



# Preservation Microfilming— Learning Guide

## TRAINING *in* PRESERVATION MICROFILMING



# Preservation Microfilming— Learning Guide

Heather Brown

National Library of Australia  
2003



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Canberra ACT 2600

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1. Preservation microfilming - Australia - Handbooks, manuals, etc. 2. Preservation microfilming - Australia - Problems, exercises, etc. 3. Preservation microfilming - Asia - Handbooks, manuals, etc. 4. Preservation microfilming - Asia - Problems, exercises, etc. 5. Preservation microfilming - Pacific Area - Handbooks, manuals, etc. 6. Preservation microfilming - Pacific Area - Problems, exercises, etc. I. Title.

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# Introduction

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This learning guide is an introduction to the training materials on preservation microfilming. It provides brief information about the contents of the training materials. It will also help to guide you in using the training materials to develop your skills, knowledge and experience in preservation microfilming.

The aim of preservation microfilming is to preserve national and international heritage for the benefit of current and future generations. It is therefore important that preservation microfilming staff have the relevant skills, knowledge and experience to be able to carry out this work to the highest level.

Recently, the need for formal training in preservation microfilming has been recognised in Australia with the endorsement of a nationally-accredited training award (*Certificate IV in Preservation Microfilming*). While the Australian course has provided a framework for these training materials, they have also been written to help meet the training needs of microfilming staff which have been identified in a recent IFLA\* survey of microfilming organisations in the Asian-Pacific region.

(\*International Federation of Library Associations and Institutions. IFLA-PAC Preservation Microfilming Training Needs Survey 2001.)

## Flexibility

In response to the training needs survey, these training materials have been designed to be used flexibly in one or more of the following ways:

- by individuals who wish to enhance their microfilming knowledge and skills
- by organisations that want to train their preservation microfilming staff
- as part of a formal course, facilitated by a lecturer, and with a formal assessor
- informally, according to needs and interests
- in the workplace, in conjunction with existing microfilming equipment
- to recognise the existing competencies (skills) of microfilming staff (see **Recognition of current competencies** below)
- by users who have access to the internet, as well as by those who do not.

If you are interested in studying a formal Preservation Microfilming course, please contact staff at Preservation Services, The National Library of Australia, Canberra 2600, Australia. Staff members will refer you to a relevant training organisation.

## Recognition of current competencies (RCC)

You may already have microfilming knowledge, experience and skills which are relevant. If you wish to formally study the Preservation Microfilming course, you may not have to study all of it.

The process of recognising previous experience and competencies (RCC) will need to be discussed with the course coordinator, or lecturer. Evidence of your microfilming competence and/or an assessment, such as a practical test, will be required.

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# The modules

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The training materials consist of ten units or modules:

1. Preservation Microfilming—Basics
2. Preservation of Materials
3. Preparation for Microfilming
4. Maintaining Microfilming Equipment
5. Operating Microfilming Equipment—Cameras
6. Jacketing and Splicing Microfilm
7. Processing and Duplicating Microforms
8. Microform Quality Control Inspection
9. Physical Management and Storage of Microforms
10. Project Management for Preservation Microfilming.

Each module is divided into topics, and has its own contents pages and individual index to guide you through the various topics. A more detailed summary of the contents (topics) of each module is given in the following table.

A **Log book**, **Glossary and combined index**, the **Learning Guide** and a number of charts and practical resources also accompany the training materials.

## The Australian curriculum

To make these training materials easier to use, some of the terms used in the original Australian curriculum have been simplified and re-ordered. The changes in syntax and order have been made without adding to or subtracting from the units of competency.

In addition to the 10 modules above, the Australian curriculum for the *Certificate IV in Preservation Microfilming* includes three 'generic' modules:

- Work Team Communication
- Dealing with Conflict
- Occupational Health Safety and Welfare—Generic Fundamentals (B).

These modules can be studied through certain Registered Training Providers across Australia which include some TAFE (Technical and Further Education) institutes as well as private training organisations.

Check the National Training Information Service (**NTIS**) website (<http://www.ntis.gov.au>) for further information on the *Certificate IV in Preservation Microfilming* (Code 40011SA) and on Registered Training Providers. Further information can also be obtained from **ANTA**, the Australian National Training Authority (<http://www.anta.gov.au>)

## Summary of contents

Module no.	Title	Contents (topics)
1	Preservation Microfilming—Basics	<ul style="list-style-type: none"> <li>• value of microfilm as a preservation reformatting option</li> <li>• working with cultural institutions</li> <li>• selection of material for filming and copyright</li> <li>• common microfilming terms</li> <li>• standards and specifications</li> <li>• microfilm as a platform for digitisation</li> </ul>
2	Preservation of Materials	<ul style="list-style-type: none"> <li>• the nature of materials with particular emphasis on paper</li> <li>• environmental factors and potential enemies which could damage materials</li> <li>• a disaster management and recovery program</li> </ul>
3	Preparation for Microfilming	<ul style="list-style-type: none"> <li>• proper handling methods for original materials</li> <li>• physical preparation of materials for microfilming</li> <li>• maintaining adequate stock records</li> <li>• choosing an appropriate format</li> <li>• preparing materials for microfilming to meet standard bibliographic requirements</li> <li>• following established procedures to ensure that copyright legislation is not breached during preservation microfilming projects</li> </ul>
4	Maintaining Microfilming Equipment	<ul style="list-style-type: none"> <li>• monitoring of equipment use and maintenance requirements</li> <li>• trouble-shooting to identify equipment problems</li> <li>• equipment suppliers and criteria for evaluating equipment</li> </ul>
5	Operating Microfilming Equipment: Cameras	<ul style="list-style-type: none"> <li>• camera types, reduction ratios, images per frame and image orientation</li> <li>• operating a microfilm camera</li> <li>• common camera problems</li> </ul>
6	Jacketing and Splicing Microfilm	<ul style="list-style-type: none"> <li>• operating jacketing equipment</li> <li>• routine maintenance</li> <li>• splicing and filming retakes</li> </ul>
7	Processing and Duplicating Microforms	<ul style="list-style-type: none"> <li>• processing to preservation standards</li> <li>• loading and operating processors</li> <li>• maintaining processing conditions</li> <li>• correct handling procedures</li> <li>• loading and operating duplicators</li> </ul>
8	Microform Quality Control Inspection	<ul style="list-style-type: none"> <li>• general inspections of microforms—packaging and correct winding</li> <li>• technical inspections of microfilm</li> <li>• visual inspections of microfilm</li> <li>• records for quality control</li> <li>• causes of defects in microforms, prevention and follow up actions</li> <li>• lists of microforms</li> </ul>

Module no.	Title	Contents (topics)
9	Physical Management and Storage of Microforms	<ul style="list-style-type: none"><li>• the nature of microfilm</li><li>• storage of microforms to prevent or reduce environmental damage</li><li>• returning original items after filming and checking</li><li>• management of existing microform collections, surveys and disaster recovery</li></ul>
10	Project Management for Preservation Microfilming	<ul style="list-style-type: none"><li>• planning a project: goals, timetable, identifying resources and costs</li><li>• promoting and evaluating a project</li></ul>

## Sequence of the modules

### A logical sequence

The modules have been designed to follow a logical sequence from the introductory unit, **Preservation Microfilming—Basics**, through to the advanced module of **Project Management**. A simple pathway through the materials is to begin with module one and work your way through to module ten.

### A flexible sequence

However, if you are interested in just one or two areas, you may find that another pathway is more suitable for your existing knowledge and skills, and your current needs.

If you wish to take a more flexible approach, you should note the introductory comments in each module under **Prerequisites**, together with any other suggestions about related modules. These will help your understanding of the context of each module.

### Essential modules

Before you start on a new module you need to have satisfactorily completed the Prerequisite modules as a foundation.

### Suggested modules

Comments about related modules are suggestions only.

The table below gives a summary of sequence of the ten modules, their Prerequisites (**P**) and suggestions for related modules (**S**). The pattern shows how the later modules logically build on the foundation of knowledge from earlier modules.

As an example, to do module seven, **Processing and Duplicating Microforms**, you need to have completed module one as a prerequisite. It would also be helpful to do the related modules three, four and five.



## Sequence of modules

On the right hand side module numbers are identified as Prerequisites (P) or Suggestions (S) for related modules

Module no.	Title	1	2	3	4	5	6	7	8	9	10
1	Preservation Microfilming—Basics										
2	Preservation of Materials	S									
3	Preparation for Microfilming	P									
4	Maintaining Microfilming Equipment	P									
5	Operating Microfilming Equipment—Cameras	P		S	S						
6	Jacketing and Splicing Microfilm	P		S	S	S					
7	Processing and Duplicating Microforms	P		S	S	S					
8	Microform Quality Control Inspection	P	P	S	S	S	S	S			
9	Physical Management and Storage of Microforms	P	P	S	S	S	S	S	S		
10	Project Management for Preservation Microfilming	P	S	S	S	S	S	S	S	S	

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# Assessment

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Each module has its own **learning outcomes** listed at the beginning. The learning outcomes are the foundations of the training materials. They explain what you will learn and be able to do when you have successfully completed the module. In competency-based training courses, the **learning outcomes** closely relate to the term ‘**elements of competency**’.

If you are formally studying the Preservation Microfilming course you must meet the **performance criteria** listed at the beginning and end of each topic in order to demonstrate your competency in each module. These performance criteria form the basis of your assessment.

## Activities

There are two types of learning activities in each of the modules.

### ■ Activity

Responses to these activities are written in each book. They are usually short tasks which keep you involved with the issues you are considering and may also require you to apply what you are learning.

Some of the activities require you to perform tasks such as loading a camera or operating a processor. Major activities are marked with the symbol ★.

Your lecturer will appoint a **formal assessor** when you start the course. In a number of cases the assessor may be a supervisor, a manager, a mentor, or a lecturer. The assessor will observe you performing the tasks and then examine the results or the product (e.g. the newly processed microfilm) to check that it meets requirements.

### ● Reflect

Here you will be asked to think about key issues, usually in consultation with workplace colleagues, and come to some conclusions. The purpose of these activities is to allow you to share your understanding with others, and benefit from wider experience than your own.

You will need to be prepared to discuss your findings or conclusions with your assessor or lecturer who will be signing off the relevant **performance criteria**.

## Within each module

As you work your way through the modules of these training materials, you will need to:

- I work through the checklist of the **performance criteria** at the end of each module
- I contact your mentor or lecturer if you have difficulty in any areas
- I complete all the learning **activities** and arrange for your assessor to:
  - check your responses to each **activity** which you have completed
  - observe and sign off any **major activities**, marked ★.

The **Submit** icon will remind you to do this.

Your assessor may ask you additional questions, or ask you to perform other tasks, to confirm that you can meet the performance criteria.

### The Log book

In addition to checking your work in the module itself, your assessor will also need to:

- I sign off on the relevant performance criteria and learning activities when satisfied that you are competent (see **Recording information** below)
- I sign off the **Summary record** for each module
- I clearly indicate any areas in which you are not yet competent, and what you need to do to achieve competency
- I arrange for you to be reassessed in any areas where you are not yet competent.

If you are in any doubt about assessment for these training materials or about how the **Log book** works, check with your lecturer or the person who is your formal assessor.

### Mentors

There are a number of people in the region who have indicated that they are prepared to be mentors to those who are using these training materials. The **List of Organisations in the Asian-Pacific Region** below includes reference to organisations with staff who are willing to act as mentors (**M**).

Ultimately, as knowledge and experience are shared, it will enhance the microfilming programs in the region so that national and international heritage is preserved to the highest level.

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# Resources

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**There are a number of resources available on preservation microfilming. Each module lists an extensive range of printed and internet resources which will develop your understanding of the topics. A librarian can help you find out where these resources are available.**

## Useful contacts

(As internet sites change frequently, you may need to use a search engine to identify the latest location)

AICCM (Australian Institute for the Conservation of Cultural Material Inc.), <<http://www.aiccm.org.au>>, accessed 15 May 2003.  
Address: GPO Box 1638, Canberra ACT 2601, Australia.

AIIM (Association for Information and Image Management), <<http://www.aiim.org>>, accessed 4 May 2003, and its sub group the Film-based Imaging Association, <<http://www.fbi.aiim.wegov2.com>>, accessed 14 May 2003. The film-based imaging association has a buyers guide of U.S. manufacturers and distributors of micrographic equipment and supplies.  
Address: 1100 Wayne Avenue, Suite 1100, Silver Spring MD 20910 USA

ANSI (American National Standards Institute) <<http://www.ansi.org>> accessed 15 May 2003.  
ANSI administers and coordinates the U.S. standardisation system. Address: Customer Service, American National Standards Institute, 25 West 43rd Street, New York, NY 10036.

ANTA (Australian National Training Authority) is a Commonwealth statutory authority which provides a national focus for vocational education and training (VET).  
Address: ANTA (Melbourne Office), GPO Box 5347BB, Melbourne. Victoria 3001, Australia.  
<<http://www.anta.gov.au>>, accessed 15 May 2003.  
See also NTIS.

Artlab Australia, <<http://www.artlab.sa.gov.au>>, accessed 3 May 2003.  
(Artlab provides a range of conservation and preservation information and services.)  
Address: Artlab Australia, 70 Kintore Avenue, Adelaide South Australia 5000, Australia.

BSI Group (British Standards Institution), <<http://www.bsi-global.com>>, accessed 13 May 2003.  
The source of information and supply of British microfilming standards.  
BSI Group 389 Chiswick High Road, London, W4 4AL, UK.

CLIR (Council on Library and Information Resources), <<http://www.clir.org>>, accessed 3 May 2003.  
Address: 1755 Massachusetts Avenue, NW, Suite 500 Washington DC 20036, USA

COOL (Conservation Online), <<http://palimpsest.stanford.edu/>>, accessed 14 May 2003.  
Hosted by Stanford University, USA, this is a comprehensive source for online information for preservation in libraries and archives.

ECPA (European Commission on Preservation and Access), <<http://www.knaw.nl/ecpa/expo.htm>>, accessed 3 May 2003.  
Hosts GRIP – which is a Gateway for Resources and Information on Preservation.  
Address: Royal Netherlands Academy of Arts and Sciences, Kloveniersburgwal 29, P.O. Box 19121 NL-1000 GC Amsterdam, The Netherlands.

G.G. Baker and Associates, <<http://www.ggbaker.com/>>, accessed 15 May 2003.  
This organisation provides detailed advice about micrographic systems. The web site includes links to suppliers and also provides background information about areas of microfilming from jacketing to linking with electronic document management systems.  
Address: Saffron Hill, Chedworth, Glos. GL54 4AL UK.

IFLA (International Federation of Library Associations and Institutions) Preservation and Conservation (PAC) Core Programme, <<http://www.ifla.org/VI/4/admin/general.htm#1>>, accessed 15 May 2003.  
IFLA-PAC Bibliotheque Nationale de France,  
Address: 2, rue Vivienne, 75084 Paris Cedex 02, France.  
• See also *Principles for the care and handling of library material*, <<http://www.ifla.org/VI/4/news/pchlm.pdf>>, accessed 15 May 2003.  
• A number of back issues of *International Preservation News* are available direct from the IFLA website, <<http://www.ifla.org/VI/4/pac.htm#4>>, accessed 15 May 2003.  
• The IFLA-PAC Centre at the National Library of Australia maintains a *Documentary Heritage Preservation Register*. This provides information about preservation projects in the Southeast Asian and Pacific regions such as microfilming, training, basic conservation and collection surveys, <<http://www.nla.gov.au/dhpr/>>, accessed 15 May 2003.

IPI (Image Permanence Institute) <<http://www.rit.edu/~661www1/>>, accessed 15 May 2003. The IPI is a university-based research laboratory devoted to image preservation.  
Address: Rochester Institute of Technology, 70 Lomb Memorial Drive Rochester NY 14623-5064, USA.

ISO (International Organisation for Standardisation), <<http://www.iso.ch/>>, accessed 15 May 2003 .  
Address: ISO Central Secretariat PO Box 56 CH-1211 GENF Switzerland.

The Microfilm Shop, <<http://www.microfilm.com/>>, accessed 15 May 2003.  
Provides product information, news and views with a focus on business applications.

MICROLINK-L is an email discussion list on preservation microfilming jointly owned by the National Library of Australia and the State Library of South Australia, <[http://www.nla.gov.au/nla/listserv/microlink\\_l.html](http://www.nla.gov.au/nla/listserv/microlink_l.html)>, accessed 15 May 2003.

Museums Australia, <<http://amol.org.au/>>, accessed 15 May 2003.  
Address: PO Box K36 Haymarket NSW 1238.  
(The resource *ReCollections* is also available online from the Museums Australia website, <<http://amol.org.au/reollections/>>, accessed 15 May 2003.)

National Library of Australia <<http://www.nla.gov.au/>>, accessed 15 May 2003.  
Address: Canberra, ACT 2600, Australia  
National Library of Australia. *Policy on Preservation Copying of Collection Materials*, <<http://www.nla.gov.au/policy/micro.html>>, accessed 15 May 2003.  
National Library of Australia. Anica – Australian Network for Information on Cellulose Acetate, <<http://www.nla.gov.au/anica/index.html>>, accessed 15 May 2003.  
See also MICROLINK-L <[http://www.nla.gov.au/nla/listserv/microlink\\_l.html](http://www.nla.gov.au/nla/listserv/microlink_l.html)>, accessed 15 May 2003, and IFLA-PAC *Documentary Heritage Preservation Register* <<http://www.nla.gov.au/dhpr/>> accessed 15 May 2003.

The National Preservation Office (UK).  
Address: British Library, 96 Euston Road London, NW1 2DB, UK <<http://www.bl.uk/services/preservation/>>, accessed 15 May 2003.

NEDCC (North East Document Conservation Center), <<http://www.nedcc.org/>>, accessed 15 May 2003. A U.S. site with a list of other internet resources about preservation. A number of their publications are available online.

NSSN: a National Resource for Global Standards, <<http://www.nssn.org>>, accessed 15 May 2003.  
Provides a fee-based information service which includes international standards and technical data. Address: Customer Service, American National Standards Institute, 25 West 43rd Street, New York, NY 10036.

NTIS, the Australian National Training Information Service is a database on vocational education and training in Australia. It contains detailed information on courses, qualifications, training packages, competency standards and training organisations. <<http://www.ntis.gov.au/>>, accessed 15 May 2003. See also ANTA.

PAMBU (Pacific Manuscripts Bureau), <<http://rspas.anu.edu.au/pambu/>>, accessed 15 May 2003. Based in the Research School of Pacific and Asian Studies, Australian National University, the aim of the Pacific Manuscripts Bureau is to locate and preserve archives, manuscripts and other unpublished or semi-published material through microfilm.  
Address: PAMBU, Research School of Pacific and Asian Studies, Australian National University, Canberra, ACT, 0200, Australia.

Preservation Resources is a division of OCLC. (Online Computer Library Center Inc.), <<http://www.oclc.org/oclc/presres/microfilm.htm>>, accessed 15 May 2003.  
It offers services such as preservation microfilming to libraries, including duplicating, scanning and polysulfide treatment.

*RLG DigiNews* is a newsletter conceived by the members of the Research Libraries Group's PRESERV community. Funded in part by the Council on Library and Information Resources (CLIR) from 1998–2000, it is available internationally via the RLG PRESERV web site, <<http://www.rlg.org/preserv/>>, accessed 15 May 2003.  
Address: Research Libraries Group 1200 Villa Street Mountain View, CA 94041-1100 USA.

SEACAP (Southeast Asian Consortium for Access and Preservation), <<http://www.seacap.chiangmai.ac.th>>, accessed 14 May 2003.  
The aim of SEACAP is to encourage and support collaboration amongst libraries, archives and other institutions and interested individuals in order to preserve and provide access to the published and documentary heritage of the region.

Spring Singapore, <<http://www.psb.gov.sg>>, accessed 15 May 2003.  
The source for information and supply of Singapore Codes of Practice relating to microfilming.  
PSB Building, 2 Bukit Merah Central, Singapore 159835.

Standards Australia, <<http://www.standards.com.au>>, accessed 14 May 2003. Address: GPO Box 5420 Sydney NSW 2001, Australia.

UNESCO *Memory of the World Programme*, <<http://whc.unesco.org/nwhc/pages/home/pages/homepage.htm>>, accessed 15 May 2003.

## Libraries and organisations in the Asian-Pacific region

A number of libraries and organisations from the Asian-Pacific region are listed below.

- I Many of these organisations have microfilming centres or units. **(C)**
- I Some organisations have staff who are trained in microfilming, but may not necessarily have a microfilming centre. **(T)**
- I A few organisations are training centres, conducting training for others. **(TrC)**
- I Some have staff who are willing to act as mentors. **(M)**

You will need to contact the organisation direct to find out what the mentor is able to do. In a number of cases, mentors will only be able to give basic advice or will only be able to give advice to staff within their own organisation.

This information is summarised in the table below. It has been obtained from the 2001 IFLA survey of microfilming organisations in the Asian-Pacific region.

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### Country/Organisation

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#### American Samoa

Department of Administrative Services  
 American Samoan Office of Archives and Records Management  
 Government of American Samoa  
 Pago Pago AS96799 **C M**

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#### Australia

National Library of Australia  
 Canberra, ACT 2600. **T**  
 Pacific Manuscripts Bureau (PAMBU)  
 Research School of Pacific and Asian Studies,  
 Australian National University, Canberra, ACT 0200. **C M**  
 W & F Pascoe Pty Ltd  
 7 Hayes St. Balgowlah  
 NSW 2093 **C M**

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#### Bangladesh

Directorate of Archives and Libraries  
 National Library Building  
 Sher-E-Bangla Nagar  
 Agargoan  
 Dhaka - 1207

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#### Brunei

Universiti Brunei  
 Darussalam Library  
 Tungku Link Road  
 Bandar Seri Begawan  
 BE14 1C  
 Brunei Darussalam **C M**  
 Brunei Museum Department  
 National Archives of Brunei Darussalam  
 Jalan Kota Batu  
 Bandar Seri Begawan  
 Brunei Darussalam 2018

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### Country/Organisation

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#### Cambodia

National Library of Cambodia  
 Street 92  
 Daun Penh District  
 Phnom Penh, Cambodia  
 National Archives of Cambodia  
 PO Box 1109, Phnom Penh  
 Cambodia **C M**  
 Documentation Centre of Cambodia  
 PO Box 1110  
 Phnom Penh, Cambodia **C**

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#### China *see* People's Republic of China

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#### Cook Islands

Cook Islands National Library and Archives  
 Ministry of Cultural Development  
 PO Box 8, Avarua

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#### Democratic People's Republic of Korea

The Grand People's Study House  
 POB 200, Pyongyang

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#### Federated States of Micronesia

Federated States of Micronesia Archives and Historic Preservation  
 PO Box PS 70  
 Palikir  
 Pohnpei FM 96941 **C M**  
 Yap State National Archives  
 PO Box 610 Colonia Yap State  
 96943 **C**

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## **Fiji**

Suva City Council Library  
PO Box 176, Suva **CT**  
University of the South Pacific Library  
GPO Suva **CTM**  
National Archives of Fiji  
PO Box 2125  
Government Building  
Suva **CTM**

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## **Hong Kong**

(People's Republic of China)  
Hong Kong Central Library  
10/F 66 Causeway Road  
Causeway Bay  
Hong Kong **C**

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## **India**

National Library of India  
Belvedere, Calcutta 700027 **CM**  
National Archives of India  
Janpath, New Delhi **CTMTrC**  
Indira Gandhi National Centre for Arts,  
144 Aslad Vil., New Delhi **M**  
INTACH ICI  
Orissa Art Conservation Centre  
State Museum Premises  
Bhubaneswar, Orissa 751014 **CTMTrC**  
Nehru Museum  
Indian Institute of Technology  
Kharagpur, Delhi **C**

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## **Indonesia**

Perpustakaan Nasional RI  
Jalan Salemba Raya 28 A  
PO Box 3624, Jakarta 16002  
Arsip Nasional Indonesia  
Janlan Ampera Raya  
Cilandah Timur, Jakarta 12560

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## **Japan**

National Diet Library  
Preservation Planning Office,  
10-1, Nagatacho 1 Chome,  
Chiyoda-ku, Tokyo 100

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## **Kiribati**

National Library and Archives  
PO Box 6  
Bairiki Tarawa **CM**

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## **Korea** *see*

- 1) **Democratic People's Republic of Korea**
  - 2) **Republic of Korea**
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## **Laos**

Ministry of Information and Culture  
National Library of Laos  
PO Box No 122  
Vientiane **C**

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## **Malaysia**

National Library of Malaysia  
232 Jalan Tun Razak  
Kuala Lumpur 50572 **CT**  
National Archives of Malaysia  
Jalan Duta  
Kuala Lumpur 50568 **TrC**

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## **Marshall Islands**

Adele Museum and Library  
PO Box 629  
Majuro 96960

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## **Micronesia** *see* **Federated States of Micronesia**

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## **Myanmar**

Ministry of Planning and Finance  
National Archives Department  
114 Pyidaugsu Yeiktha Road  
Yangon **CM**  
Universities Historical Research Centre  
Yangon University Campus  
Yangon **CT**

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## **Nepal**

Ramsaha Path  
Kathmandu  
National Library  
Pulchowk,  
Lalitpur

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## **New Caledonia**

Secretariat of the Pacific Community Library  
BP D5, 998848  
Noumea Cedex **M**  
Service des Archives de Nouvelle Caledonia  
159 Avenue James Cook,  
Nouvelle  
BP 525- 98845, Noumea **M**

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## **New Zealand**

National Library of New Zealand  
PO Box 1467, Wellington 1 **C**

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## **Pakistan**

National Archives of Pakistan  
N Block  
Pakistan Secretariat, Islamabad **CM**  
National Library of Pakistan  
Constitution Avenue  
POB 1982, Islamabad **CM**

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**Papua New Guinea**

PNG Office of Libraries & Archives  
National Archives & Public Records Service of PNG, PO Box 734,  
Waigani NCD **C**

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**People's Republic of China**

China Microfilming Center for Library Resources  
National Library of China  
39 Baishiqiao Road  
Beijing 100081 **C T M TrC**

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**Philippines**

National Library of the Philippines  
TM Kalaw Street  
PO Box 2926  
Ermita Manila 1000  
Records Management and Archives Office  
TNL Building  
TM Kalaw Street  
Ermita Manila 1000 **C M**

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**Republic of China (Taiwan)**

National Central Library  
20 Chungshan S. Road  
Taipei 10040

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**Singapore**

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31 Trang Thi Street  
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Bandinh, Hanoi **M**

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# Useful tables

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## Table of temperature comparisons

Source: *Whitaker's Almanac 2001*

Celsius	Fahrenheit	Celsius	Fahrenheit	Celsius	Fahrenheit
50	122	25	77	0	32
49	120.2	24	75.2	-1	30.2
48	118.4	23	73.4	-2	28.4
47	116.6	22	71.6	-3	26.6
46	114.8	21	69.8	-4	24.8
45	113	20	68	-5	23
44	111.2	19	66.2	-6	21.2
43	109.4	18	64.4	-7	19.4
42	107.6	19	62.6	-8	17.6
41	105.8	16	60.8	-9	15.8
40	104	15	59	-10	14
39	102.2	14	57.2	-11	12.2
38	100.4	13	55.4	-12	10.4
37	98.6	12	53.6	-13	8.6
36	96.8	11	51.8	-14	6.8
35	95	10	50	-15	5
34	93.2	9	48.2	-16	3.2
33	91.4	8	46.4	-17	1.4
32	89.6	7	44.6	-18	0.4
31	87.8	6	42.8	-19	-2.2
30	86	5	41	-20	-4
29	84.2	4	39.2	-21	-5.8
28	82.4	3	37.4	-22	-7.6
27	80.6	2	35.6	-23	-9.3
26	78.8	1	33.8	-24	-11.2

## Table of paper sizes

The table of paper sizes is based on ISO (International Organisation for Standardisation) recommendations (adapted from *Whitaker's Almanac 2001* and 1981). The dimensions are for the trimmed or finished size.

Symbol	Size	
	mm	inches
A0	841 x 1189	33.11 x 46.81
A1	594 x 841	23.39 x 33.11
A2	420 x 594	16.54 x 23.39
A3	297 x 420	11.69 x 16.54
A4	210 x 297	8.27 x 11.69
A5	148 x 210	5.83 x 8.27

## Conversion table for measures

The central figures in heavy type represents either of the two columns beside them.

For example:

1 centimetre = 0.394 inches and 1 inch = 2.54 centimetres

1 metre = 1.094 yards and 1 yard = 0.914 metres,

1 kilometre = 0.621 miles and 1 mile = 1.609 kilometres.

Source: *Whitaker's Almanac*.

Centimetres	Inches	Metres	Yards	Kilometres	Miles			
2.54	1	0.394	0.914	1	1.094	1.609	1	0.621
5.08	2	0.787	1.829	2	2.187	3.219	2	1.243
7.62	3	1.181	2.743	3	3.281	4.828	3	1.864
10.16	4	1.575	3.658	4	4.374	6.437	4	2.485
12.7	5	1.969	4.572	5	5.468	8.047	5	3.107
15.24	6	2.362	5.486	6	6.562	9.656	6	3.728
17.78	7	2.756	6.401	7	7.655	11.265	7	4.35
20.32	8	3.15	7.315	8	8.749	12.875	8	4.971
22.86	9	3.543	8.230	9	9.843	14.484	9	5.592
25.4	10	3.937	9.144	10	10.936	16.093	10	6.214
50.8	20	7.874	18.288	20	21.872	32.187	20	12.427
76.2	30	11.811	27.432	30	32.808	42.28	30	18.641
101.6	40	15.748	36.576	40	43.745	64.374	40	24.855
127	50	19.685	45.720	50	54.681	80.467	50	31.069
152.4	60	23.622	54.864	60	65.617	96.561	60	37.282
177.8	70	27.559	64.008	70	76.553	112.564	70	43.496
203.2	80	31.496	73.152	80	87.489	128.748	80	49.71
228.6	90	35.433	82.296	90	98.425	144.841	90	55.923
254	100	39.37	91.44	100	109.361	160.943	100	62.137

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# International microform standards

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The following is a selected list of international microform standards. As these are continually being updated and revised, you will need to check with the organisations listed below for the latest versions.

## Australian standards

The following is a selected list of Australian microform standards. Further information about new and revised Australian microform standards can be obtained from Standards Australia, <<http://www.standards.com.au/>>, accessed 14 May 2003.

Number	Date	Title	Comments
AS 1203.1	1996	Microfilming of engineering documents. Operating procedures.	identical with ISO 3272.1 1983
AS 1203.2	1996	Microfilming of engineering documents. Quality criteria and control.	identical with ISO 3272.2 1994
AS 1203.3	1996	Microfilming of engineering documents. Unitised 35mm microfilm carriers.	identical with ISO 3272.3 1975
AS 1203.4	1996	Microfilming of engineering documents. Microfilming of drawings of special and exceptional elongated sizes.	identical with ISO 3272.4 1994
AS 1717	1975	Unitised microfilm carriers 35mm.	
AS 1998	1977	A6 microfiche for engineering and other data (excluding computer output microfiche).	
AS 2422	1981	Glossary of micrographics terms.	
AS 2840	1986	Microfilming newspapers for archival purposes.	
AS 3674	1989	Storage of microfilm.	
MP25	2002	Basic guide to microfilming.	
AS/NZS 4577	1999	Micrographics—Readers for transparent microforms— performance characteristics.	
AS/NZS 4578	1999	Micrographics—Readers for transparent microforms— measurement of characteristics.	
AS/NZS 4579	1999	Micrographics—Reader-printers for transparent microforms—characteristics.	
AS/NZS 4589	1999	Micrographics—Microfilming of documents on 16mm and 35mm silver-gelatin type microfilm—operating procedures.	

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# International microform standards

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## British standards

The following is a selected list of British microform standards. Further information about new and revised British microform standards can be obtained from the BSI Group (British Standards Institution), <<http://www.bsi-global.com>>, accessed 13 May 2003.

Number	Date	Title	Comments
BS 1153	1992	Recommendations for processing and storage of silver gelatin-type microfilm.	
BS ISO 4087	1991	Micrographics. Microfilming of newspapers for archival purposes on 35mm.	
BS 4657	1990	Method for determining the resolution obtained in microcopying.	Same as ISO 3334 1989
BS 5454	2000	Recommendations for the storage and exhibition of archival documents.	
BS ISO 6198	1993	Micrographics. Readers for transparent microfilms. Performance characteristics.	
BS ISO 6199	1991	Micrographics. Microfilming of documents on 16mm and 35mm silver-gelatin type microfilm. Operating procedures.	
BS ISO 6200	1999	Micrographics. First generation silver-gelatin microforms of source documents. Density specifications and method of measurement.	
BS 6354	1983	Method for measuring the screen luminance, contrast and reflectance of microform readers.	
BS ISO 7565	1993	Micrographics. Readers for transparent microfilms. Measurement characteristics.	
BS ISO 18917	1999	Photography. Determination of residual thiosulfate and other related chemicals in processed photographic materials. Methods using iodine-amylose, methylene blue and silver sulfide.	

## Singapore codes of practice

The following is a selected list of Singapore codes of practice relating to microforms. Further information about new and revised Singapore microfilming codes of practice can be obtained from Spring Singapore, <<http://www.psb.gov.sg>>, accessed 15 May 2003.

Number	Date	Title	Comments
CP 69	1998	Microfilming of documents on 16mm black and white, silver-gelatin type microfilm/planetary and rotary camera filming—operating procedures.	
CP 70	1998	Microfilming of technical drawings and other drawing office documents on 35mm black and white, silver-gelatin type microfilm/planetary camera filming—operating procedures.	
CP 71	1998	Quality control inspection of 16mm and 35mm black and white, silver-gelatin type microfilm.	
CP 72	1998	Microfilming of newspapers on 35mm black and white, silver-gelatin type microfilm/planetary camera filming—operating procedures.	

## United States standards

The following is a selected list of United States microform standards. Many ANSI standards are now being updated by ISO standards. Further information about new and revised United States microform standards can be obtained from sources such as:

- I NSSN: a National Resource for Global Standards, <<http://www.nssn.org>>, accessed 15 May 2003. Provides a fee-based information service which includes international standards and technical data.
- I ANSI (American National Standards Institute) which administers and coordinates the U.S. standardisation system, <<http://www.ansi.org>>, accessed 15 May 2003.
- I AIIM (Association for Information and Image Management), <<http://www.aiim.org/about.cfm>>, accessed 4 May 2003.

Number	Date	Title	Comments
ANSI/AIIM MS5	1998	American National Standard for Information and Image Management—micrographic microfiche .	
ANSI/AIIM MS11	1987	Standard for Information and Image Management—microfilm jackets.	
ANSI/AIIM MS14	1996	American National Standard for Information and Image Management—specifications for 16mm and 35mm roll microfilm.	
ANSI/AIIM MS18	1998	American National Standard for Information and Image Management—splices for imaged microform—dimensions and operational constraints.	
ANSI/AIIM MS19	1993	American National Standard for Information and Image Management—recommended practice—identification of microforms.	
ANSI/AIIM MS23	1998	Standard for Information and Image Management—Standard recommended practice for production, inspection and quality assurance of first-generation silver microfilm of documents.	
ANSI/AIIM MS26	1990	American National Standard for Information and Image Management—35mm planetary camera (top light)—procedures for determining illumination uniformity of microfilming engineering drawings.	
ANSI/AIIM MS34	1990	American National Standard—dimensions for reels used with processed 16mm and 35mm microfilm not for use in automatic threading equipment.	
ANSI/AIIM MS37	1988	American National Standard for information and Image Management—recommended practice for microphotography of cartographic materials.	
ANSI/AIIM MS43	1998	American National Standard for Information and Image Management—recommended practice for operational procedures/inspection and quality control of duplicate microforms of documents and from COM.	
ANSI/AIIM MS45	1990	American National Standard for Information and Image Management—recommended practice for inspection of stored silver-gelatin microforms for evidence of deterioration.	
ANSI/AIIM MS111	1994	American National Standard for Information and Image Management—micrographics-standard recommended practice for microfilming printed newspapers on 35mm roll microfilm.	
ANSI/NAPM IT9.12	1995	American National Standard for Photography—processed vesicular photographic film—specifications for stability.	
ANSI/NAPM IT9.13	1996	American National Standard for Imaging Media—photographic films, papers and plates—glossary of terms pertaining to stability.	

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## International microform standards

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Number	Date	Title	Comments
ANSI/NAPM IT9.15	1993	American National Standard for Imaging Media (Photography)—the effectiveness of chemical conversion of silver images against oxidation - methods for measuring.	
ANSI/PIMAIT9.2	1998	American National Standard for Imaging Media—photographic processed films, plates and papers—filing enclosures and storage containers.	
ANSI/PIMAIT9.11	1998	American National Standard for Imaging Media—processed safety photographic films—storage.	
ANSI IT9.9 1990 and ANSI/NAPM IT9.11	1990 1993	American National Standard for Imaging Media—stability of color photographic image—methods for measuring.	

## ISO (International Organisation for Standardisation) standards

The following is a selected list of ISO microform standards. As these are continually being updated and revised, further information about new and revised ISO international microform standards can be obtained from sources such as:

I ISO (International Organisation for Standardisation), <<http://www.iso.ch/>>, accessed 15 May 2003.

Number	Date	Title	Comments
ISO 543	1995	Photography—photographic films—specifications for safety film (revision and redesignation of ANSI PH1.25 - 1984 (Revised 1989).	
ISO 1116	1999	Micrographics—16mm and 35mm microforms spools and reels—specifications.	
ISO 3272-1	1983	Microfilming of technical drawings and other drawing office documents, Part 1: operating procedures.	
ISO 3272-2	1994	Microfilming of technical drawings and other drawing office documents, Part 2: quality criteria and control of 35mm silver gelatin microfilms.	
ISO 3272-3	1975	Microcopying of technical drawings and other drawing office documents, Part 3: utilised 35mm microfilm carriers.	
ISO 3272-4	1994	Microfilming of technical drawings and other drawing office documents, Part 4: microfilming of drawings of special and exceptional elongated size.	
ISO 3272-5	1999	Microfilming of technical drawings and other office documents, Part 5: procedures for diazo duplicating of microfilm images in aperture cards.	
ISO 3334	1989	Micrographics—ISO resolution test chart no. 2—description and use.	Identical to ANSI/AIIM MS51 and BS 4657
ISO 4087	1991	Micrographics—microfilming of newspapers for archival purposes on 35mm microfilm.	
ISO 5123	1984	Documentation—headers for microfiche of monographs and serials.	
ISO 6148	1993	Photography—micrographic films, spools and core—dimensions.	
ISO 6196-1	1993	Micrographics—vocabulary—Part 1: general terms (bilingual edition).	
ISO 6196-2	1993	Micrographics—vocabulary—Part 2: image positions and methods of recording (bilingual edition).	
ISO 6196-3	1997	Micrographics—vocabulary—Part 3: film processing (bilingual edition).	
ISO 6196-4	1998	Micrographics—vocabulary—Part 4: materials and packaging (trilingual edition)	

# International microform standards

Number	Date	Title	Comments
ISO 6196-5	1987	Micrographics—vocabulary—Part 5: quality of images, legibility, inspection (trilingual edition).	
ISO 6196-6	1992	Micrographics—vocabulary—Part 6: equipment (trilingual edition).	
ISO 6196-7	1992	Micrographics—vocabulary—Part 7: computer micrographics.	
ISO 6196-8	1992	Micrographics—vocabulary—Part 8: use.	
ISO 6196-10	1992	Micrographics—vocabulary—Part 10: index.	
ISO 6197-1	1980	Microfilming of press cuttings—Part 1: 16mm silver gelatin type roll microfilm.	
ISO 6197-2	1985	Microfilming of press cuttings—Part 1: 16mm silver gelatin type roll microfilm.	
ISO 6198	1993	Micrographic—readers for transparent microforms—performance characteristics. Same as British standard	
ISO 6199	1991	Micrographics—microfilming of documents on: 16mm and 35mm silver-gelatin type microfilm—operating procedures.	
ISO 6200	1999	Micrographics—first generation silver-gelatin microforms of source documents—specifications and methods of measurement.	
ISO 6829	1983	Flowchart symbols and their use in micrographics.	
ISO 7565	1993	Micrographics—readers for transparent microforms—measurement of characteristics.	Same as British standard
ISO 8126	2000	Micrographics—duplicating film, silver, diazo and vesicular—visual density—specifications and measurement.	
ISO 8127-1	1989	Micrographics—A6 size microfilm jackets—Part 1: five channel jacket for 16mm microfilm.	
ISO 8217-2	1999	Micrographics—A6 size microfilm jackets—Part 2: other types of jacket for 16 mm and 35 mm microfilm.	
ISO 8225	1995	1995 Photography—ammonia-processed diazo photographic film—specifications for stability.	Identical to ANSI/NAPM IT9.5
ISO 9718	1995	Photography—processed vesicular photographic film—specifications for stability.	
ISO 9878	1990	Micrographics—graphical symbols for use in microfilming.	
ISO 9923	1994	Micrographics—transparent A6 microfiche—image arrangements.	
ISO 10196	1990	Micrographics—recommendations for the creation of original documents.	
ISO 10197	1993	Micrographics—reader-printers for transparent microforms—characteristics.	
ISO 10214	1991	Photography—processed photographic materials—filling enclosures for storage	
ISO 10549	2000	Micrographics—A6 size aperture cards.	
ISO 10550	1994	Micrographics—planetary camera systems—test target for checking performance.	
ISO 10602	1995	Photography—processed silver-gelatin type black and white film—specifications for stability.	Identical to ANSI/NAPM IT9.1
ISO 18917	1999	Photography—determination of residual thiosulfate and other related chemicals in processed photographic materials—methods using iodine-amylose methylene blue and silver sulfide.	Also a British standard
ISO/TR 12031	2000	Micrographics—inspection of silver-gelatin microforms for evidence of deterioration.	
ISO/TR 12036	2000	Micrographics—expungement, deletion, correction or amendment of records on microforms.	

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Heather Brown

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## **Background**

**The training materials have been developed by the National Library of Australia, in collaboration with the State Library of South Australia and under the auspices of IFLA PAC, and will be provided to people within the Asia and Pacific regions as a training resource. The materials will also be used within Australia as part of an accredited TAFE training course.**

**The training materials consist of 10 modules, 6 wall charts, a Log Book, a Learning Guide and a Glossary/Index. We expect that users will both read a printed version of the materials and download them as PDF files from the National Library of Australia's website – [www.nla.gov.au](http://www.nla.gov.au)**

