

Title	Demonstrate knowledge of chemistry used in leather manufacture		
Level	4	Credits	12

Purpose	<p>This unit standard is for experienced people wishing to develop their technical skills in leather manufacture.</p> <p>People credited with this unit standard are able to demonstrate knowledge of: matter relevant to leather manufacture; organic compounds relevant to leather manufacture; chemical structures of skin and hair/wool; and the potential hazards associated with use of leather manufacturing chemicals.</p>
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Classification	Fellmongery and Leather Processing > Leather Processing Knowledge
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Available grade	Achieved
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Explanatory notes

Legislation relevant to this unit standard includes but is not limited to – Health and Safety in Employment Act 1992, Resource Management Act 1991.

Outcomes and evidence requirements

Outcome 1

Demonstrate knowledge of matter relevant to leather manufacture.

Evidence requirements

1.1 Matter is explained in terms of states and classes.

Range evidence of three of the following classes with a solid, liquid and gas state for each is required including – elements, compounds, mixtures, metals, non-metals.

1.2 Matter is explained in terms of properties.

Range evidence of two of the following properties is required including - mass, weight, volume, density, specific gravity.

1.3 Chemical bonding is explained in terms of bond types.

Range includes but is not limited to – ionic, covalent, hydrogen.

1.4 Acids, bases, and salts are explained in terms of dissociation and composition.

Range dissociation and composition include but are not limited to – H, OH, and acid base reactions.

Outcome 2

Demonstrate knowledge of organic compounds relevant to leather manufacture.

Evidence requirements

2.1 Organic compounds associated with the leather manufacturing process are explained in terms of their structures and functional groups.

Range evidence is required of three of the following – alcohols, carboxylic acids, esters, soaps, fats and oils, amines, amides.

2.2 A detergent is described in terms of its structure and activity as a modifier of fat or grease behaviour in aqueous systems.

Range structure includes but is not limited to – carboxylic acids, amines, fats/oils.

Outcome 3

Demonstrate knowledge of the chemical structures of skin and hair/wool.

Evidence requirements

3.1 Skin and hair/wool are outlined in terms of the key chemical structures that react with tannery chemicals and tanning agents.

Outcome 4

Demonstrate knowledge of the potential hazards associated with the use of leather manufacturing chemicals.

Evidence requirements

4.1 Types of potential hazards associated with tannery chemicals are identified and described.

Range potential hazards include but are not limited to – acid burn, alkali burn, sulphide, and one of solvent, dermatitis, enzyme dust.

4.2 Personal protective clothing is identified and described in terms of preventing harm or injury from tannery chemicals.

Planned review date	31 December 2017
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Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	24 September 1996	31 December 2013
Revision	2	16 September 1997	31 December 2013
Review	3	27 April 2000	31 December 2013
Revision	4	20 February 2002	31 December 2013
Revision	5	14 October 2004	31 December 2013
Review	6	14 December 2007	31 December 2015
Review	7	21 February 2013	N/A

Consent and Moderation Requirements (CMR) reference	0033
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This CMR can be accessed at <http://www.nzqa.govt.nz/framework/search/index.do>.

Please note

Providers must be granted consent to assess against standards (accredited) by NZQA, before they can report credits from assessment against unit standards or deliver courses of study leading to that assessment.

Industry Training Organisations must be granted consent to assess against standards by NZQA before they can register credits from assessment against unit standards.

Providers and Industry Training Organisations, which have been granted consent and which are assessing against unit standards must engage with the moderation system that applies to those standards.

Requirements for consent to assess and an outline of the moderation system that applies to this standard are outlined in the Consent and Moderation Requirements (CMR). The CMR also includes useful information about special requirements for organisations wishing to develop education and training programmes, such as minimum qualifications for tutors and assessors, and special resource requirements.

Comments on this unit standard

Please contact the Primary Industry Training Organisation standards@primaryito.ac.nz if you wish to suggest changes to the content of this unit standard.