

## **Mennonite Archives of Ontario**

### **Recommendations for optical disc archival storage**

For a multitude of reasons, printing to paper is still the best option for long term preservation of archival records. However, this is not possible for all records. Audiovisual recordings obviously need to remain in a machine-readable format that can be played using current technology. Many users of digital cameras prefer not to print large numbers of photographs.

“Optical media” are usually glass or plastic discs that store digital data and use polarized light to record and retrieve that data. The most common in use today are compact discs (CDs) and Digital Video (or Versatile) Discs (DVDs). They can be used to store computer files, audiovisual recordings, photographs and other images. When using optical discs for storage, remember that:

1. Storage conditions for optical media require a combination of 20–50% relative humidity (RH) and temperatures between -10 and 23°C. In addition, it is important to avoid large, rapid fluctuations in temperature and RH because these changes can promote delamination of disc layers, especially on discs that are poorly manufactured.
2. CDs and DVDs should be stored in standard polystyrene plastic “jewel” cases that are 10 mm (3/8 in.) thick. Store the jewel cases vertically on their edges and away from direct lighting. Standard commercial CDs and DVDs are not sensitive to light. However, CD-Rs and DVD-Rs may contain light-sensitive dyes as recording material.
3. Don't use stick-on labels. If you use markers, make sure they're CD/DVD safe.
4. For maximum stability, the Canadian Conservation Institute recommends using stable media such as CDs or DVDs that have gold metal reflective layers. For CD-Rs, read the manufacturer's documentation to make sure that a stable dye, such as phthalocyanine, was used in the disc's manufacture. This type of disc can be purchased directly from several Internet suppliers or from standard conservation suppliers. Office supply stores may also carry them.
5. The Mennonite Archives of Ontario currently uses discs with an archival life rating of 100 years. Discs rated as high as 300 years are commercially available; however these are much more expensive. Shop around, as prices will vary.

**Here are the projected longevities for typical optical disc formats: <sup>1</sup>**

CD-RW, DVD-RW, DVD+RW	5–10 years
CD-R (cyanine and azo dyes)	5–10 years
Audio CD, DVD movie	10–50 years
CD-R (phthalocyanine dye, silver metal layer)	10–50 years
DVD-R, DVD+R	10-50 years
CD-R (phthalocyanine dye, gold metal layer) ( <b>recommended</b> )	> 100 years

6. Finally, don't forget to record information *about* the data you are recording! What format are the files on your CD? When they were first recorded? Who recorded them? If they are photographs, who is in the picture? When was it taken? And so on. If possible, record this information within the files themselves, as well as elsewhere, such as in a printed list. Don't think "Oh, I'll remember." You probably won't.

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<sup>1</sup> Adapted from Electronic Collections Care for Museums and Small Archives. 2008. <http://www.cci-icc.gc.ca/crc/articles/elecmediacare/step2-etape2-eng.aspx>.