

## Transcript of the video Identifying Acetate Base Audio Reels

Video length: 00:02:17

**Joe Iraci, Senior Conservation Scientist:** “When surveying the health of your magnetic tape collection, one factor to consider is the type of plastic used for the tape base.

The majority of audio and video tapes in collections have either a polyester or an acetate plastic base.

Cassette tapes, video tapes, and audio reels after 1970 used polyester and it is a fairly stable plastic and not of major concern.

On the other hand, many audio reel-to-reel tapes prior to 1970 used acetate as the base.

The problem with acetate is degradation via a hydrolysis reaction or in other words, a chemical reaction with water molecules.”

[Photographs of various video and audio tapes, including audio reels in various condition are shown]

**Joe Iraci:** “This deterioration leads to the tape smelling like vinegar and becoming deformed, very brittle, and extremely difficult to play.

Because of these degradation problems, it is important to identify which audio reels in your collection are acetate as soon as possible.

To do this, a simple and non-destructive light test can be performed. A reel of tape is held up to a strong light. If light shines through or the tape pack appears translucent then the tape is likely acetate based. If no light shines through or the tape pack is opaque, then it is likely polyester.”

[A demonstration of the light test is presented]

**Joe Iraci:** “Once identified, acetate-based tapes need to be digitized as soon as possible.

If not, storage under cool and dry conditions is required to slow or halt the chemical degradation until digitization is possible.”

[Text on screen: For more information, please see Canadian Conservation Institute Technical Bulletin 30, *The Digitization of Audio Tapes*, and Technical Bulletin 27 *Remedies for Deteriorated or Damaged Modern Information Carriers*.

Acknowledgements: International Association of Sound and Audiovisual Archives; Phonogrammarchiv, Austrian Academy of Sciences (<https://www.musiikkiarkisto.fi/audio/audio112.html>)]

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