

12200 Copper resinate

Copper resinate is the name given to the transparent green glazes that are colored by copper salts of resin acids.

One of the earliest known recipes for the preparation of copper resinates dates from the seventeenth century and is found in the De Mayerne manuscript. Copper resinate appears mainly as a glazing pigment that was used in Italian easel painting done in oil in the sixteenth century. It was also found on Northern paintings dating from the fifteenth and sixteenth century. However, after the sixteenth century it seems not to be a usual feature of the palette in Europe. There are numerous recipes for copper resinate calling for different ingredients, such as Venice turpentine, colophony, linseed oil, pine resin, mastic, oil of turpentine and even a yellow lake pigment (Van de Graaf). Verdigris is however always the principal ingredient giving the glaze its green color. A recipe from a Florentine book gives a recipe for "making a green to put on glass instead of blinds" and recommends that copper resinate glaze is re-warmed before using it. This would allow it to flow again and produce a thin and even coat to be formed. Recipes that describe the production of copper resinate for painting normally call for an addition of a drying oil to the glaze.

Copper resinate is mainly composed of copper salts of resin acids. Thus, if resins from conifers are used for its preparation, such as Venice turpentine, then copper salts of abietic acid ($C_{19}H_{29}COOH$) are formed as the main product. Copper resinate is soluble in numerous organic solvents, such as benzene, chloroform, mineral spirits, and so on, but it is insoluble when locked in a dried oil film.

Copper resinate has a neutral warm green color. A phenomenon often encountered in paintings is that areas originally green in color, done with copper resinate glazes, display a brown discoloration at the surface. This color change is significantly less in areas hiding behind the frame than in areas that are exposed to light. Often underneath the protective film of discoloration, unchanged green persists. A possible cause for the discoloration is the decomposition of the glazes under the influence of ultraviolet light.

Copper resinate consists of a highly viscous transparent green resin paste and can be thinned with turpentine.

Excerpts from:

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