

**POTENTIAL TO USE *Lawsonia inermis*
(MARATHONDHI) LEAVES AND *Emblica officinalis*
(NELLI) FRUIT EXTRACTS AS TANNIN AGENTS
FOR LEATHER MANUFACTURING**

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by

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Abstract

Presently mimosa powder is used as a tannin agent for production of vegetable tanned leathers. But this mimosa imported to sri lanaka with high cost. Here find out the potential to used locally available *Emblica officinalis* (Nelli) and *Lawsonia inermis* (Marathondi) as tannin agents for production of vegetable tanned leathers. Tanning was done using tannin solution of “Mimosa” (control),’ nelli” and “marathondi” for buffalo hide pieces with same size same area of hide. Three replicate of hide pieces were used for each treatment. This tanning process was done four weeks of time. During this period concentration of the solution in each treatment was increased gradually same amount. After tanning process fat liquoring and drying was done for resulted leathers. Then physical parameters and qualitative parameters of the leather were measured. Mean penetration rates of the Mimosa, Nelli and marathondi was respectively 0.29^a mmday^{-2} , 0.20 mmday^{-2} , 0.13 mmday^{-2} with significant different ($P < 0.05$) among values. Mean thickness reduction was respectively 0.17^a mm, 3.43 mm, 1.23 mm with significant different ($P < 0.05$) among values. Mean tensile strength was respectively 270^a Nmm^{-2} , 517.33 Nmm^{-2} , 262.33^a Nmm^{-2} with significant different ($P < 0.05$) among values. Mean yield was respectively 51.27^a %, 44.15^a %, 43.45^a %, with no significant different ($P > 0.05$) among values. When measuring qualitative parameters best appearance of the leather was “nelli” treated leather. Fullness, hardness and overall best leather were “mimosa” treated leather. According above results still mimosa is the best tannin agent but “Nelli” and “marathondi” also having potentials with some physical and qualitative parameters.