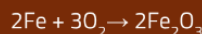


A pigment is a material that changes the color of reflected or transmitted light by absorbing specific colors. Most metals in their elemental state are gray, but when they react with other elements the colors they absorb change. For example, elemental iron is a metallic gray, but when reacted with oxygen it forms rust which is red/brown. Rust is not usually thought of a pigment today, but it was one of the first pigments used by humans.



Inorganic Pigments

Throughout History

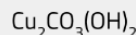
Historically, many inorganic pigments were created from large quantities of organisms, minerals and toxic metal oxides for use in painting. Modern pigments are typically synthesized from less harmful metals and serve a diverse array of purposes such as fire retardants, anti-corrosive coatings, and magnets for memory storage.

4,000 to 3,000 BC
Ancient Egyptian*

Natural minerals such as malachite were used to create rich green-blue pigments

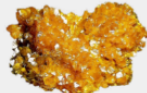


By Ondrej244



1600 BC
Egyptian*

Orpiment, or arsenic sulfide, was used for bright yellow, orange, or gold. This pigment faded quite easily and is toxic.



By Steven Schinnerich



600 AD
Middle Ages*

The beginning of painters' desire for rich and bright pigments. One important pigment was ultramarine, which was made by grinding up a mineral, Lapis Lazuli.



By KCA/Start Clavon

Lapis Lazuli

20th and 21st Centuries
Specialty Pigments*

Modern pigments have greater functions beyond color, such as acting as fire retardants, anti-corrosive coatings, magnets and more. Zinc oxide pigment is used in paints to control the growth of mildew and inhibits corrosion.



By Zinshield

ZnO

28,000 - 24,000 BC
First Pigments*

Different iron oxides were used in cave paintings as red, brown and black pigments.



By Amelcy

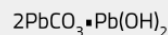


300 BC - 1960 AD
Greco-Roman*

Many lead based pigments were developed including White Lead, which was used up until the 1960s despite being toxic.



By Essential Varnish

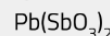


1600 AD
Renaissance*

One of the first manufactured pigments was Naples Yellow, which features lead and antimony.

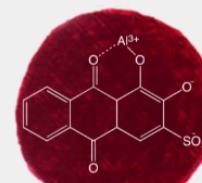


By L. Cornelissen & Sim



1886 AD
Synthesis of Alizarin*

"Madder lake" is a plant extracted red dye that has been used since 1500 BC. The pigment was isolated in 1826 and artificially synthesized in 1886 as "alizarin."



By Michael Droume

References

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- *Douna, Michael, curator. "Pigments through the Ages." 2008. <http://www.webexhibits.org/pigments> (accessed October 18, 2017)

