Making lime wash, additives and application

Adobe, Cob and Quicklime · https://highdesertpermaculture.org/docs/adobe-cob-and-quicklime/making-lime-wash-additives-and-application/

8/17/25 Time for more testing

I'm actually quite happy with the test from spring 2023



Plain old lime wash filled the hairline cracks perfectly.

I'm thinking to definitely do a lime only application for the first coat. The thinner it is, the better the penetration.

I made it thin enough to use the sprayer for a test in spring 2023 before I got corneal ulcers and was out for the year.

Used no other additives.

It held up amazingly well on this south wall, exposed to our summer winds. We had several heavy wind driven rains.

Cleaned the stucco with just a garden hose set to "pressure" and I used a 2 g sprayer, although I generally prefer brushing. Since I got arthritis and have so much cleaning and all sorts of work to do, I'll see how it goes.

Then subsequent coats with coloring (cayenne and/or turmeric?) and possibly casein.

While it's still so hot, I'm hoping to do some testing inside too.

Application Instructions

https://www.limestuff.co.uk/blog/how-to-apply-limewash

> In its simplest form, limewash is lime putty diluted by water to turn it into a milky consistency.

Interesting UK discussion on additives or none:
https://www.periodproperty.co.uk/forum/threads/elementary-lime-wash-question.13820/

Ordering Casein and recipes

https://www.naturalpigments.com/casein-powder.html

1 kg for $35.20 (free shipping over $100)

https://www.naturalpigments.com/artist-materials/casein-milk-paint

> ... Casein paint or milk paint is unlike any other natural water-based paint as it dries waterproof. However, it must cure for a specific time, usually about a week to a month. Despite this, it dries to the touch quickly if painted thinly so that many successive layers can be painted in one session. Thicker layers may take about a day to dry.
>
> Cracking can occur for several reasons: The paint may have an excess binder, or the previous layer may not have dried completely. On the other hand, this can create beautiful crackle effects. Paint on top of an incompletely dried casein gesso.
> How to Prepare Casein or Milk Paint
>
> **The recipe for the casein binder is relatively straightforward:**

> Soak 2 1/2 oz. (80 g) casein powder in 9 fl. oz. (250 ml) room temperature water* for at least 10 minutes.
> Pre-heat the soaked casein.
> While the soaked casein is heating, dissolve 1 oz. (32 g) borax in 9 fl. oz. (250 ml) hot water*.
> Stir the hot borax solution into the soaked casein when it reaches 120 °F (48 °C).
> Continue stirring the casein solution while heating it to 180 °F (82 °C).
> Cook at that temperature for at least 15 minutes with continuous stirring.
> Allow the mixture to stand to cool to room temperature and store it in a refrigerator.
> Add 6 cups (1.4 liters) of water for use.
>
> **How to Use**
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> Use only on rigid, porous surfaces. Casein is brittle, so flexible supports, such as stretched canvas, should not be used. Prime the surface with diluted casein binder. Next, mix chalk and titanium dioxide or zinc oxide white pigment with the casein binder to create casein gesso. Apply gesso as usual and sand thoroughly dry coats (approximately one day) as needed.
> Preparing Casein Colors
>
> Mix pigments with distilled water into a paste. Add an equal amount of casein binder to the paste. Thin with water to the desired consistency. Test your paint by applying it to a piece of cardboard. If some pigment rubs off after an hour, you need more binder. If it cracks, reduce the binder content by adding more pigment and water. ...

$90/gallon

https://lancasterlimeworks.com/wp-content/uploads/2020/03/LLW_Old_Fashioned_Casein_-Tech_Sheet.pdf

> **Installation/Limitations:**
> Application should be done using brushes or a sprayer to a pre-wetted surface. If a sprayer is used, a thorough back-brushing must be done immediately after application.
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> Alkali-stable pigments can be used up to 20% of the dry binder weight of the lime wash. The addition of Old Fashioned Casein may lower "breathability"and "permability" of the substrate that it is applied too and

> should not be added to the Lime Wash if maximum "breathability" is desired. ...

> Art Casein – Fine Casein Powder for Artists (secco fresco, casein tempera, milk paints)

Embedded media: https://frescoshop.com/classic/aged-lime-putty-fresco-plaster/art-casein-fine-casein-powder-for-artists-secco-fresco-casein-tempera-milk-paints/embed/#?secret=4RPQr50VbY#?secret=b7yjHwU6Xf

So much to know!