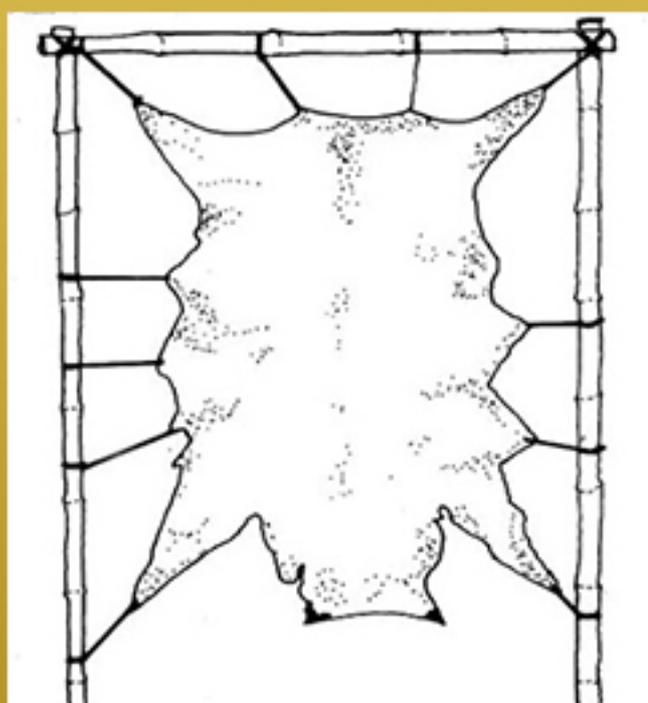


**Module Title:**  
**Skills Development Towards  
Eco-friendly Preservation of  
Hides and Skins**



**Module Endorsed by ALLPI Curriculum Review Committee**



**Africa Leather and Leather Products  
Institute (ALLPI)**

**Training Coordinator**

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**February 2018**

Module title	<b>Skills Development towards Application of Eco-friendly Preservation Techniques of Hides and Skins</b>
Module code	
Total hours	5 days
Target group	Hides and Skins Traders and
Description of module	The module targets hides and skins traders/collectors, abattoir owners, tannery and relevant workers associated with preservation and handling of preserved materials. The imparts novel techniques relevant to the hides and skins preservation and use of tradition methods proven to be eco-friendly. The cost effectiveness of various preservation techniques in relation to their ecological benefits will be discussed to enhance the participant's competence on the subject. A view of global trends and perspectives will also be elucidated to preview both the positive and negative aspects of the preservation technique explored e.g. impacts of salinity etc. The course strengthen the participants knowledge and practical base for the subject. At the end of the module it is envisaged that the participants would have built competence and improved their awareness and capability to provide guidance to all important aspects of preservation and potential impact to the environment
Learning outcomes	At the end of this learning module, the participant must be able to demonstrate a basic knowledge, skill, understanding and attitude of: <ul style="list-style-type: none"> <li>• Comprehending, identification and understanding of the different preservation and handling techniques of hides and skins;</li> <li>• Basic evaluation of hides and skins and their quality;</li> <li>• Evaluating of data related to hides and skins quality and integrity;</li> <li>• Recognizing, explaining and performing appropriate preservation and handling of preserved hides and skins;</li> <li>• Demonstrate commitment to minimize damages whilst preservation and handling of preserved hides and skins;</li> <li>• Basic record keeping;</li> <li>• Awareness creation towards impacting factors to the environment;</li> <li>• Inherent capacity to guide and manage cleaner technology adaptation and adoption process.</li> </ul>
Content	Environmental, physiological and microbiological aspects of curing. Pre, peri and post-slaughter handling of raw stock materials, Types of preservation; <ul style="list-style-type: none"> <li>• Air drying,</li> <li>• wet-salting,</li> <li>• dry salting,</li> <li>• freezing/chilling,</li> <li>• pickling,</li> <li>• mimosa cure,</li> <li>• ground drying,</li> </ul>

	<ul style="list-style-type: none"> <li>• appropriate curing salt, curing/preservation facilities</li> </ul> <p>Storage and transportation, Ecosystem preview,</p> <ul style="list-style-type: none"> <li>• impact on salinity,</li> <li>• Biological Oxygen Demand (BOD),</li> <li>• Carbon Oxygen Demand (COD),</li> </ul> <p>Total Dissolved Solids (TDS), etc</p>
<b>Teaching strategy</b>	<ul style="list-style-type: none"> <li>• Class room teaching</li> <li>• Field trips to industry</li> <li>• Assignments</li> <li>• Group work</li> <li>• Practical sessions</li> <li>• Visit industries</li> </ul>
<b>Assessment criteria</b>	<ul style="list-style-type: none"> <li>• Individual Assignment</li> <li>• Group assignment and presentation</li> <li>• Practical work</li> </ul>
<b>Assessment strategy</b>	<ul style="list-style-type: none"> <li>• Continuous assessment basis:</li> <li>• Class attendance</li> <li>• Written exams</li> <li>• Reports of assignments</li> <li>• Practical demonstration</li> </ul>
<b>Role of Trainer and Trainees</b>	<ul style="list-style-type: none"> <li>• Trainer should organize classes and field sessions, conduct lectures, give guidance to do assignments, motivate trainees to actively participate in class and field sessions.</li> <li>• Trainees should attend classes and field sessions, actively participate in class and field sessions and submit duly completed reports of assignments.</li> </ul>
<b>Teaching support and inputs</b>	<ul style="list-style-type: none"> <li>• Lecture materials (handouts, Slides, Reference books)</li> <li>• LCDs and laptops, photocopier and photocopy papers, flip charts</li> </ul>
<b>Reading materials</b>	<ul style="list-style-type: none"> <li>• FDDI Sayam Siddha Manual on Leather grading</li> <li>• Muthian PL, Ramanathan N, Nayudamma Y (1968) Biochemical studies of the skin samples obtained from different sites on various animals. Journal of American Leather Chemists Association 63: 38-47.</li> <li>• Kamini NR, Hemachander C, Geraldine J, Mala S, Puvanakrishnan R (1999) Microbial enzyme technology as an alternative to conventional chemical in leather industry. Current Science 77: 80-86. not in text</li> <li>• Sharpouse JH (1983) Leather Technician's Handbook. 2nd Edn. Leather Producers Association, London</li> <li>• <a href="http://www.nene.ac.uk">http://www.nene.ac.uk</a>; Common Fund for Commodities, Amsterdam</li> </ul>

	<ul style="list-style-type: none"> <li>• The Netherlands <a href="http://www.common-fund.org">http://www.common-fund.org</a>; Food and Agriculture Organization of the United Nations, Rome-Italy, <a href="http://www.fao.org">http://www.fao.org</a>; Leather Biz, News portal to complement World Leather magazine, <a href="http://www.leatherbiz.com">http://www.leatherbiz.com</a>; International Council of Hides, Skins and Leather Traders Associations, UK, <a href="http://www.ichslta.org">http://www.ichslta.org</a></li> <li>• International Council of Tanners, Leather Trade House, UK; <a href="mailto:sec@tannerscouncil.org">sec@tannerscouncil.org</a>; International Organization for Standardization</li> <li>• Switzerland, <a href="http://www.iso.ch">http://www.iso.ch</a>; International Union of Leather Technologists and Chemists Societies, UK., <a href="http://www.iultcs.org">http://www.iultcs.org</a>; United Nations Conference on Trade and Development, <a href="http://www.unctad.org">http://www.unctad.org</a>; United Nations Environment Programme, <a href="http://www.unep.org">http://www.unep.org</a>; United Nations Industrial Development Organization, Vienna, Austria, <a href="http://www.unido.org">http://www.unido.org</a>; prototype materials, tools, and guidelines</li> </ul>
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