



# Conserve O Gram

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## Salvaging Acidic Or Damaged Museum Accession Books

The National Park Service (NPS) Accession Book is a permanent record of accession transactions for NPS museum objects. In 1993, servicewide pH testing of a sample of museum forms revealed that an estimated 50% of NPS accession books are made with paper having a pH between 6.0 and 6.8 (slightly acidic). An estimated 28% of accession books have a pH below 6.0 (acidic) and an estimated 22% have a pH above 6.8 (alkaline). Acidic paper may lessen the long-term permanence of the book. Mechanical or other chemical damage may also threaten the condition of the accession book.

### *Testing for Acidity*

You can test your accession book paper for acidity. Use a pH testing pen and make a mark in an inconspicuous spot on one of the ledger pages. The mark will turn to one of the following colors:

- purple or blue indicates the paper has a pH above 6.8 (alkaline), which is ideal
- mixed yellow/tan or tan/purple/blue indicates the paper has a pH of 6.0-6.8 (slightly acidic)
- yellow/clear indicates the paper has a pH below 6.0 (acidic)

*NOTE:* An accession book with acidic paper doesn't need immediate attention. The book may last many decades if stored under cool, dark, dry conditions and handled correctly.

### *Deacidification Concerns*

Deacidification is the process of adding an alkaline buffering agent into paper to neutralize inherent acids. Paper is deacidified by placing it in a liquid solution or fuming it with a vapor that contains the buffering agent.

Deacidification of an acidic accession book, in most instances, is not recommended for the following reasons:

- Deacidification may cause text to fade when buffering agents interact with dyes and pigments in inks.
- Deacidification is expensive because it requires a series of treatments. The calcium carbonate buffering agent depletes over time and requires reapplication, at a cost of \$12.00 or more per treatment.
- Deacidification doesn't make paper less brittle. Brittleness is caused by inherent fault in the paper (for example, short paper fibers) or the chemical composition of the paper (for example, paper with the presence of lignin), both of which are characteristic of wood pulp paper. The addition of a buffering agent doesn't make paper fiber longer or remove lignin. Wood pulp paper becomes brittle and tears easily.

### *Problems that Require Action*

Take action immediately for an accession book that has any of the following problems:

- pages separated from the binding
- cracked, broken, or detached bindings or spines
- brittle or fragile paper or book boards
- ripped or torn pages
- severely-faded ink
- water or humidity damage, including stains, severely distorted or cockled/buckled pages
- mold growth or foxing (brown spots)
- insect or vermin residue or damage
- stains due to leaks, spills or adhesives

*For volumes with pages separated from the binding or with a cracked or broken binding or with a detached spine:* Arrange to rebind the accession book if the paper isn't brittle and maintains its structural integrity. Contact your Support Office curator for recommendations on binderies or other vendors that provide high quality book rebinding. Also, search the phone directory for preservation book binderies.

Make a high-quality photocopy of the book on archival-quality paper to insure informational integrity in case the original is damaged or lost while rebinding. Be careful not to damage the original volume during photocopying, and in particular, don't press down on the book spine. See *Conserve 0 Gram 19/4, Archives: Preservation Through Photocopying*, for guidelines on photocopying. Three-hole-punch the copies without destroying information, number each page, and place the pages in original sequence in an album binder. Use an archival-quality, 0- or D-ring, three-hole binder with at least 1 inch capacity to hold the copy.

*For other physical problems:* For problems associated with physical integrity, particularly brittleness of the paper, make a high quality photocopy of the book on archival quality paper using the guidance mentioned above. Purchase an archival-quality rare book box to store the original accession book and provide physical support and a good microenvironment.

Maintain the boxed original accession book archivally and don't reference it on a regular basis. Also maintain the copy archivally, but use this one for regular reference. See *Conserve 0 Gram 19/1 8, How to Care for Bound Archival Materials*, for care, handling, and reformatting instructions and *Conserve 0 Gram 19/3, Use and Handling of Rare Books*, for further handling guidelines.

Order a new accession book made of archival-quality, low-lignin, alkaline paper and register all subsequent accessions in this book. Conservation Resources International provides an accession ledger book meeting these requirements. See **Sources** for address. The company lists the book as an Accession Register, stock number AC-REG. Fiscal Year 1997 cost is approximately \$55.00-\$90.00 depending on destination.

### **Sources**

Consult NPS *Tools of the Trade*, Release No. 3 (available only to NPS) for description and ordering information on rare book boxes and binders, or contact the following vendors:

Conservation Resources International,  
8000-H Forbes Place, Springfield, VA 2215 1;  
(800) 634-6932; (703) 321-7730.

Light Impressions Corporation, P.O. Box 940,  
Rochester, NY 14603; (800) 828-6216.

University Products, P.O. Box 101, Holyoke,  
MA 01041; (800) 628-1912.

pH testing pens are available from Light  
Impressions and University Products.

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The series is distributed to all NPS units and is available to non-NPS institutions and interested individuals by subscription through the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402, FAX (202) 512-2233. For further information and guidance concerning any of the topics or procedures addressed in the series, contact NPS Museum Management Program, 1849 C Street NW, Washington, DC 20240; (202) 343-8142.