MEDIUMS

Experience the rich feel of traditional oil color.

Use Walnut Oil and Walnut Alkyd Medium for a safer approach to oil painting.

Walnut Oil

Free your studio of dangerous solvents by using walnut oil. Walnut oil effectively removes color from artists' brushes and is a natural vegetable oil that does not evaporate or remove essential oils from the artists' brushes.

The addition of walnut oil to color will slow drying, enhance flow and increase sheen.

Walnut/Alkyd Medium

Concentrated Walnut/Alkyd Medium thins the color, accelerates drying, enhances adhesion between layers and increases surface sheen and flexibility while remaining essentially non-yellowing. Ideally suited for alla-prima and glaze applications. Walnut/Alkyd Medium is certified nontoxic.

Reminder: If improperly discarded, rags, steel wool or other waste may spontaneously combust when combined with vegetable drying oils and artists products made with them. Dispose of contaminated waste, immediately after use, in a sealed, water filled metal container.

Walnut Oil and Walnut/Alkyd Medium are designed to augment the special nature of our oil color but are also completely compatible with other artists oil colors and mediums.

The pigments used in our oil color are identical to those in our watercolor, gouache and acrylic color formulations for ease of color matching in underpainting or mixed media techniques.

Every Artist Deserves The Finest Color That Can Be Created.

HISTORY

Artists' have used walnut oil since the 5th century and have found it to be superior to linseed oil because it yellows and cracks less while being easier to manipulate.

Throughout the 15th century, artists in Europe used nut oil to create works with astonishing brilliance and luminosity. By the mid 1500's, the use of walnut oil was recommended over linseed oil for all forms of painting...as said by Vasari "Nut oil is better because it yellows less". It is known that painters of the Renaissance such as Jan Van Eyck, Albrecht Durer, Leonardo Di Vinci, Titian and later, Rubens and Van Dyck, among others, used nut oil inter-changeably with linseed oil and preferred nut oil because it offered greater ease of manipulation.

It appears that artists' of the European Renaissance did not use solvents to thin their color but preferred to paint directly using the oil in which the color was ground, as their medium..."When they are ground with these oils (Walnut or Linseed) which is their medium, nothing else is needed so far as the colors are concerned, but to lay them on with a brush" Vasari on Technique, Georgio Vasari, 1550

All M. Graham & Co. products are certified by an independent, board certified, toxicologist for conformity to ASTM D4236 under LHAMA in a manner consistent with consumer Product Safety Commission Guidelines. For health and safety information please refer to our Material Safety Data Sheets. You may obtain a copy of our Material Safety Data Sheet by contacting:

M. GRAHAM & Co.
PO Box 215
West Linn, OR 97068-0215
Tel/Fax 503 656 6761
email colormaker@mgraham.com
www.mgraham.com

A *"F.Y.I."* Publication

OIL COLOR

Made With
WALNUT OIL

Artists' Quality

Preferred by artists for more than five centuries, colors ground in walnut oil provide the artist with richer more vibrant color and greater freedom of control over all types of painting application. The result; paintings that are richer, more vivid and easier to create.

Because of Walnut Oils' unique refractive index and non-yellowing nature, colors dispersed in this fine oil are naturally more alive and brilliant. They retain their clarity and are free from the discoloration associated with other drying oils.

Free flowing and slow drying, walnut oil enables delicate passages of finely blended color, rich, jewel-like glazes or juicy, full brush applications without the addition of solvents.

The free flowing nature and lower viscosity of this traditional oil enables the color maker to increase the amount of pigment in each batch resulting in an extraordinary richness, color saturation, brilliance and tinting strength.

M. GRAHAM & CO.

WALNUT VS LINSEED OIL

All drying oils depend upon the amount of unsaturated fatty acids in them to dry and form films. The composition of these fatty acids determine how stable the oil is, how much yellowing will take place, how brittle the film will become over time and how rapidly the film will dry. The composition tells us how well an oil will perform as an artists' vehicle.

A comparison of walnut oil and linseed oil fatty acid composition indicates that walnut oil is more stable, turns rancid less readily, yellows hardly at all and remains more flexible over time.

The primary fatty acids that make up walnut oil and linseed oil are the same. What is different, is the amount occurring in each. Below is a listing of the primary fatty acids, typical percentages and the effect of each.

Acid	Walnut	Linseed	Effect
Oleic	17%	14%	The higher the percentage, the less likely the oil will turn rancid or crack upon drying.
Linoleic	60%	42%	Responsible for the drying of the oil to a tough, flexible film.
Linolenic	12%	38%	Responsible for rancidity, yellowing, embrittlement and cracking due to the rapid oxidation of the paint film.

(% values represent typical distribution with slight variations occurring as a result of different crops.)

Due to its high linolenic acid content, linseed oil forms conjugated fatty acids which, combined with oxygen from the air, form polyunsaturated hydroxy compounds causing both yellowing and brittleness. Linolenic acid, is one of the most unstable fatty acids in the vegetable world.

LF = Light Fastness Key:
I Excellent II Very Good III Acceptable
(Pale tints may fade in direct sunlight)
ST = Staining SD = Sedimentary
T = Transparent ST = Semi Transparent
SO = Semi Opaque O = Opaque

PIGMENT LIST

Description	Composition	LF	Opq
Alizarin Crimson	1:2 Dihydroxyanthraquinone on Alumina Base (PR 83)	III	T
Anthraquinone Blue	Anthraquinone Blue (PB 60)	I	T
Anthraquinone Red	Anthraquinone Red (PR 177)	I	T
Azo Green	Azomethine Copper Complex (PY 129)	I	T
Azo Yellow (Aureolin)	Benzimidazolone Yellow & Arlyamide Yellow (PY 151) (PY 74)	I	ST
Burnt Sienna	Calcined Natural Iron Oxide (PBr 7)	I	ST
Burnt Umber	Calcined Natural Iron Oxide containing Manganese (PBr 7)	I	SO
Cadmium Orange	Cadmium Seleno-Sulfide (PO 20)	I	O
Cadmium Red	Cadmium Seleno-Sulfide (PR 108)	I	O
Cadmium Red Deep	Cadmium Seleno-Sulfide (PR 108)	I	O
Cadmium Red Light	Cadmium Seleno-Sulfide (PR 108)	I	O
Cadmium Yellow	Cadmium Zinc Sulfide (PY 35)	I	O
Cadmium Yellow Deep	Cadmium Zinc Sulfide (PY 35)	I	O
Cadmium Yellow Light	Cadmium Zinc Sulfide (PY 35)	I	O
Cerulean Blue	Oxides of Cobalt and Chromium (PB 36)	I	O
Cobalt Blue	Oxides of Cobalt and Aluminium (PB 28)	I	ST
Dioxazine Purple	Carbazole Dioxazine (PV 37)	II	T
Hansa Yellow	Arylide Yellow (PY 3)	II	ST
Indian Yellow	Isoindolinone Yellow (PY 110)	I	T
Ivory Black	Amorphous Carbon (PBk 9)	I	O
Lamp Black	Nearly Pure Amorphous Carbon (PBk 6)	I	SO
Manganese Blue Hue	Copper Phthalocyanine & Zinc Oxide (PB 15:3) (PW 4)	I	ST
Mars Black	Synthetic Iron Oxide (PBk 11)	I	O
Naphthol Red	Naphthol AS-D (PR 112)	II	SO
Naples Yellow	Natural Iron Oxide, Arylamide Yellow & Titanium Dioxide (PBr 7) (PY 74) (PW 6)	I	O
Olive Green	Azomethine Complex, Chlorinated Copper Phthalocyanine, Isoindololinone Yellow & Amorphous Carbon (PY 129) (PG 7) (PY 110) (PBk 9)	I	T
Payne's Gray	Amorphous Carbon & Silicates of Sodium/Aluminum with Sulfur (PBk 9) (PB 29)	I	SO
Permanent Green Light	Chlorinated Copper Phthalocyanine & Benzimidazolone Yellow (PG 7) (PY 151)	I	SO
Phthalocyanine Blue	Copper Phthalocyanine (PB 15:3)	I	T
Phthalocyanine Green	Chlorinated Copper Phthalocyanine (PG 7)	I	T
Prussian Blue	Ferriammonium Ferrocyanide (PB 27)	I*	T
Quinacridone Red	Quinacridone Red (PR 209)	I	T
Quinacridone Rose	Quinacridone Violet (PV 19)	I	T
Quinacridone Violet	Quinacridone Violet (PV 19)	I	T
Raw Sienna	Natural Iron Oxide (PBr 7)	I	ST
Raw Umber	Natural Iron Oxide containing Manganese (PBr 7)	I	SO
Sap Green (Permanent)	Chlorinated Copper Phthalocyanine, Azomethine Copper Complex & Amorphous Carbon (PG 7) (PY 129) (PBk 9)	I	T
Terra Rosa	Synthetic Iron Oxide (PR101)	I	O
Titanium White	Titanium Dioxide & Zinc Oxide (PW 6) (PW 4)	I	O
Titanium White (Rapid Dry)	Titanium Dioxide & Zinc Oxide (PW 6) (PW 4)	I	O
Transparent Orange Iron Oxide	Synthetic Iron Oxide (PY 42) (PR 101)	I	T
Transparent Red Iron Oxide	Synthetic Iron Oxide (PR 101)	I	T
Transparent Yellow Iron Oxide	Synthetic Iron Oxide (PY 42)	I	T
Turquoise	Copper Phthalocyanine & Chlorinated Copper Phthalocyanine (PB 15:3) (PG 7)	I	T
Ultramarine Blue	Complex Silicate of Sodium & Aluminum with Sulfur (PB 29)	I	T
Ultramarine Violet	Complex Silicate of Sodium & Aluminum with Sulfur (PV 15)	I	T
Van Dyke Brown	Calcined Natural Iron Oxide & Amorphous Carbon (PBr7) (PBk 9)	I	ST
Viridian	Hydrous Chromium Sesquioxide (PG 18)	I	T
Yellow Ochre	Natural Hydrated Iron Oxide (PY 43)	I	O
Zinc White	Zinc Oxide (PW 4)	I	SO