

A/V Preservation Temperature and Storage Guidelines

- Colder and less humid is generally better (to a point)
- Different conditions suit different materials better
 - Magnetic Tape should probably not be stored in the same environment as paper, wood, leather, etc., which tolerate a higher humidity
 - Since photos, film, tape all have similar characteristics, they may be stored in the same room
- Sometimes meeting the recommended conditions is difficult to impossible
 - Expensive to maintain
- Consistency is very important, avoid wide fluctuations
- Temperature and humidity may be measured and graphed using a Preservation Environment Monitor (PEM), or another thermometer/hygrometer

A/V Preservation Temperature and Storage Guidelines

How Temperature Affect Film/Tape Materials

Film Material	Room 68°F (20°C)	Cool 54°F (12°C)	Cold 40°F (4°C)	Frozen 32°F (0°C)
Nitrate film*	Likely to cause significant damage	Likely to cause significant damage	Meets ISO recommendations	Provides extended life
Acetate film*	Likely to cause significant damage	Likely to cause significant damage	Meets ISO recommendations	Provides extended life
Polyester film	B&W: May be OK Color: Causes significant damage	B&W: Meets ISO recommendations Color: Causes significant damage	B&W: Provides extended life Color: Meets ISO recommendations	Provides extended life

Source	Media	Temperature	Maximum Temp. Gradient	Relative Humidity (RH)	Maximum RH Gradient
ISO TC 171/SC Jan. 2002	CD-R CD-ROM	+5°C to 20°C (41°F to 68°F)	4°C /hr (7°F /hr)	30% to 50%	10% /hr
IT9.25 and ISO 18925 February, 2002	CDs DVDs	-10°C to 23°C (14°F to 73°F)		20% to 50%	Cycling no greater than: ±10%
NARA, FAQ About Optical Media, April, 2001	CDs DVDs	68°F (20°C)	+/- 1°F /day (+/- 0.6°C /day)	40%	5% /day
National Archives of Australia, April, 1999	CDs	18°C to 20°C (64°F to 68°F)		45% to 50%	10% /24 hrs
Library Technical Report Nov.-Dec. 1997	CDs	-10°C to 50°C (16°F to 122°F)		10% to 90%	
DVD Dystified, Second Edition, Jill Taylor, 2001	DVD-R DVD-ROM	-20°C to 50°C (-4°F to 122°F)	15°C /hr (27°F /hr)	5% to 90%	10% /hr
	DVD-RAM	-10°C to 50°C (16°F to 122°F)	10°C /hr (18°F /hr)	3% to 85%	10% /hr
	DVD+RW	-10°C to 55°C (14°F to 131°F)	15°C /hr (27°F /hr)	3% to 90%	10% /hr
National Library of Canada, 1996	CDs	15°C to 20°C (59°F to 68°F)	2°C /24 hrs (9°F /24 hrs)	25% to 45%	5% /24 hrs
Media Sciences, Inc. Jerome L. Hartke July 2001	CD-R	10°C to 15°C (50°F to 59°F)		20% to 50%	