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TEMPERA GRASSA
("Fat Tempera" in Italian)

Any drying oil (linseed, poppy, walnut, safflower) can be combined with yolk to create an emulsion medium known as 'tempera grassa'. Tempera grassa is believed to have been used in the Renaissance as the transition was made in the 15th century from pure egg tempera to oil painting.¹ Tempera grassa has some of the characteristics of each medium: relatively fast drying and linear in nature, but a *little* bit more painterly and blendable. Its characteristics vary, depending on whether it is an:

Egg / Oil Emulsion = more egg yolk than oil in the emulsion. Water-soluble. Dilute paint and clean brushes with water. Paint behaves more like egg tempera. Use the same materials and methods as with pure egg tempera. Paint is a *little* more painterly and finish is *slightly* more saturated and shiny than egg tempera. Surface not as amendable to etching into.

Oil / Egg Emulsion = more oil than egg yolk in the emulsion. Soluble in mineral spirits. Working properties are more like oil paint. Resulting paint film has plasticity more like oil. Finish is closer to oil, more saturated and shiny than pure egg tempera.

Support.² A rigid support under any medium (even oil) helps stabilize the paint. However if you work thinly with tempera grassa, on a regular acrylic ground, a rigid support is not absolutely requisite (since, due to the oil in the paint, it's a bit more flexible than pure egg tempera). If, on the other hand, you plan to build up multiple layers of tempera grassa and/or work on true gesso, use an inflexible substrate, as with pure egg tempera.

Ground. *Water*-based tempera grassa behaves and adheres better on an absorbent ground, such as traditional gesso or a high PVC synthetic polymer gesso. *Solvent*-based tempera grassa can be applied to either true gesso, a high PVC synthetic polymer gesso, or even regular acrylic gesso.

Commerical Tempera Grassa. The tubed "egg tempera" paints (all water-soluble) sold by Sennelier and Daler Rowney are actually egg and oil emulsions. The Sennelier paints also contain gum Arabic.³



Blue Irises and Butterflies. Tempera Grassa, 9 x 6 1/2", 2018. Because this image was painted in tempera grassa, the dark background appears more saturated, the irises a bit more painterly. Egg tempera, with its high PVC, is wonderfully receptive to incising the surface with a sharp tool (i.e. to delineate lettering) When I tried to do so in this painting, my fine pointed stylus dragged and tore at the paint - the more plastic quality of tempera grassa wasn't nearly as receptive to incising. Each medium has benefits and limitations.

¹ It's uncertain the extent to which tempera grassa was used in the 15th-16th centuries. No contemporary descriptions are known and it is a difficult medium to analyze, for reasons outlined in National Gallery Technical Bulletin, Vol. 26, 2005. However a 2012 study affirms that the 15th c. artist Lorenzo Lotto "selected a tempera grassa technique throughout most of his creative life, although not continuously." See [An analytical investigation of the painting technique of Italian Renaissance master Lorenzo Lotto](#), Journal of Cultural Heritage, Elsevier, July-September 2012. Another good discussion of this period, including references to tempera grassa, is Nuttall, Paula, [From Flanders to Florence, The Impact of Netherlandish Painting, 1400-1500](#), Yale University Press, 2004.

² The directions for Sennelier tubed 'egg tempera' paints (which are actually egg oil emulsions) recommend both canvas and paper as supports. Yet the same instructions say impasto is *not* recommend; this is a hint that the paint isn't entirely flexible, and apt to crack in thick layers on top of flexible supports (such as the canvas and paper recommended by Sennelier).

³ Gum Arabic, in addition to its binding properties, is a natural emulsifier. Zecchi's tubed egg tempera do *not* contain oil; they're made from freeze dried egg yolk, gum Arabic, and a touch of preservative. Little to no testing has been done on the short or long-term properties in a paint film of dehydrated egg, so the purpose or viability of its use in a tubed paint is, at this point, unclear.

Homemade Tempera Grassa. You can make tempera grassa yourself, literally within a few minutes. There are many different recipes. Here is a simple yet effective one.

Basic Recipe For Tempera Grassa

- **1 egg yolk.** Extract the yolk from its sac to eliminate any stringy, fibrous material.
- **Drying oil** (linseed, walnut, poppy, safflower), **about 1 tablespoon per yolk.** The quantity of oil should be slightly *less* than the amount of yolk. I use sun-thickened linseed oil; it's a dense, faster drying oil.

Slowly add the oil, drop by drop, to the yolk while stirring or whisking vigorously (like making mayonnaise). For small amounts, use a mini whisk to get a good emulsion. The resulting medium looks like hollandaise sauce. Combine with pigments (or pigment pastes) as you would to make tempera paint. Thin with water as needed (but if you have more oil than yolk in the medium, use mineral spirits to thin). Medium may be kept in the fridge for several days. Throw away if you detect *any* hint of rotten egg smell or mold.

Many recipes add a natural resin, such as 1 teaspoon dammar. A resin makes the medium faster drying and glossier, but contributes yellowing and brittleness to the paint film. Another problem is that resins dry through evaporation of their solvent, whereas oil and egg yolk polymerize - two different drying processes that can cause complications in a paint film. Finally, if there is resin within a paint film and a varnish is applied and/or latter removed, solvent could affect the resin within the paint film (weaken it or lift paint). For all these reason, **I don't recommend adding a resin to tempera grassa.**

Another common additive is a preservative such as wine or vinegar; however these substances can contain organic matter that putrefies and attracts mold. Instead, use pure alcohol or Phenol as a preservative. Or, as I prefer, use no additives, refrigerate medium when not in use, and/or make fresh medium as needed.

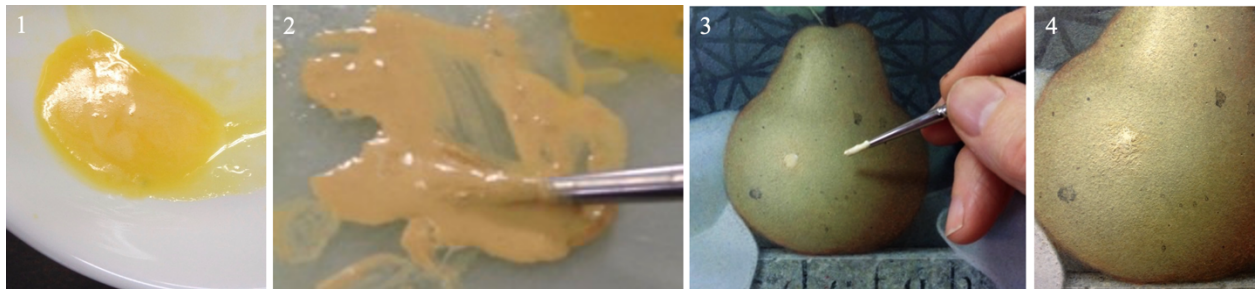


Photo 1: A freshly made batch of tempera grassa – it looks like hollandaise sauce. **Photo 2:** I've tempered yellow ochre and titanium white with tempera grassa medium (the same as you would temper with egg yolk medium). It makes a slightly richer, oily and dense paint than pure egg tempera. **Photo 3:** Adding a tempera grassa highlight to an egg tempera painted pear. Tempera grassa sits perfectly well atop pure tempera (although the first few strokes may sink in a bit). Tempera grassa is more capable of impasto highlights than pure tempera. **Photo 4:** This image was taken in raking light to show the three-dimensionality of the tempera grassa highlight on the pear. Impasto highlights increase the appearance of illumination in an image, and transitioning to tempera grassa is one way to achieve this effect.