

type	historical reference	description	support	abrasive	binder	pigments	preparation	reference
recipe		M&K METALPOINT BASIC GROUND: 1 abrasive: 1 RSG: 18 water: 1 pigment, diluted with water as necessary to reach consistency of thin cream	paper, parchment, particle board (?)	bone ash (1 g)	rabbit skin glue (1 g RSG : 18 g water, to start)	mineral* pigment of choice (1 g) *these are more commonly used in historical recipes	add RSG and water to beaker in bain marie of cold water; heat gently, keeping it 40–60 C; add bone ash (and pigment, if using); dilute to consistency of thin cream; apply with brush in 2 coats to taped-down (and burnished, if necessary) support; burnish through lens paper as desired	See table entries below
reconstruction		Basic ground		bone ash (1 g)	rabbit skin glue (1 g RSG : 25 ml water)			Jun Nakamura, in conversation
reconstruction		Basic ground	good quality drawing paper or illustration board	bone ash (≤ 1 oz bone ash)	rabbit skin glue (1 oz RSG : 18 oz cold water)	pigment of your choice (≤ 1 oz)	put glue and cold water in a double boiler; warm slowly and stir until dissolved; add bone ash (and roughly equal amount of pigment, if using) and stir until dissolved. Aim for a thinnish, creamy paint	https://julianadeflorey.livejournal.com/4647.html
reconstruction	Cennini; reconstruction of Holbein's pink ground	Salmon pink ground	hand-made laid paper, dampened and stretched using paper tape	whiting (5.2 g) (i.e., "Spanish white" = purified chalk (calcium carbonate))	rabbit skin glue (1 RSG : 6 water to start, later diluted)	vermillion (0.25g) + yellow ochre (0.4g)	glue mixed with water (1:6) and heated; abrasive and pigments added to make thick paste; diluted with additional glue and water to consistency of thin cream; 2 coats applied	Appendix 2 of Victoria Button, 'The Portrait Drawings of Hans Holbein the Younger: Function and Use Explored through Materials and Techniques' (Ph.D., The Royal College of Art/Victoria & Albert Museum, 2013).
reconstruction	unspecified	Basic ground	rag paper	Chalk from Bologna, light (Kremer) (i.e., calcium sulphate)	rabbit skin glue (5%, i.e., 1:20)			Kristi Dahm, 'The Stylus Revealed: A Metalpoint Identification Study of Fifteenth-and Sixteenth-Century Italian Drawings in the Metropolitan Museum of Art', The Paper Conservator 28, no. 1 (2004): 81
reconstruction	unspecified	Basic ground	rag paper	Champagne chalk (Kremer) (i.e., calcium carbonate)	rabbit skin glue (5%, i.e., 1:20)			Dahm, 81.
reconstruction	unspecified	Basic ground	rag paper	Bone ash (Kremer) (i.e., tri-calcium phosphate)	rabbit skin glue (5%, i.e., 1:20)			Dahm, 81.
recipe	Cennini (V)	Basic ground	boxwood panel (9"x9")	very finely ground bone ash (< ½ bean)	saliva		mix bone ash with saliva, and spread over panel using fingers. Before it dries, hold panel in left hand and tap it with right hand to distribute evenly.	Cennino Cennini, The Craftsman's Handbook, trans. Daniel V. Thompson (New York: Dover Publications, 1954), 4.
recipe	Cennini (X)	Basic ground	(sheep) parchment	very finely ground bone ash (< ½ bean)	none		sprinkle it on, spread it about, and dust off excess with a hare's foot	Cennini, 6–7.
recipe	Cennini (XVI)	Green tinted ground	paper or parchment* *requires extra prep. See Cennini XVII.	very finely ground bone ash (≤ 1 bean)	druggists' glue (hide, not fish)	solid white lead (½ nut) + terre-verte (½ nut) + ochre (¼ nut) + vermillion (≤ ½ bean)	soak a leaf of druggists glue for 6 hours in 2 common goblets of water. Boil, skim, strain and add pigments & ash; consistency should allow tinted size to flow freely from brush; apply 4-5 coats, waiting for each coat to dry between applications; when dry, rub with blade of penknife to remove any roughness	Cennini, 9–10.
recipe	Cennini (XVIII)	Tourmesol tinted ground	as above	as above	as above	coarse lead white (½ oz) + hematite (≤ 1 bean)	as above	Cennini, 11.
recipe	Cennini (XVIII)	Indigo tinted ground	as above	as above	as above	lead white (½ oz) + Bagdad indigo (2 beans)	as above	Cennini, 11–12.
recipe	Cennini (XX)	Reddish, almost peach tinted ground	as above	as above	as above	coarse lead white (2 beans) + terre-verte (½ oz) + light sinoper (≤ 1 bean)	as above	Cennini, 12.
recipe	Cennini (XXI)	Flesh color	as above	as above	as above	coarse lead white (½ oz) + vermillion (< 1 bean)	as above	Cennini, 12.

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recipe	Cennini (XXII)	Greenish grey or drab tinted ground	as above	as above	as above	coarse lead white (¼ oz) + light ochre (1 bean) + black (< ½ bean)	as above	Cennini, 12.
recipe	John Archerius, A Treatise upon colors of various kinds (late 14th c.), 296	Basic ground	paper, parchment, cloth, sindon, wooden panels	very finely ground bone ash or horn ash	size (hide glue) or parchment glue		mix as much bone as as wanted with size to a moderate consistency and warmth; beush onto burnished paper and let dry; 2 coats is usually good, 1 is often sufficient; if desired, burnish surface through another unused paper	Mary P. Merrifield, ed., Medieval and Renaissance Treatises on the Arts of Painting: Original Texts with English Translations (Mineola, N.Y: Dover Publications, 1999), 274.
technical analysis	analysis of Pier Francesco Foschi paper	Grey ground				lead white, bone black, azurite or blue verditer, and (?) bone white		Dahm, 83.
technical analysis	analysis of Domenico Ghirlandaio paper	Pink ground				lead white, vermilion, and (?) red lead, white chalk, and bone white		Dahm, 83.
technical analysis	analysis of Filippino Lippi paper	Pink ground				lead white, red lead, bone black, and (?) bone white or white chalk		Dahm, 83.
technical analysis	analysis of Pietro Perugino paper	white ground				lead white and bone white		Dahm, 83.
technical analysis	analysis of circle of Perugino or Raphael paper	Beige ground				lead white, bone white, iron-oxide red, and blue verditer		Dahm, 83.
technical analysis	analysis of Leonardo school paper	Blue-green ground				lead white, bone black, blue verditer and/or azurite, and (?) bone white or white chalk		Dahm, 83.
technical analysis	analysis of Leonardo paper	Pink-beige ground				lead white, bone black, vermilion, and (?) red lead and azurite and/or blue verditer		Dahm, 83.
technical analysis	analysis of Rembrandt paper (Berlin, kupferstichkabinett)		parchment	bone white				Reiche et al., 'Spatially Resolved Synchrotron Radiation Induced X-Ray Fluorescence Analyses of Rare Rembrandt Silverpoint Drawings', Applied Physics A 83, no. 2 (2006): 170, https://doi.org/10.1007/s00339-006-3505-4 .
technical analysis	analysis of numerous metalpoint drawings in French National Collections			bone white		vermilion, red ochre, lead red, yellow ochre, indigo, carbon black, lead-tin yellow		See table 5 in A. Duval, H. Guicharnaud, and J. C. Dran, 'Particle Induced X-Ray Emission: A Valuable Tool for the Analysis of Metalpoint Drawings', Nuclear Instruments and Methods in Physics Research Section B: Beam Interactions with Materials and Atoms, Radiation and Archaeometry, 226, no. 1 (2004): 60–74, https://doi.org/10.1016/j.nimb.2004.02.020 .