

LETTERS TO THE EDITOR

White Fatliquor Based on Coconut Oil

Coconut oil, being a saturated oil containing very small amounts of unsaturated fatty acids cannot be sulphated and used as fatliquor. Hence for white leathers like zirconium-tanned leather, sulphated fatliquor of a blend of coconut oil and castor oil was recommended; this fatliquor can mostly be considered as dispersion of raw coconut oil in sulphated castor oil since coconut oil does not, for all practical purposes, undergo sulphation. An attempt was made to modify coconut oil so that it can be sulphated for use in fatliquoring of white leathers.

Coconut oil was converted into mono/di ester by trans-esterification with a suitable polyol; the product was sulphated by the addition of sulphuric acid, salted out with brine and then neutralised with sodium hydroxide to pH 7 for use as fatliquor.

Wet zirconium-tanned skins neutralised to pH 5.5 were fatliquored with 4% of the sulphated fatliquor of mono/di ester of coconut oil. The fatliquor was fixed with 0.5% acetic acid. Next day, these leathers were slickered, dried, sammed, staked and buffed. Comparison of fatliquored charac-

teristics of these leathers with those fatliquored with the sulphated coconut + castor oil blend showed that the fatliquor of coconut oil ester imparted better lubricity and mellow feel than the fatliquor of coconut + castor oil blend; also the leathers fatliquored with the coconut oil ester are more white than those fatliquored with coconut + castor oil blend.

Better lubricity and mellowness imparted by the fatliquor of coconut oil ester are due to fineness of emulsion since sulphated ester as well as non-sulphated portion of the ester which is present in the fatliquor are emulsifiable whereas in the fatliquor of castor + coconut oil blend, only sulphated castor oil is emulsifiable; coconut oil mostly gets dispersed in it.

It is concluded that the fatliquor of coconut oil ester is good for white leathers like zirconium tanned leathers.

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REFERENCE

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