

Period III Reddish Wash on Brick and Mortar Paint

Samples used for color matching: SB-EX-2, SB-EX-22, RC-4

Color Measurements

Color System*		Coordinates	
Munsell	Hue	Value	Chroma
	3.1YR	4.7	4.9
CIE L*a*b*	Black to White	Green to Red	Blue to Yellow
	47.19	+18.41	+25.01

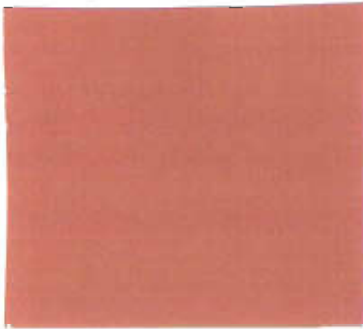
Benjamin Moore # HC-49 “mayflower red”

Color System*		Coordinates	
Munsell	Hue	Value	Chroma
	0.6YR	4.6	5.7
CIE L*a*b*	Black to White	Green to Red	Blue to Yellow
	46.69	+21.64	+22.09

Benjamin Moore # 2173-30 “salmon stream”

Color System*		Coordinates	
Munsell	Hue	Value	Chroma
	10R	4.6	6.0
CIE L*a*b*	Black to White	Green to Red	Blue to Yellow
	47.22	+23.39	+22.29

Benjamin Moore #HC-49



Benjamin Moore #2173-30



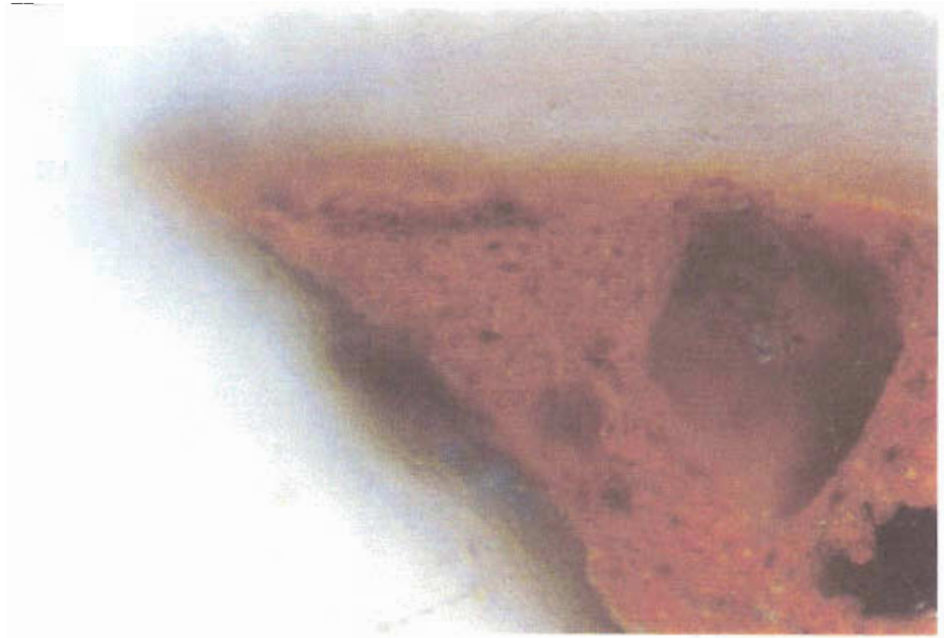
The color difference between the Period III red wash layer and the Benjamin Moore commercial match of HC-49 is $\Delta E = 4.2$ which means it is a good numeric as well as an very good visual match. The color difference between the Period III red wash layer and the Benjamin Moore commercial match of #2173-30 is $\Delta E = 5.6$ which means it is an acceptable numeric as well as a good visual match. The appearance of this layer and binding media reactions suggest it was originally completely matte and could be replicated in with a traditional limewash.

Montpelier Brick Wash Mock-up Sample – Red Limewash – December 2004 (Susan Buck)

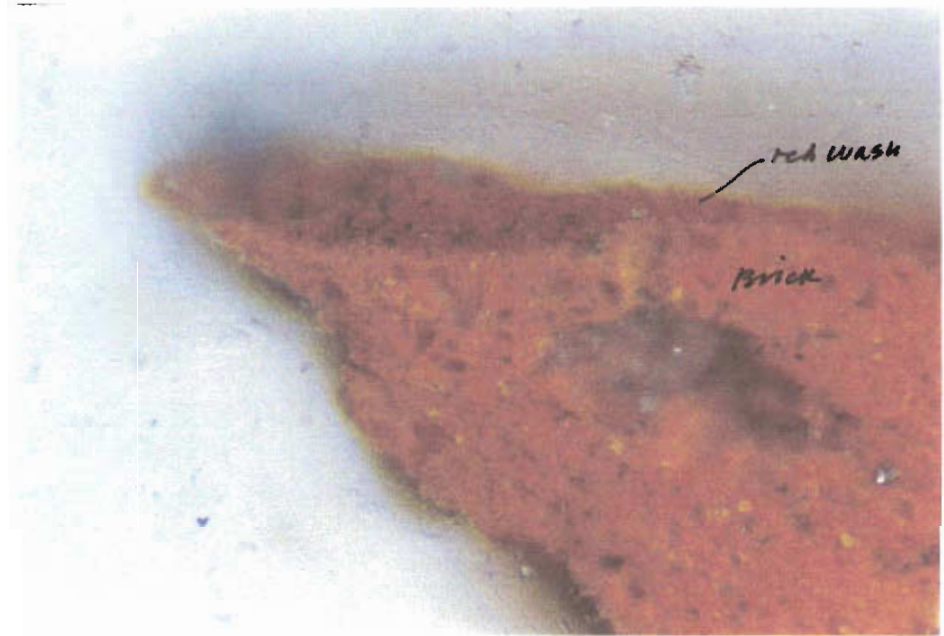
Lime: iron oxide red*:Pompeii red**:red bole***

8:1:1:1

Visible Light 50X



Visible Light 125X



- * Iron oxide red is haematite, a natural variety of anhydrous ferric oxide
- ** Pompeii red is burnt natural sienna (Tuscan earth)
- *** Red bole is a natural ferruginous aluminum silicate, natural red earth

Period III Replicated Red Limewash

Samples used for color matching: SB-EX-2, SB-EX-22, RC-4

Color Measurements

Color System*		Coordinates	
Munsell	Hue	Value	Chroma
	3.1YR	4.7	4.9
CIE L*a*b*	Black to White	Green to Red	Blue to Yellow
	47.19	+18.41	+25.01

1. Proportions: Lime: iron oxide red: Pompeii Red: red bole 8:1:1:1

Color System*		Coordinates	
Munsell	Hue	Value	Chroma
	0.1YR	4.3	5.9
CIE L*a*b*	Black to White	Green to Red	Blue to Yellow
	44.36	+22.60	+21.32

2. Proportions: Lime: iron oxide red: Pompeii Red; red bole 8:0.5:0.5:2

Color System*		Coordinates	
Munsell	Hue	Value	Chroma
	0.2YR	4.5	6.1
CIE L*a*b*	Black to White	Green to Red	Blue to Yellow
	46.00	+23.63	+23.25

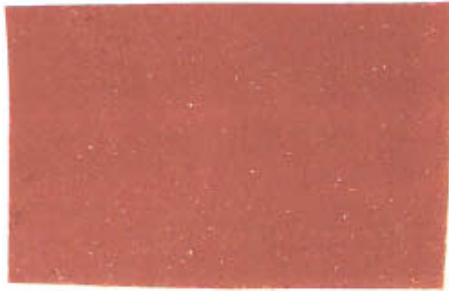
3. Proportions: Lime: iron oxide red: Pompeii Red: red bole: yellow ochre 8:0.5:0.5:1.5:0.5

Color System*		Coordinates	
Munsell	Hue	Value	Chroma
	0.6YR	4.6	6.2
CIE L*a*b*	Black to White	Green to Red	Blue to Yellow
	46.79	+23.46	+24.50

The closest numeric match between the Period III red wash layer and the red-pigmented limewash replicate #3 is $\Delta E = 5.0$, which means it is an acceptable numeric as well as an very good visual match. The color difference between the Period III red wash layer and the replicate #1 is $\Delta E = 6.2$ and the color difference between the Period III red wash layer and the replicate #2 is $\Delta E = 5.6$. All the hand-mixed replicates are slightly too red and not quite yellow enough. This can be solved by continuing to play with the proportions of the pigments. It also may be possible to order a red ochre with a slightly more yellow tone from another source. The binding media reactions suggest the Period III red wash had small proportions of protein and carbohydrate additives. This additive could well have been skim milk, as noted in some of the selected traditional limewash recipes included at the end of this report.

1. Proportions: Lime: iron oxide red: Pompeii Red: red bole 8:1:1:1

Color System*		Coordinates	
Munsell	Hue	Value	Chroma
	0.1YR	4.3	5.9
CIE L*a*b*	Black to White	Green to Red	Blue to Yellow
	44.36	+22.60	+21.32



2. Proportions: Lime: iron oxide red: Pompeii Red; red bole 8:0.5:0.5:2

Color System*		Coordinates	
Munsell	Hue	Value	Chroma
	0.2YR	4.5	6.1
CIE L*a*b*	Black to White	Green to Red	Blue to Yellow
	46.00	+23.63	+23.25



3. Proportions: Lime: iron oxide red: Pompeii Red; red bole: yellow ochre 8:0.5:0.5:1.5:0.5

Color System*		Coordinates	
Munsell	Hue	Value	Chroma
	0.6YR	4.6	6.2
CIE L*a*b*	Black to White	Green to Red	Blue to Yellow
	46.79	+23.46	+24.50

