, 70, 80 OC and strength of alkali taken was 7, 11, 15 % and bleaching of oil was done by different bleaching agents i.e. bleaching earth, activated carbon and bleaching earth+ activated carbon. The best optimum conditions were found for degumming was phosphoric acid treatment, for neutralization it was 70 OC at 7 % alkali strength and for bleaching the better colour removal was in bleaching earth. The quality of crude and refined mahua seed oil was analysed and compared. The viscosity of crude mahua seed oil was decreased from 44.233±0.586 to 38.6±1.082 cs, iodine value 93.113±1.639 to 60.637±1.477 mg/100g, saponification value 161.707±2.168 to 149.035±2.627 mg/g after refining. Flash point of crude and refined mahua seed oil was found to be 95.333±1.414 and 174.33±4.243 oC. The colour of oil with L*, a*, b* value for crude mahua seed oil was 28.4±3.874, 1.5±0.964, 14.667±6.830 and refined mahua seed oil was 41.12±2.585, -1.267±0.306, 20.667±4.819 respectively. Reduction in phosphorus content from 27 ppm to 0 observed from crude to refined of mahua seed oil. The storage study results for up to 6 months obtained show that the moisture content, FFA, peroxide value increased from 0.0221 to 1.021%, 8.78 to 27.4 %, 7.04 to 33.792 meq peroxide/kg for crude oil and 0.0026 to 0.3598 %, 0.54 to 1.97%, 5.12 to 30.326 meq peroxide/kg for refined oil. The change in colour ΔE value increased from 2.69 to 12.35 for crude oil and for refined oil it was 2.01 to 8.81. The research results will be useful to small entrepreneurs and farmers for refining of mahua seed oil for better keeping quality and marketability.

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