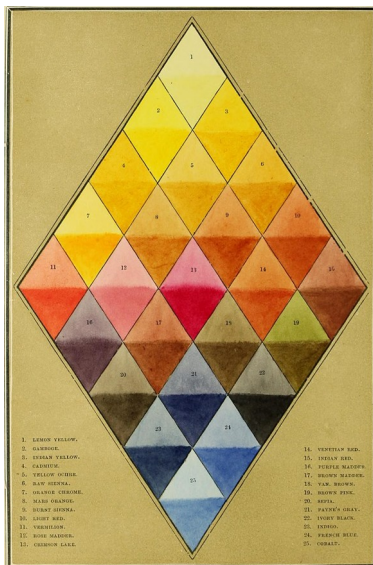


Product Profiles: Organic, Synthetic, Inorganic, and Natural Art Materials

Ask the Experts: “I see that some art supplies are sold as “natural” and “organic”. How can an art material be “organic”?”



This 1871 chart of watercolors includes Madder, Gamboge, and Indian Yellow, naturally derived pigments that were soon to be replaced with synthetic organic colors.

A: The terms “synthetic”, “natural”, and “organic” carry important, specific meanings in the art materials industry. These same words, however, have been used as marketing terms since the mid-20th century, and as a consequence, they now carry connotations separate from their literal meanings. Unfortunately for artists, this can lead to confusion when reading art materials labelling.

Natural: In art supply terminology, “natural” refers to materials that are created by processes of nature, without human action. Where art materials are concerned, the word “natural” does not necessarily carry any meaning in terms of health, safety or environmental impact. Pure Gum Spirits of Turpentine is an example of a naturally derived art material that requires special measures for safe use. Some naturally derived materials, however, do have a low impact on the environment (linen), and some may actually be beneficial in their production (damar resin).

A “natural” pigment is obtained through mining or collection, as opposed to those manufactured from raw ingredients. Most of the artist’s pigments characterized as natural are neutrals and earth colors.

Natural paint binders include linseed oil, casein from milk, egg tempera, gum arabic, and wax.

Synthetic: Art materials that are “synthetic” are man-made. Synthetic art materials sometimes replace or improve on a natural item, or they may be a unique product with no natural analogue. The majority of synthetic artist’s pigments are unique, brilliant hues in a color space that did not exist prior to the modern color industry.

Synthetic resins, used as paint binders and varnishes, are highly durable, and retain flexibility and neutral color for many years. Alkyds, acrylics, and other man-made polymers generally equal or exceed the long-term performance of historical materials.

Another important synthetic art material category is brushes. Polymer-based synthetic brush filaments are often inspired by the properties and performance of natural hair and bristle, but today, synthetic artists’ brushes often surpass animal hair products in all important characteristics: shape retention, paint distribution, snap-back, durability, and solvent resistance.

Organic: This refers to the carbon-containing components of a material, as in “organic chemistry”, as opposed to organic standards for food cultivation. Pigments and solvents classified as organic can be produced from fossil sources like oil, coal, and natural gas, but they can also be made from animal and plant raw materials. A few organic pigments are neutral in color, like the natural organic Van Dyke Brown, but the majority are extremely bright colors. The ancient pigments Lamp Black and Ivory Black are produced as solids, but most synthetic organic colors are manufactured as a dye which needs to be fixed to an inert solid to make a pigment.

Inorganic: Pigments made from metals, gems, and non-carbon minerals are examples of inorganic pigments. Most earth colors are classified as inorganic. Some of these can be available as both natural and synthetic. Some earth colors that started out as mined

commodities later became a manufactured product, after the original sources were exhausted. Cadmiums, cobalts, oxides, umbers, and white pigments are all classified as inorganic.

It would be wrong to say that art supply terminology is always specific, and never romantic, but artists are now probably more knowledgeable than at any time in the past about the materials they use. That is one reason why package labeling and product listings include terms like "inorganic" and "synthetic": because these words have important, precise meanings for the people who use them in studio craft and education.

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