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**Historical recipes for preparatory layers for oil paintings in manuals, manuscripts and handbooks in North West Europe, 1550-1900: analysis and reconstructions**

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## Appendix 13 Ground colours mentioned in recipes 1550-1900, North West Europea and South Europe

Note: if information regarding the binding medium or the ground colour appears between square brackets, this information does not appear in the recipe text but is an interpretation by the author, based on pigmentation mentioned in the recipe text.

### 13a Panel ground colour

<i>source, date, page</i>	<i>geographic origin recipe</i>	<i>support</i>	<i>pigmentation (of upper ground layer)</i>	<i>binding medium</i>	<i>ground colour</i>
Vasari 1550 (1568): 52	Italy	panel	lead white, massicot, 'terra da campana'	nut oil	[flesh]
Van Mander 1604: 47v, 48r	Netherlands	panel	-	[oil]	flesh colour
De Mayerne 1620-44: 11	England	panel	lead white, umber	[oil]	[warm grey or drab]
De Mayerne 1620-44: 90v	England	panel	ceruse, umber	oil	[warm grey or drab]
Bate 1633 (1654): 167 <sup>793</sup>	England	panel	lead white	oil	white
Norgate 1649 <sup>794</sup>	England	panel	lead white	oil	white
Pacheco 1649: 382-3	Spain	panel	lead white, Italian umber	Linseed oil	[warm grey or drab]
King 1653-7: 52, 52v	England	panel	ceruse, charcoal black, very little red lead	[oil]	[grey]
'Art of painting in oyle' 1664: 94-5	England	panel	lead white, minium, Spanish brown, umber, (lamp black)	Linseed oil	[greyish brown]
Salmon 1672: 141	England	canvas panel	lead white	oil	white
De la Fontaine 1679: 27-8	France	panel	Spanish white	glue	white
De la Fontaine 1679: 27-8	France	panel	-	-	grey
De Piles 1684: 64-5	France	panel canvas		-	white
Beurs 1692: 19-20	Netherlands	panel	lead white, black	oil	grey
Beurs 1692: 19-20	Netherlands	panel	lead white, umber	oil	[warm grey or drab]
De la Hire 1730:	France	panel	lead white or ceruse,	[oil]	[warm grey]

<sup>793</sup> Transcript of 1633 edition by (Talley 1981: 172) checked against 1654 edition.

<sup>794</sup> Transcription Hardie 1919: 91

<i>source, date, page</i>	<i>geographic origin recipe</i>	<i>support</i>	<i>pigmentation (of upper ground layer)</i>	<i>binding medium</i>	<i>ground colour</i>
708- 710		canvas copper	little brown red, little carbon black		
Mss. Hist. Helv. XVII 234 1750- 1800: 85-6 <sup>795</sup>	Switzerland	panel	brown red	oil	brown red
Pernety 1756: lxxxviii	France	panel	lead white, little brown red and carbon black	[oil]	reddish grey
Dossie 1758: 203- 4	England	panel	lead white	oil	white
Dossie 1758: 203- 4	England	panel	lead white, ochre	Hot drying oil	yellow
Dossie 1758: 203- 4	England	panel	lead white or flake white	[oil]	white
Hallen 1761: 321- 2	Germany	panel	flake white, brown- red, charcoal black	oil	warm grey
Jombert 1766: 135-6	France	panel	lead white, brown red, carbon black	oil	warm grey
<i>Valuable secrets</i> 1775: 133	England	panel	whiting	glue, covered with boiling oil	whitish
<i>Nieuwen verlichter</i> 1777: 170	Netherlands	panel	lead white, brown red, carbon black	[oil]	warm grey
Pileur d'Aligny 1779: 72	France	panel	white	glue	white
Dutens 1779: 62	France	panel	lead white, you may add brown red	oil	white pinkish
Monton 1792: 42	Spain	panel	ochre	oil	yellow
Van Leen c. 1800: 18	Netherlands	panel	calcined lead white	boiled oil, turpentine oil, turpentine balsam	whitish
<i>Compendium</i> 1801: 215-6	England	canvas panel	jess [gesso]	size	white
Ibbetson 1803: 11-2	England	panel	lead white	dpirits of turpentine, drying oil	white
Fokke Simonsz 1803-4: 84-5	Netherlands	panel	chalk	glue	white
Smith 1825: 357- 8	France	panel	burnt bone ashes	wheat flour paste	whitish

<sup>795</sup> Transcribed in Stettler 1987.

<i>source, date, page</i>	<i>geographic origin recipe</i>	<i>support</i>	<i>pigmentation (of upper ground layer)</i>	<i>binding medium</i>	<i>ground colour</i>
Hayter 1825: 293-4 <sup>796</sup>	England	canvas panel	[unspecified]	gum Arabic, gum mastic, wax	grey
Boutard 1826: 36	France	canvas panel copper	-	-	light grey
Boutard 1826: 36	France	canvas panel copper	-	-	brown red
Bouvier 1827: 571-2	France	all supports	lead white, yellow ochre, little clear red nr. 7	nut oil	light orangy gold
Bouvier 1828: 423-4	Germany	all supports	lead white, yellow ochre, bright red ochre nr. 7	nut oil	bright, gold, little orangy
Vergnaud 1831: 119	France	all supports	lead white	oil	white
Fernbach 1834: 5-7	Germany	panel	lead white, Mannheim chalk	amber varnish, turpentine oil	white
Fielding 1839: 79- 80	England	panel	calcined ground sheeps trotter bones, artists (colours)	wheat flour, water	white [unspecified colour]
Fielding 1839: 81- 2	England	panel	lead white	drying oil, spirits of turpentine	white
Fielding 1839: 82	England	panel	chalk or plaster or whiting	size	white
Cawse 1840: 20- 1, 28	England	canvas panel	whiting, Paris plaster (colour)	size	white [unspecified colour]
Cawse 1840: 21	England	canvas panel	tobacco pipe clay, Spanish white (colour)	water, drying oil	white [unspecified colour]
Cawse 1840: 21	England	panel	lead white	[oil]	white
'Omnim Gathm No 4' 1844-6 (recipe date 1844): 04P016L04	England	panel	Grecian powder, lead white	turpentine, anime varnish, siccatives	white
Hampel 1847: 26	Germany	panel	lead white, ochre	oil varnish	[cream]
Hundertpfund 1849: 105-9	England	vanvas panel	lead white <sup>797</sup>	oil	[white]

<sup>796</sup> The colour of this ground appears in a section that describes the so-called 'Grecian method' of painting, a wax painting method which is different from standard oil painting. See Carlyle 1991, vol. 1: 167-8 or Carlyle 2001: 117-8 for more information Hayter's sources for and descriptions of this method.

<sup>797</sup> A layer of flour is spinkled on while the lead white/oil layer is still tacky

<i>source, date, page</i>	<i>geographic origin recipe</i>	<i>support</i>	<i>pigmentation (of upper ground layer)</i>	<i>binding medium</i>	<i>ground colour</i>
Blockx 1881: 4	Belgium	canvas panel	-	-	white
<i>Technische Mitteilungen</i> , nr 25 (1886): 39	Germany	canvas panel	slaked chalk, white bole or china clay	Cologne glue or rabbitskin glue, with shellac sealing layer on top	[light orange]
Raycroft et al. 1888: 23-4	England	canvas panel board paper	-	-	light grey [white]
Vibert 1892: 184	England	panel	lead white	painting varnish, little siccativ	white
Vibert 1892: 186-8, 108	England	canvas panel board	zinc white	casein paste	white
Oughton 1892: 36	England	panel	flake white, little bright red	[oil]	[pinkish] [warm white]
<i>Technische Mitteilungen</i> , nr 20 (1895): 1-2	Germany	canvas panel	chalk ground	glue, with boiled linseed oil sealing layer	[cream]

### 13b Canvas ground colour

<i>source, date, page</i>	<i>geographic origin recipe</i>	<i>support</i>	<i>pigmentation (of upper ground layer)</i>	<i>binding medium</i>	<i>ground colour</i>
Vasari 1550 (1568): 52	Italy	canvas	lead white, massicot, 'terra da campana'	nut oil	[flesh colour]
Vasari 1550 (1568): 52	Italy	canvas	lead white	flour paste with nut oil	[cream]
Borghini 1584 (1730): 138	Italy	canvas	Volterra gypsum	flour paste, glue, oil	[cream]
'Reglas para pintar' c. 1575-1600: 1-1v <sup>798</sup>	Spain	canvas	lead white, minium, black	oil	[warm grey]
Ms. Fr 640 1580-1600: perso 8	France	canvas	ceruse, yellow ochre, little massicot	[oil]	[cream, light yellow]
Ms. Fr 640 1580-1600: 57 perso 115	France	canvas	ashes	Oil	[grey]
Armenini 1587: 124-5	Italy	canvas	lead white, massicot, terra di campana	common varnish	[flesh colour]

<sup>798</sup> Transcription by Bruquetas-Galán 1998: 37

<i>source, date, page</i>	<i>geographic origin recipe</i>	<i>support</i>	<i>pigmentation (of upper ground layer)</i>	<i>binding medium</i>	<i>ground colour</i>
Armenini 1587: 124-5	Italy	canvas	verdigris, lead white, umber	common varnish	[warm grey]
De Mayerne 1620-44: 5	England	canvas	lead white, charcoal black, umber	oil	[warm grey]
De Mayerne 1620-44: 11	England	canvas	lead white, umber (a little)	[oil]	[warm grey or drab]
De Mayerne 1620-44: 20v	England	canvas	lead white, ochre, black	[oil]	[warm grey]
De Mayerne 1620-44: 28v	England	canvas	ochre	walnut oil, litharge	[ochre]
De Mayerne 1620-44: 90	England	canvas	ceruse, umber	[oil]	[warm grey or drab]
De Mayerne 1620-44: 98v	England	canvas	lead white, carbon black	[oil]	[grey]
De Mayerne 1620-44: 85	England	canvas	lead white, red ochre, little umber, very little charcoal black	[oil]	[blueish grey]
De Mayerne 1620-44: 87	England	canvas	ceruse, umber or yellow ochre or red burnt ochre	[oil]	[beige] [light orange] [warm grey]
De Mayerne 1620-44: 95	England	canvas	lead white, smalt, lake (little)	[oil]	[purplish grey]
De Mayerne 1620-44: 96	England	canvas	lead white, umber (little), smalt	[oil]	[blueish grey]
De Mayerne 1623-44: 78-9	England	canvas	calcined bones, little ceruse or lead white, little massicot	[oil]	[whitish]
Manuscript Sloane 1990 c. 1623-44: 78-9	England	canvas	lead white, minium	[oil]	[light orange]
Bate 1633 (1654): 167 <sup>799</sup>	England	canvas	lead white	oil	white
Lebrun 1635 <sup>800</sup>	France	canvas	potter's earth, yellow earth, ochre	linseed- or nutoil	[brown or ochre]
Pacheco 1649: 383-4 <sup>801</sup>	Spain	canvas	red earth	oil	red
Pacheco 1649: 383-4 <sup>802</sup>	Spain	canvas	lead white, minium, charcoal black	linseed oil	[warm grey]
Symonds 1650- 2: 10	England Italy	canvas	red earth, lead white, chalk, carbon black	[oil]	[greyish red]
<i>Tractato</i> 1656 <sup>803</sup>	Spain	canvas	chalk from crushed shells	linseed oil	[cream]

<sup>799</sup> Transcript of 1633 edition by (Talley 1981: 172) checked against 1654 edition

<sup>800</sup> Transcription Merrifield 1849 (1999): 772

<sup>801</sup> Translated by Véliz 1986: 68.

<sup>802</sup> Translated by Véliz 1986: 68.

<sup>803</sup> Translated by Véliz 1986: 111

<i>source, date, page</i>	<i>geographic origin recipe</i>	<i>support</i>	<i>pigmentation (of upper ground layer)</i>	<i>binding medium</i>	<i>ground colour</i>
Lana 1670: 158	Italy	canvas	umber, little lead white, red earth	linseed oil	[brown]
Volpato c. 1670 <sup>804</sup>	Italy	canvas	terra da bocali, red earth, little umber	linseed oil	[red]
Salmon 1672: 141	England	canvas panel	lead white	oil	white
Beale pocketbooks 1677, 1681: 56v <sup>805</sup>	England	canvas	-	-	reddish
Eikelenberg 1679-1704: 385	Netherlands	canvas	umber, brown red, white, paint from pencil tray or pot	[oil]	'not too dark' [greyish brown]
De Piles 1684: 64-5	France	panel canvas		-	white
Félibien 1676: 407-8	France	canvas	brown red, lead white	nut or linseed oil	brown red
Félibien 1676: 407-8	France	canvas	lead white, carbon black	nut or linseed oil	greyish
Beurs 1692: 17- 20	Netherlands	canvas	umber, [lead white]	oil	[warm grey or drab]
Hidalgo 1693 <sup>806</sup>	Spain	canvas	almagra and umber or Fuller's earth, siccative	boiled linseed oil	[brown]
Dupuy du Grez 1699: 244-5	France	canvas	-	-	white
Dupuy du Grez 1699: 243-4	France	canvas	lead white, carbon black	[oil]	grey
Palomino 1715, 1724, vol. 2: 32- 3	Spain	canvas	clay or marl (Fuller's earth), red earth, old colours, brown earth <sup>807</sup>	linseed oil	[warm brown]
Palomino 1715, 1724, vol. 2: 34- 5	Spain	canvas	sifted ashes <sup>808</sup>	mixed with glue, impregnated with oil	[greyish]
Chambers 1728, vol 2: 735 <sup>809</sup>	England	canvas	lead white, charcoal black	[oil]	grey
Cröker 1729: 74- 7	Germany	canvas	bole	varnish	[orange/red]
De la Hire 1730: 708- 710	France	panel canvas	lead white or ceruse, little brown red, little	[oil]	[warm grey]

<sup>804</sup> Transcription Merrifield 1849 (1999): 731

<sup>805</sup> Transcribed by Talley 1981: 287

<sup>806</sup> Translated by Véliz 1986: 137

<sup>807</sup> Translated by Véliz 1986: 150

<sup>808</sup> Translated by Véliz 1986: 152

<sup>809</sup> Recipe details taken from transcript by Kraft 2005

<i>source, date, page</i>	<i>geographic origin recipe</i>	<i>support</i>	<i>pigmentation (of upper ground layer)</i>	<i>binding medium</i>	<i>ground colour</i>
		copper	carbon black		
Barrow 1735, vol 2: n.p.	England	canvas	white lead, charcoal black	[oil]	ash colour
Chomel 1743: 948	Netherlands	canvas	lead white, charcoal black	[oil], little spike oil	grey
Mss.Hist.Helv.XV II 233 1750- 1800: 50 <sup>810</sup>	Switzerland	canvas	brown red, lead white, chalk	oil	[brown]
Barrow 1754: n.p.	England	canvas copper	lead white, charcoal black	[oil]	grey
Pernety 1756: 295-6	France	canvas	-	-	white
Smith 1756: 58	England	canvas	lead white, little black	linseed oil	grey
Dossie 1758: 203	England	canvas	white lead, [black]	oil	grey
École 1759: 173- 4	France	canvas	lead white, carbon black	[oil]	grey
Hallen 1761: 322	Germany	canvas	red bole	oil	orange/brown /red
Jombert 1766: 135-6	France	panel	lead white, brown red, carbon black	oil	warm grey
Jombert 1766: 126-31	France	canvas	lead white, brown red, carbon black	[oil]	warm grey
Chomel 1767: 869	France	canvas	lead white, carbon black	[oil]	grey
Griselini and Fassadoni 1772: 269	Italy	canvas	lead white, carbon black	[oil]	grey
Watin 1772: 190-1	France	canvas	lead white, carbon black	half nut oil, half linseed oil	grey
<i>Valuable secrets</i> 1775: 133-5	England	canvas	lead white, charcoal black	[oil]	grey
<i>Nieuwen verlichter</i> 1777: 170	Netherlands	copper	lead white, brown red, carbon black	oil	warm grey
<i>Nieuwen verlichter</i> 1777: 167	Netherlands	canvas	lead white, brown red, carbon black	[oil]	warm grey
Pileur d'Aligny 1779: 70	France	canvas	lead white	[unspecified] , honey	white
Pileur d'Aligny 1779: 69-70	France	canvas	lead white, carbon black	oil	grey
Dutens 1779: 52	France	canvas paper	black, ochre, white, (brown red)	[oil]	warm grey
Pernety 1781: 08	France	canvas	lead white, carbon	[oil]	grey

<sup>810</sup> Transcribed in Lehmann 2002.



<i>source, date, page</i>	<i>geographic origin recipe</i>	<i>support</i>	<i>pigmentation (of upper ground layer)</i>	<i>binding medium</i>	<i>ground colour</i>
			black		
<i>Artist's assistant</i> c. 1785: 93	England	canvas	lead white, carbon black	drying oil, [spike oil?]	grey
<i>Encyclopedie méthodique</i> 1789: 145	France	canvas	lead white, carbon black	half nut oil, half linseed oil	grey
<i>Golden cabinet</i> 1793: 112	United States	canvas	chalk	size, little honey	white
<i>Golden cabinet</i> 1793: 112	United States	canvas	lead white, carbon black	[oil]	grey
<i>Maler- og forylder handbok</i> n.d.: 70-1	Denmark	canvas	pale white, coal black	linseed oil	[grey]
<i>Practical treatise</i> 1795: 207-8	England	canvas	black of burned peach stones, [lead] white	[unspecified]	grey
<i>Practical treatise</i> 1795: 158	England	canvas	brown ochre, white and light red	[unspecified]	tanned leather
<i>Praktisches Handbuch</i> 1795: 84-5	Germany	canvas	lead white, carbon black	half nut oil, half linseed oil	grey
Krünitz 1799, vol 76: 623-5	Germany	canvas	lead white, charcoal black	half nut oil, half linseed oil	grey
Sheldrake 1798: 297-8	England	canvas	umber broken with red, yellow or blue, diluted with chalk or whiting	distemper	[brown]
<i>Secrets</i> 1801: 151-2	France	canvas	lead white, carbon black	[oil]	grey
Simis 1801: 158	Netherlands	canvas	light colour	[oil]	light colour
<i>Compendium</i> 1801: 215-6	England	canvas panel	jess [gesso]	size	white
<i>Compendium</i> 1801: 216	England	canvas	peach stone black, [lead] white	[Unspecified ]	grey
Hodson and Dougall 1805: 244	England	canvas	-	-	tanned leather
Sully 1809-71: 019	United States	canvas	whiting	glue, oil	white
Sully 1809-71 (recipe date 1818): 066	United States	canvas	whiting	[unspecified]	whitish
Sully 1809-71 (recipe date	United States	canvas	lead white	paste, oil, litharge	white

<i>source, date, page</i>	<i>geographic origin recipe</i>	<i>support</i>	<i>pigmentation (of upper ground layer)</i>	<i>binding medium</i>	<i>ground colour</i>
1826): 036					
Sully 1809-71 (recipe date 1828): 046	United States	canvas	whiting	oil	white <sup>811</sup>
Sully 1809-71 (recipe date 1840): 106-7	United States	canvas	whiting	size	white
Sully 1809-71 (recipe date 1849): 134-5	United States	canvas	lead white	linseed oil, starch, water	white
Sully 1809-71 (recipe date 1855): 156	United States	canvas	lead white	Skimmed milk	white
Sully 1809-71 (recipe date 1856): 156	United States	canvas	lead white	[oil]	White
Sully 1809-71 (recipe date 1867): 176	United States	canvas	lead white, pinch of vermilion	skimmed milk	whitish
Stöckel 1825: 181-3	Germany	canvas	lead white, charcoal black	lightly boiled oil varnish	grey
Hayter 1825: 293-4	England	canvas panel	[unspecified]	gum Arabic, gum mastic, wax	grey
Boutard 1826: 36	France	canvas panel copper	-	-	light grey
Boutard 1826: 36	France	canvas panel copper	-	-	brown red
Riffault 1826: 183-4	France	canvas	lead white, carbon black	nut oil, linseed oil	grey
Bouvier 1827: 571-2	France	all supports	lead white, yellow ochre, little clear red nr. 7	nut oil	light orangy gold
Bouvier 1827: 571-2	France	canvas	lead white with little vine black, or with little red ochre pinch of black, or with yellow ochre with little red ochre	[oil]	[grey warm grey orange]
Bouvier 1827: 577-80	France	canvas	pipe clay, little red ochre, light yellow ochre	flour paste	[warm white light yellow]
<i>Artist &amp;</i>	United	canvas	lead white, carbon	[oil]	grey

<sup>811</sup> Underneath this layer is a layer of yellow soap dissolved in water with either lamp black, yellow ochre or whiting ground in drying oil. It is possible that this layer would shimmer through, considering the possible colour difference.

<i>source, date, page</i>	<i>geographic origin recipe</i>	<i>support</i>	<i>pigmentation (of upper ground layer)</i>	<i>binding medium</i>	<i>ground colour</i>
<i>tradesman's guide 1827: 38-9</i>	States		black		
Bouvier 1828: 423-4	Germany	all supports	lead white, yellow ochre, bright red ochre nr. 7	nut oil	bright, gold, little orangy
Bouvier 1828: 420-3	Germany	canvas	lead white, vine black or other black	oil	ash
Bouvier 1828: 420-3	Germany	canvas	lead white, red ochre with little black	oil	[warm grey]
Bouvier 1828: 420-3	Germany	canvas	lead white, Yellow ochre, little red ochre	oil	[light orange] [light yellow]
Bouvier 1828: 428-30	Germany	canvas	pipe clay, light yellow ochre, little red ochre	starch or fine flour, water	[warm white] [light yellow]
Montabert 1829: 158	France	canvas	white	soft glue	white
Montabert 1829: 158-9	France	canvas	ochre	oil	[yellow]
Montabert 1829: 158-9	France	canvas	white	oil	white
Montabert 1829: 161-2	France	canvas	[unspecified]	oil	grey
Vergnaud 1831: 119	France	all supports	lead white	oil	white
Vergnaud 1831: 137-8	France	canvas	lead white, carbon black	linseed oil, nut oil	grey
Arsenne and Denis 1833: 335- 7	France	canvas	lead white, black, red ochre	[oil]	grey warm grey white
Bickes 1834: 133-4	Germany	canvas	chalk	glue	white
Fernbach 1834: 4-5	Germany	canvas	lead white, pipe clay (Mannheim clay)	oil boiled with bread	white
<i>Nyt magazin</i> 1838: 261-2	Denmark	canvas	slaked chalk, lead white		white
Sarsfield Taylor/Merimee 1839: 218-9	England	canvas	ceruse	[oil]	white
Sarsfield Taylor/Merimee 1839: 220-1	England	canvas	chalk	glue	white
Cawse 1840: 20- 1, 28	England	canvas panel	whiting, Paris plaster (colour)	size	white [unspecified colour]
Cawse 1840: 21	England	canvas panel	tobacco pipe clay, Spanish white (colour)	water, drying oil	white [unspecified colour]

<i>source, date, page</i>	<i>geographic origin recipe</i>	<i>support</i>	<i>pigmentation (of upper ground layer)</i>	<i>binding medium</i>	<i>ground colour</i>
Roberson 1840: n.p.	England	canvas	dry white, lead white, Paris plaster	drying oil, goldsize, copal	[whitish]
Hampel 1846: 22-5	Germany	canvas	lead white, ochre, black or lead white and dark ochre <sup>812</sup>	linseed oil varnish	light brown light grey
W&N recipe book 'P.O7' 1847: 7PP239L01	England	canvas	chalk, lead white, umber	glue size, treacle, linseed oil	[light]
Hundertpfund 1847: 130	Germany	canvas	pipe clay	flour, water	[whitish]
Hundertpfund 1847: 125-7	Germany	canvas panel	lead white <sup>813</sup>	linseed oil	[white]
Hundertpfund 1849: 105-9	England	canvas panel	lead white <sup>814</sup>	oil	[white]
W&N recipe book 'P.O9' 1854: 9PP017L01 <sup>815</sup>	England	canvas	zinc oxide	meguilp (beeswax, turpentine, double mastic varnish)	[white]
Hopman 1856: 135-6	Netherlands	canvas	yellow ochre, white, black	[oil]	[light brown]
Tyrwhitt 1868: 338-9	England	canvas	cadmium or yellow ochre, pink madder, lead white	turpentine, [oil]	warm white
W&N recipe book 'P.O4' 1871: P4P140L01	England	canvas	putty, white lead, patent driers	[oil, varnish]	[warm white]
Dietrich 1871: 21-2	Germany	canvas	slaked lime	glue, honey	[white]
Knowlton 1879: 029-30	England	canvas millboard	lead white	spirits of turpentine [oil]	white
Knowlton 1879: 030-1	England	canvas millboard	lead white <sup>816</sup>	[oil]	white
Spon 1879: 113	England	canvas	lead white, whiting, burnt ochre, pumice stone	raw oil, turpentine, gold size	[light orange]
Grace 1881: 87	England	canvas	flake white, chalk	oil,	white

<sup>812</sup> Before use, this layer is washed with potash lye and covered with pulverized pumice stone and lead white in linseed oil varnish, which will probably lighten the colour somewhat.

<sup>813</sup> A layer of flour is sprinkled on while the lead white/linseed oil layer is still tacky

<sup>814</sup> A layer of flour is sprinkled on while the lead white/oil layer is still tacky

<sup>815</sup> The same recipe appears twice in P.09, also on page 15, unique recipe code 9PP015L01.

<sup>816</sup> A layer of flour is sprinkled on while the lead white/oil layer is still tacky

<i>source, date, page</i>	<i>geographic origin recipe</i>	<i>support</i>	<i>pigmentation (of upper ground layer)</i>	<i>binding medium</i>	<i>ground colour</i>
				turpentine oil, linseed oil	
Grace 1881: 87-8	England	canvas	flake white	egg, water, French white vinegar	white
Grace 1881: 88	England	canvas	lead white with wash of yellow ochre, ivory black	benzoline or turpentine, or tube paint, or water	[off white]
Blockx 1881: 4	Belgium	canvas panel	-	-	white
Ellis 1883: 146	England	canvas	lead white	linseed or poppy oil	white
<i>Technische Mitteilungen nr 25 (1886): 39</i>	Germany	canvas panel	slaked chalk, white bole or china clay	Cologne glue or rabbitskin glue, with shellac sealing layer on top	[light orange]
<i>Technische Mitteilungen nr 25 (1886): 39</i>	Germany	canvas	lead white, clay	oil, caoutchouc	[white]
Raycroft et al. 1888: 23-4	England	canvas panel board paper	-	-	light grey [white]
Raycroft et al. 1888: 25	England	canvas	silver white, ivory black	[oil]	light grey
Church 1890: 26	England	canvas	lead white, with zinc white dusted over, alternatively thin layer of zinc white in drying oil	linseed oil	white
Vibert 1892: 108-9, 193	England	canvas	zinc white	watercolour fixative, dammar	white
Vibert 1892: 186-8, 108	England	canvas panel board	zinc white	casein paste	white
Standage 1892: 73-4	England	canvas	zinc white	[oil]	white
Standage 1892: 73-4	England	canvas	thin coat of umber over lead white ground	[oil]	[greyish brown]
<i>Technische Mitteilungen, nr</i>	Germany	canvas panel	chalk ground	glue, with boiled	[cream]

<i>source, date, page</i>	<i>geographic origin recipe</i>	<i>support</i>	<i>pigmentation (of upper ground layer)</i>	<i>binding medium</i>	<i>ground colour</i>
20 (1895): 1-2				linseed oil sealing layer	
<i>Technische Mitteilungen</i> , nr 9 (1897): 2	Germany	canvas board	burnt chalk	water, beeswax, linseed oil, white cheese	[white]

### 13c Copper and other metal supports ground colour

<i>source, date, page</i>	<i>geographic origin recipe</i>	<i>support</i>	<i>pigmentation (of upper ground layer)</i>	<i>binding medium</i>	<i>ground colour</i>
Pacheco 1649: 385	Spain	metal stone	lead white, umber	oil	[warm grey or drab]
Eikelenberg 1679-1704: 159	Netherlands	copper	white or green ashes, vermilion, yellow ochre	[oil]	[light brown]
De la Hire 1730: 709	France	panel canvas copper	lead white or ceruse, little brown red, little carbon black	[oil]	[warm grey]
Barrow 1754: n.p.	England	canvas copper	lead white, charcoal black	[oil]	grey
Dossie 1758: 204	England	copper	lead [white]	oil	white
Dossie 1758: 204	England	copper	ochre	oil	[yellow]
Jombert/De Piles 1766: 137-8	France	copper	lead white, brown red, carbon black	[oil]	warm grey
<i>Nieuwen verlichter</i> 1777: 170	Netherlands	copper	lead white, brown red, carbon black	oil	warm grey
Boutard 1826: 36	France	canvas panel copper	-	-	light grey
Boutard 1826: 36	France	canvas panel copper	-	-	brown red
Bouvier 1827: 571-2	France	all supports	lead white, yellow ochre, little clear red nr. 7	nut oil	light orangy gold
Bouvier 1828: 423-4	Germany	all supports	lead white, yellow ochre, bright red ochre nr. 7	nut oil	bright, gold, little orangy
Vergnaud 1831: 119	France	all supports	lead white	oil	white
Hampel 1846:	Germany	copper	lead white, dark ochre	linseed oil	[cream]

<i>source, date, page</i>	<i>geographic origin recipe</i>	<i>support</i>	<i>pigmentation (of upper ground layer)</i>	<i>binding medium</i>	<i>ground colour</i>
28				varnish	
Hampel 1846: 28-9	Germany	zinc plate precious stone	lead white, dark ochre	linseed oil varnish	[light brown] [cream]

### 13d Board and paper ground colour

<i>source, date, page</i>	<i>geographic origin recipe</i>	<i>support</i>	<i>pigmentation (of upper ground layer)</i>	<i>binding medium</i>	<i>ground colour</i>
Fokke Simonsz 1803-4: 84-5	Netherlands	paper	chalk	glue	white
Bouvier 1827: 571-2	France	all supports	lead white, yellow ochre, little clear red nr. 7	nut oil	light orangy gold
Bouvier 1828: 423-4	Germany	all supports	lead white, yellow ochre, bright red ochre nr. 7	nut oil	bright, gold, little orangy
Vergnaud 1831: 119	France	all supports	lead white	oil	white
Sully 1809-71 (recipe date 1841): 113	United States	paper	lead white	skimmed milk	white
Knowlton 1879: 29-30	England	canvas millboard	lead white	spirits of turpentine [oil]	white
Knowlton 1879: 30-1	England	canvas millboard	lead white <sup>817</sup>	[oil]	white
Raycroft et al. 1888: 23-4	England	canvas panel board paper	-	-	light grey [white]
<i>Technische Mitteilungen,</i> nr 9 (1897): 2	Germany	canvas board	burnt chalk	water, beeswax, linseed oil, white cheese	[white]

### 13e Ground colour supports not specified

<i>source, date, page</i>	<i>geographic origin recipe</i>	<i>support</i>	<i>pigmentation (of upper ground layer)</i>	<i>binding medium</i>	<i>ground colour</i>
Stalker and Parker 1688:	England	unspecified	lead white, red or brown ochre, umber,	oil	[greyish brown]

<sup>817</sup> A layer of flour is sprinkled on while the lead white/oil layer is still tacky

<i>source, date, page</i>	<i>geographic origin recipe</i>	<i>support</i>	<i>pigmentation (of upper ground layer)</i>	<i>binding medium</i>	<i>ground colour</i>
54			pot scrapings		
Wiltshut ms. 1701: 27-8	Netherlands	unspecified	ceruse, blue black, brown ochre	[oil]	not too brown, towards rose colour
Wiltshut ms. 1701: 27-8	Netherlands	unspecified	blue black chalk, a little brown red and ochre	[oil]	[light orangy brown]
Wiltshut ms. 1701: 27-8	Netherlands	unspecified, for painting flowers	blue black chalk, a little brown red, ochre, a little ultramarine or smalt	[oil]	[somewhat cooler brown]
Dutens 1779: 62	France	unspecified	-	-	white
Jahn 1803: 46	Germany	unspecified	-	-	white
Sully 1809-71 (recipe date 1810): 006	United States	[unspecified]	whiting	weak size, treacle	white
Verri 1814: 110	Italy	[unspecified]	-	-	white
Craig 1821: 426	England	[unspecified]	-	-	white
Sully 1809-71 (recipe date 1828): 134	United States	[unspecified]	lead white	skimmed milk	white
Montabert 1829: 180	France	[unspecified]	-	-	ivory
Roberson 1840: A	England	unspecified	whiting, lead white	linseed oil, beeswax, treacle, size	white
Sully 1809-71 (recipe date 1845): 130	United States	[unspecified]	lead white	skimmed milk	white