

## PRESERVATION LEAFLET

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### PHOTOGRAPHS

## 5.2 Types of Photographs, part 1: 19<sup>th</sup> and Early 20<sup>th</sup> Century

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### INTRODUCTION

This leaflet introduces the different types of photographs and their distinguishing characteristics and should serve as a basic guide in identifying individual photoprints and negatives.

### DEFINITIONS

First, a few useful terms and concepts:

**POP (printing-out paper):** A photographic paper that forms a visible image directly from the reaction of light on light-sensitive materials. POP prints are warm in tone, tending towards a brown, purple, or reddish color. They are usually made in contact with a negative.

**DOP (developing-out paper):** A photographic paper that forms a visible image using a chemical developer to reveal the latent image made by exposure to light. DOP prints are cool in color -- blue, neutral, or black -- unless they have been toned or are faded/chemically damaged. They may be either contact-printed or enlarged from a negative.

**Coated paper:** A support that has a binder layer on its surface consisting of albumen, gelatin, or collodion. This layer holds the light-sensitive photographic salts. A three-layer structure has as its third layer barium sulfate (aka Baryta layer). This layer occurs between the paper and the image layer.

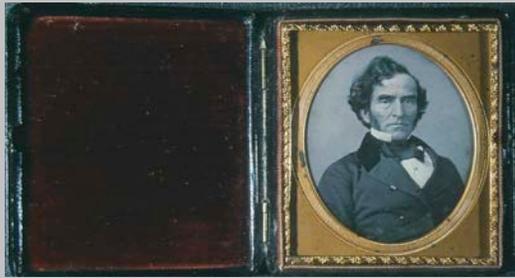
**Uncoated paper:** A paper support without any binder layer. The image often appears to be within the paper.

### DISTINGUISHING CHARACTERISTICS

When considering a photographic object, there are a few primary features to consider:

1. Positive or negative
2. Nature of support material
3. Texture, surface quality
4. Color, tone
5. Characteristics of deterioration

## DIRECT POSITIVE PHOTOGRAPHS

Support Materials	Technique	Popular use dates	Image (click on image for a larger version)	Identifying Features
Silver-plated sheet of copper	Daguerreotype	1839 – c. 1860		Mirror surface; positive-negative nature; usually housed in a miniature case made of wood covered with leather, paper, cloth or mother of pearl; and/or made of thermoplastic material. Tarnish can form on support.
Glass	Ambrotype	1851 – c. 1880		Milky gray highlights; various black backings, occasionally use ruby glass; usually housed in a miniature case. (See daguerreotype for description.)
Iron, coated with a black varnish ("Japanned surface") containing raw linseed oil, asphaltum, and pigments	Tintype, ferrotype, melainotype	1854 – c. 1930s		Milky gray highlights, lack of contrast in image. Rust can form.

## PHOTOGRAPHS FROM NEGATIVES

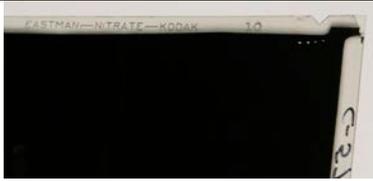
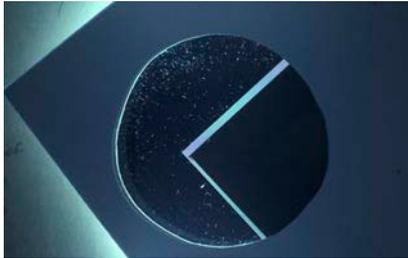
Support Materials	Technique	Date	Image (click on image for a larger version)	Identifying Features
Uncoated Paper (1-layer structure)	Salted paper print	1840 – c. 1860		POP, matte surface; paper fibers visible; often faded to pale yellow (especially at the edges); sometimes varnished.

	Platinotype  Palladiotype	1880 – c. 1930  1916 – c. 1930		Gray-black color, matte surface; paper fibers visible; rich, velvety texture; popular with art photographers; usually stable images, little fading or silvering; paper often acidic and discolored; catalyst for cellulose deterioration causing image transfer.
	Cyanotype (blue-print)	c. 1880 – c. 1910		Brilliant blue color, matte surface; invented in 1842 but not widely used until 1880s; paper fibers visible.
<b>Coated Paper (2-layer structure)</b>	Albumen print	1851 – c. 1900s		POP, usually semi-glossy surface; red-brown, purple or yellow-brown image; thin paper support, usually on heavy mount; a crackle pattern can often be seen; usually yellowed in highlights; paper fibers visible through albumen coating.
	Carbon print	1855-1930		Used extensively for reproductions of works of art, also used as tip-ins for book illustration. Subtle image relief; paper fibers visible in highlights; no fading or yellowing; may get large cracks in dark areas; may be any color.

	Woodburytype (Photoglypty)	1866 – c. 1900		Same characteristics as carbon prints. Woodburytypes are not photographic, but photomechanical. Mainly used for book illustration and large edition publications; often labeled.
Coated Paper (3-layer structure)	Collodion print	Glossy: late 1880s– 1920s  Matte: 1894 – 1920s		POP, glossy surface (sulfur sepia and gold toned, purple color) or matte surface (gold or platinum toned, range of tones possible, usually neutral color), very stable image, rarely faded; easily abraded; usually mounted; paper fibers usually not visible. Glossy collodion prints often exhibit a subtle rainbow effect on their surface when viewed under fluorescent lights.
	Gelatin POP print (silver chloride)	c. 1880 – c. 1910		POP warmer in tonality than a gelatin DOP; brown or purple image hue; usually very glossy; often faded to yellow; paper fibers not visible.
	Gelatin DOP print (silver bromide)	c. 1880 – present		DOP appears black and white unless image deterioration has occurred, or it may be toned to various warm shades; matte, glossy or textured; often exhibits silvering; may fade; paper fibers not visible.

## NEGATIVES: PAPER, GLASS, AND FILM BASE

Support Materials	Technique	Date	Image (click on image for a larger version)	Identifying Features
Paper	Calotype, paper negative	1841 – c. 1865		Rare, usually waxed or oiled; paper fibers visible, usually warm image tone.
	Eastman paper negative	1885 – c. 1895	Not Available	Rare, usually in poor condition; small format.
Glass	Collodion wet plate	1851 – c. 1880		Plate coated by hand; uneven coating at the edges; pour lines; rough cut edges of glass; edges often ground; varnished; warm pale image tone; longer density range.
	Gelatin dry plate	c. 1880 – c. 1975		Plate is machine coated; even coating at edges; clean cut glass; occasionally varnished; less density range tends to tarnish; usually cool image tone.
Gelatin	Eastman American film	1884 – c. 1890	Not Available	Rare; looks like plastic; brittle, uneven edges; used for Kodak No. 1 (2-1/2" diameter) and Kodak No. 2 (3-1/2" diameter)
Plastic	Cellulose nitrate (sheet film)	1913 – 1939		"NITRATE" marked on edge; very flammable; small clipping sinks in trichloroethylene; turns a deep blue in diphenylamine test; degraded products smell very acrid; becomes yellow, brittle, sticky.

				
	Cellulose acetate, diacetate, triacetate, etc.	Black and white: 1925 – present  Color: 1942 to present	  	"SAFETY" marked on edge; burns with difficulty; clipping floats in trichloroethylene; no blue color in diphenylamine test; degraded products smell of acetic acid (vinegar); channels form between base and emulsion as the negative deteriorates.
	Polyester	c. 1965 – present		When viewed between polarizing filters, the film is identified by interference patterns (rainbow colors); may include edge printing "SAFETY."

## RESOURCES:

For more information on the care and identification of photographs, please see:

- Reilly, James M. *Care and Identification of 19th Century Photographs*. Eastman Kodak Company. 1986.
- Image Permanence Institute. "Graphics Atlas." <http://www.graphicsatlas.org/>

For more information on the care and identification of film-base materials, please see:

- Guidelines for Care and Identification of Film-base Photographic Materials by Monique C. Fischer and Andrew Robb at <http://cool.conservation-us.org/byauth/fischer/fischer1.html>
- NEDCC Leaflet 5.1 "A Short Guide to Film Base Photographic Materials: Identification, Care, and Duplication." <https://www.nedcc.org/free-resources/preservation-leaflets/5.-photographs/5.1-a-short-guide-to-film-base-photographic-materials-identification,-care,-and-duplication>

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