



Arrouk-art

THE GREATEST MASTERPIECES WERE ONCE ONLY PIGMENTS

BEAUTIFUL COLOURS HIDDEN AWAY FROM OUR EYES
FOR 350 YEARS HAVE BEEN AN INSPIRATION FOR:

REMBRANDT'S SECRETS REVEALED

The number of pigments available to 17th century artists was very limited.

Rembrandt used only **12 main pigments** throughout his career.

At that time **The Netherlands** was the center for the manufacturing of pigments. The red pigment **carmine**, was obtained from crushed cochineal beetles that came from Central and South America, burnt animal bones were the raw material for **bone black** and **smalt** (the blue pigment) was made from pulverized glass.

This **work of art** will give you the same experience as Rembrandt had before he started his masterworks.

THE PAST BROUGHT TO LIFE!



UMBER (raw)

RAW MATERIAL: mineral

SOURCE: found all over the world

Did you know:

umber is earth just mined and ground into a pigment?

When heated, the color becomes more intense,
and then becomes known as burnt umber.

The umbers were not widely used in Europe before the end of the 15th century.

Rembrandt used it as an important element of his rich and complex browns,
and he also took advantage of its other qualities;

it dried more quickly than other browns, and therefore he often used it
as a base so he could work more quickly,
or mixed it with other pigments to speed up the drying process.



SIENNA (burnt)

RAW MATERIAL: mineral

SOURCE: Italy

Did you know:
that every painting by Rembrandt contains some kind of earth pigment?

The pigment sienna was known and used, in its natural form, by the ancient Romans.

In its natural state, sienna is yellow-brown and is called raw sienna. When heated, it becomes a reddish brown and is called burnt sienna.

It became, along with umber and yellow ochre, one of the standard browns used by artists in the 17th century.

Rembrandt used all the earth colours, including ochre, sienna and umber, in his palette.



OCHRE

RAW MATERIAL: mineral

SOURCE: mainly France and Italy

Did you know:

ochre is the oldest known natural pigment in the world?

Ochre is the first pigment used by humans, at least 70,000 years ago.

It is found all over the world and has been used by nearly every prehistoric culture, whether as paint on cave and building walls, staining of pottery or other types of artifacts or part of a burial ritual or body paints.

Rembrandt used ochre to mix with red pigments when stronger, more vibrant colors were required.



KASSEL EARTH

RAW MATERIAL: *mineral and organic*

SOURCE: *various places
but mainly near Kassel and Cologne*

Did you know:
the pigment is known as Kassel earth because of the deposits found
near the town of Kassel, Germany?

Kassel earth is a deep semi-transparent brown coloured pigment.
It was originally made from peat or soil.
The pigment is not very stable in oil and slows the drying.

By painting with strong contrasts between light and dark
Rembrandt turned his paintings into dramatic, mysterious compositions.



AZURITE

RAW MATERIAL: mineral

*SOURCE: mainly from Hungary
until it was occupied by the Turks in the 17th century*

Did you know:
in ancient China, azurite was used during the Ming Dynasty
to dye the legendary, beautiful vases?

Azurite, however, gained particular importance in the paintings
of the European Middle Ages and the Renaissance.

Rembrandt's paintings do not have bright blue colors.
In the beginning of his career, he used blue pigments more often
than in later period works.



LEAD WHITE

RAW MATERIAL: man-made from lead

*SOURCE: lead ore is found
in various places in Europe*

Did you know:

that Rembrandt used this pigment the most?

Lead white has a stiff texture so the brushstrokes remain clearly visible.

It reacts with linseed oil and becomes extremely hard
so that the life of the paintings is extended.

This is why Rembrandt's paintings have survived better than modern oil paintings.

This pigment was made in an extraordinary way:
rolled-up strips of lead were placed in earthenware pots containing acetic acid.

The pots were then covered with horse manure.

The fumes from the acid and the heat from the manure reacted
with the lead and created white lead compound on the rolls of lead.

This was scraped off the plates and used as a pigment.



LEAD-TIN YELLOW

RAW MATERIAL: man-made from lead and tin

*SOURCE: lead and tin ore is found
in various places in Europe*

*Did you know:
this yellow pigment has historically been
of great importance in painting?*

The pigment was prepared by heating a mixed lead and tin component to about 650–800 °C. The opaque yellow colour has good covering power.

Rembrandt also used the pigment, for example in the green color of the peacock's wings in his *Still Life with Peacocks*.

Orange hues were commonly created by mixing this pigment with vermilion red.



VERMILION

RAW MATERIAL: metal or man-made from mercury and sulphur

SOURCE: cinnabar is found all over the world

e.g. Spain and Slovenia

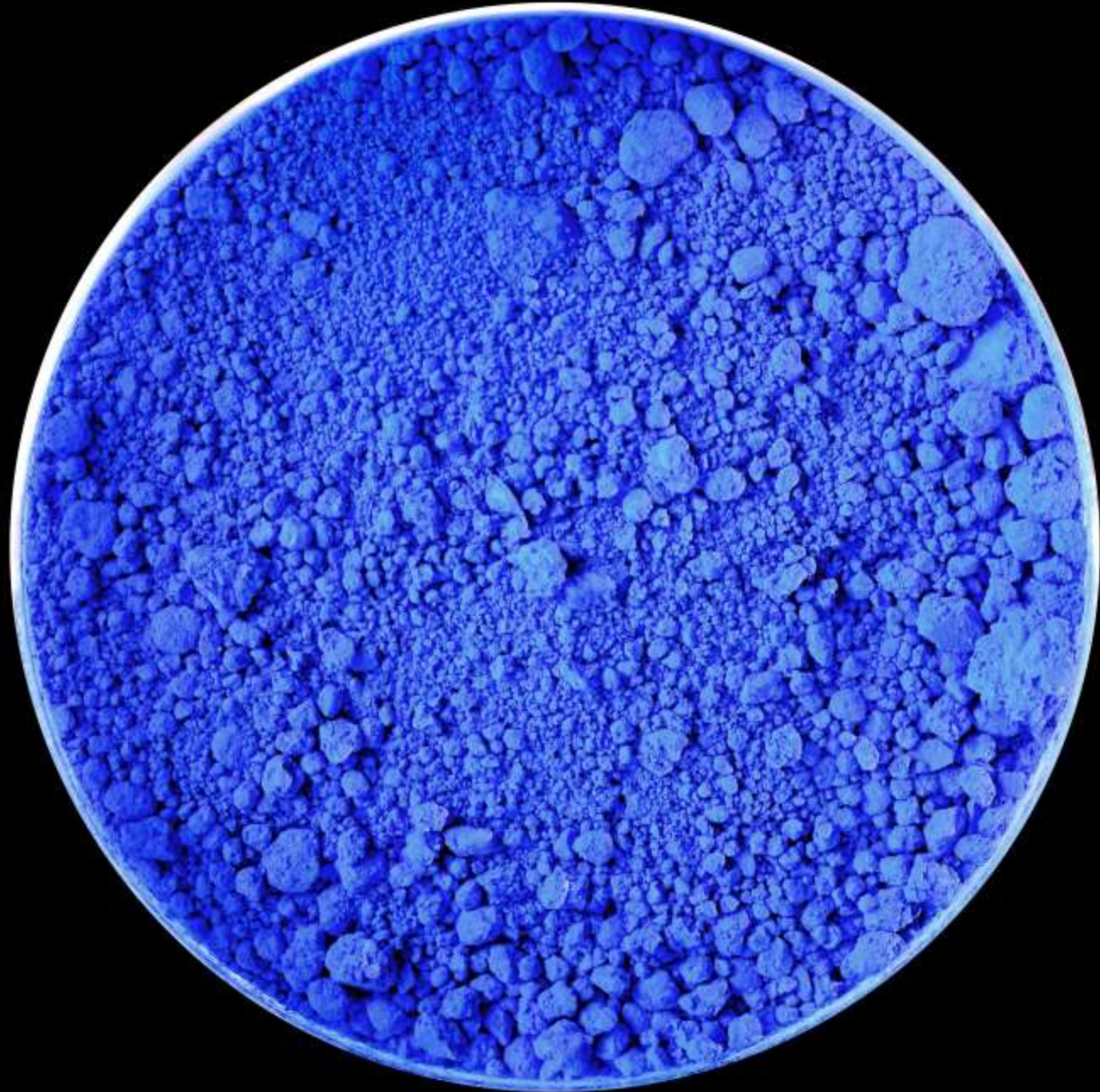
Did you know:

**this brilliant red pigment is originally made
from the toxic powdered mineral cinnabar?**

In the 17th and 18th century skilled Dutch 'vermilion heaters' earned an international reputation with their excellent 'vermilion pigment'.

The mercury was extracted from mercury mines, the largest of which can still be found near the Spanish city of Almadén. Prisoners were used to mine the mercury, many of whom succumbed in the mine shafts to the fatal mercury vapor.

Because of its cost and toxicity, it was almost entirely replaced by a new synthetic pigment, cadmium red, in the 20th century.



SMALT

RAW MATERIAL: glass containing cobalt and sand

SOURCE: silver mines in Saxony

Did you know:

this blue pigment is made from pulverized glass?

Smalt was popular because of its low cost and its manufacture became a specialty of the Dutch and Flemish in the 17th century.

Rembrandt loved this pigment not only because of the colour, but also because the paint dries better if it contains smalt.

He also used smalt to make the paint thicker.

A disadvantage of smalt is that it slowly becomes gray.



CARMINE

RAW MATERIAL: cochineal beetle

*SOURCE: Central and South America;
mainly in the Oaxaca region of Mexico*

Did you know:
you need 140.000 beetles for 1 kilo of Carmine pigment?

The cochineal beetle is an insect that lives on cactuses
in Central and South America.

The red colour is obtained from carminic acid,
produced by female beetles to scare away other insects and birds.

The insects were picked by hand, then dried, crushed and filtered.



MADDER

RAW MATERIAL: plant madder root

*SOURCE: originally from Asia,
also cultivated in Zeeland in the 17th century*

Did you know:

*this pigment is made of the **Rubia tinctorum** plant?*

As an extract of the root of this plant,
(which was allowed to grow for two years in the ground)
the root is not red itself.

The madder pigment bleaches out in a few months,
but the darker tones are more permanent.

The Dutch were leading producers of madder in the 17th century.
Rembrandt used madder in his portrait of Jan Six, who's family were dyers.
The coat, that Jan Six wore in the portrait, was also dyed with madder.



BONE BLACK

RAW MATERIAL: man-made from bones

SOURCE: all over the world

Did you know:

this deep black pigment was made by heating animal bones or ivory without the addition of oxygen?

Rembrandt often used it in pure form to sketch the design of a painting.
In addition to bone black, Rembrandt also used wood charcoal.

The pigment has a slightly bluish-black cast when mixed with white.
Such a mix was applied to enhance the cool mid-tones of the flesh in
A Woman Bathing in a Stream.



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