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Sunday, July 31, 2011

## What's Cookin' This Week (for hair): Homemade flax seed gel

I'll make this a fairly frequent entry. The true "keepers" will be in the "Recipes and Projects" page. I have a preoccupation (note I did not say obsession) with making homemade hair products. Shampoo and detergent-free hair wash, conditioner, treatments, and of course, hair gel! Sometimes these are made with easy-to-find items, sometimes not. I'll post 'em and you can try them out if you like. And of course, please share your results so we can get a little dose of happy.

Here is an all-natural hair gel which is a work in progress. I'm looking for the right mix of curl enhancement, hold, shine, and softness because I hate crunchy, tangly hair.

Metric conversion: 1 teaspoon = 5 ml, 1 1/2 teaspoons = 7 ml, 1 tablespoon = 15 ml

**The Base:**©Science-y Hair Blog 2013

Boil in 1 1/4 cups water (almost 300 ml) for about 5 minutes (if it is thick now, it won't strain, boil only until thin threads\* hang from the fork you're stirring with:

2-3 (30-45 ml) tablespoons whole flax seeds

\* I do mean *Thin Threads*. If your gel hangs in thicker "strings" - it won't strain well. The gel thickens slightly as it cools.

>>>If you love a really thick gel, boil longer, but you're going to need to strain through cheesecloth or the foot of pantyhose and squeeze really hard.

Strain through a metal mesh strainer (it should strain mostly through, use the back of a spoon to press out the gel sticking to the seeds as best you can).

**Note:** Strain into a glass measuring cup if you have one so you know how much gel you have! If it measures less than 3/4 cup, you may need to reduce the amount of things you add.

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**Things to Add after the gel has cooled enough to touch (mix and match):**

### **To hydrate and slow water loss:**

- 1/2 to 1 tablespoon (7 to 15 ml) aloe vera gel (the edible kind if you can get it) - aloe moisturizes, adds shine, enhances curls.
- 1/2 teaspoon panthenol (2.5 ml) (available through soap and lotion making suppliers) - see below for an alternative (protein)
- 3/4 to 1 teaspoon hydrolyzed protein (3 to 5 ml) (an easy-to-find form is Colorful brand Neutral Protein Filler, available at Sally's Beauty Supply) - good for fine/medium hair or damaged hair, highlighted hair, *dry climates*, defines and enhances curls and waves, promotes clumping (to avoid stringy hair), holds moisture, adds shine.
- 1/8 to 1/4 teaspoon glycerin (0.6 to 1.5 ml) (humectant - preserves water, may work best when it's neither too dry/arid nor especially humid)
- 1/8 to 1/4 teaspoon gelatine (0.6 to 1.5 ml) (dissolve in hot water first, or add to strained gel, re-heat and stir vigorously - protein to hydrate, boost curls - not for coarse or protein-intolerant hair)

### **Emollients to soften, lubricate and slow water loss:**

- 1-5 drops (or a lot more) oil of your choice (coconut oil, grapeseed, sunflower, castor, avocado, olive, canola oil, the oil from a vitamin E capsule), oil holds in moisture, gives a softer, smoother finish
- Hair conditioner, either a leave-in or a rinse out conditioner: from 1/4 teaspoon to 1 tablespoon or more

### **To thicken:**

- 1/4 to 1/2 teaspoon xanthan gum (1.2 to 2.4 ml) (available at many grocery stores as a gluten-free binder). This makes a thicker gel, prevents "stringy" hair and promotes plump clumps of waves or curls. *You must re-heat the strained gel after you add xanthan gum and mix well until the gel thickens when adding this ingredient.*
- 1/2 to 3/4 (2.4 to 3.5 ml) teaspoon corn starch or tapioca starch, mixed with enough cool water to dissolve - then add it to strained, hot gel and re-heat to thicken
- 1 1/2 teaspoons to 1 tablespoon (7.5 to 15 ml) powdered fruit pectin (for making low sugar jam or jelly). This must also be added to strained gel and then re-heated to thicken

### **To add hold:**

- 1 1/2 to 2 teaspoons (7.5 to 10 ml) acacia fiber (a.k.a "gum arabic," available at health food stores as a soluble fiber supplement) - this doesn't thicken, but it does add "hold" close to what you get from a commercial gel. Can feel drying, especially with continued use - use with some oil or conditioner.

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- fragrance if you like it
- 1/4 to 1/2 teaspoon (1.2 to 2.4 ml) honey or agave nectar (or more) - provides *strong* hold, may cause a "wet" look in silky hair. Honey and agave are very poor hold-providers for humid weather.
- In place of 1 tablespoon flax seeds, use 1 tablespoon whole psyllium seeds for a thicker gel

Blend these into the gel very well in with a whisk (or fork) or an immersion (stick) blender. If you get lumps, walk away and come back later - some will have dissolved. *Refrigerate immediately and use within 1 1/2 to 2 weeks. Throw out if the gel changes color or gets cloudy, changes odor, or gains or loses thickness (viscosity).*

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This gel gives wonderful, plump clumps, defined waves and curls, rinses out easily and refreshes with just a spray of water.

#### A good mix for the beginner/the tentative:

Just use flaxseeds and water, and a small amount of oil and use it as a "curl enhancer/definer" under a stronger-hold product.

Posted by [WS](#) at [3:39 PM](#)

Labels: [Flaxseed gel recipe](#)

## 29 comments:

[heddo](#) August 4, 2011 at 2:09 AM

Thanks! I am gonna do the chamomile tea soak overnight, add like 1/8-1/4 tsp of honey and maybe 1/2-1 tsp aloe vera gel. And if I can have my friend find it, a few drops of my Lloyds Hair and Body Pack <http://www.saltspringislandorganics.com/index.php?page=hairbodypack> though I am debating about skipping that for now and trying a dab (about the same as the honey) of SS RPT instead. Or Caitlin's since it has protein in it too, and I have more of that than the RPT. What do you think? Would the Caitlin's be enough protein? Should I skip the honey if I use this instead? Maybe just the tea soak, aloe, and Caitlin's? Thanks?

[Reply](#)

[WS](#) August 4, 2011 at 12:10 PM

I think the Spiral Solutions Repairing Protein Treatment would be the best bet to see how protein performs for you. The conditioner has some protein, but if you use that, you'll end up with a flaxseed "curl cream" which is a super idea too.

With the aloe, you'll need at least 1 1/2 teaspoons to see much effect. You can use up to a tablespoon. Whip it in like you're whipping egg whites.

Honey has a different purpose - hold. If you want your flaxseed gel to have a stand-alone quality, or give you more hold, then use honey. If you plan to use it with a stronger-hold product, then skip the honey.

[Reply](#)

[rheostaticsfan](#) August 24, 2011 at 3:00 PM

Being in Canada, I don't have Colorful Neutral Protein Filler (it's not available from Sally's here). Would gelatin powder substitute?

Oh, and do you know the differences in action between xanthan gum and cornstarch?

[Reply](#)

[WS](#) August 24, 2011 at 3:29 PM

Gelatin should work, I know of somebody else who used gelatin in their flaxseed gel. I think it was around 1/2 teaspoon powdered gelatin (unflavored) per batch, possibly 3/4 teaspoon. This would absolutely require refrigeration and might help thicken/add substance to the mixture. I would strain the gel, then put it back in the pan, bring it to a boil, sprinkle gelatin over, take off the heat and whisk in the gelatin.

Xanthan gum and cornstarch are both polysaccharides (long-chain sugars) and therefore are polymers with film-forming abilities. With cornstarch, it will not gel unless it is dissolved in cold water, then heated to "gelatinize" the starch (must be cooked). So you're modifying a plant starch. Xanthan gum (made from fermented bacterial!) dissolves more quickly in a heated liquid, but does not need to be cooked/heated to thicken. They both thicken. Cornstarch is far easier to find and probably works as well as Xanthan gum. I have not found the right amount of cornstarch yet. One teaspoon per batch of flax gel should thicken and add some "hold." If you want a very thick gel, 2-3 teaspoons will give you that, but it may not spread well when cold.

Xanthan gum may give a clearer-looking gel than cornstarch, but it's up to the user to decide whether it's visible on the hair or not.

[Reply](#)

[mewy](#) April 6, 2012 at 4:22 PM

I know some people make flaxseed gel in large batches and then freeze it. Can you freeze the gel if it has gelatine mixed into it? I'm interested in gel with protein (but no aloe vera), but I prefer to make things in large batches and freeze. Would this ruin the protein component of it?



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Also, you posted the flaxseed + gelatine comment over half a year ago. Have you tried making a recipe with just flaxseed gel and gelatine (no other additions) since then? If so, did the recipe you posted above yield a good gel? I'm really excited to try it but worried about ruining a lot of gel, is all. :)

[Reply](#)

**WS** April 6, 2012 at 5:11 PM

Yes, I have made the flaxseed gel with gelatine, though I also used some pectin. I have not frozen gel containing gelatine. I don't think at this concentration it (freezing) would be a problem for the gelatin. Only one way to find out, but maybe by making a small batch.

This gel did not have the same curl-enhancing effects as the usual protein additive I use (Colorful Neutral Protein Filler which is keratin and wheat proteins). It was a nice gel, but didn't give the result I was hoping for.

[Reply](#)



**Unknown** February 24, 2014 at 11:20 AM

What about the pH of this gel? I measured mine and it seems a bit too acidic. I still need to add anything to it, but yeah, I was curious.

Also, could I add some epsom salt to this?

[Reply](#)

[Replies](#)



**WS** February 25, 2014 at 11:25 AM

Erika, If you are worried about the pH, don't use aloe. You can find pH test strips in drugstores and pet stores. The pH of flaxseed gel made with distilled water tends to be around 5.6.

You can add epsom salt if you don't find it drying. It shouldn't alter the gel.



**Unknown** February 26, 2014 at 3:36 AM

(: I'll keep that in mind. My hair doesn't seem to like aloe too much anyway.

That's great! Thanks again.

[Reply](#)



**Cindy Puzio** March 20, 2015 at 3:10 PM

I am going to make this recipe today. I am planning on using 3 tablespoons of newly purchased whole flaxseeds. (I have read you do not want to use really old seeds nor can you use ground seeds.) I have Colorful Protein Filler (3/4 tsp) and Xanthan Gum (1/2 tsp) at my house so I am going to use that plus a few drops of coconut oil. I am on the fence about adding honey to this. I have organic raw honey which is thicker than commercial honey. Also, I have read somewhere that using honey can lighten your hair color over time. I have dark brunette hair and I don't think I want to lighten it. Any other advice?? I noticed that your initial post is from 2011.

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**WS** March 21, 2015 at 11:23 AM

Honey as a hair lightener is really subtle and is usually done with larger amounts of honey over an extended period of time - but the warning is there just in case. Some honeys contain a lot more peroxide than others. I'm guessing that heat doesn't matter much in peroxide activity because I use heated hydrogen peroxide to remove some organic stains from materials in the lab and it works very well!

Honey or agave both can provide hold and shine - if the weather is not too humid. When the air is humid, they tend to absorb moisture and do not provide extra hold.

[Reply](#)



**Unknown** March 31, 2015 at 7:03 PM

Hi, I noticed that when I put my homemade flax seed gel in my hair it makes it feel stringy and tangly. What does that mean? I have low porosity hair. My flaxseed gel recipe is 2 tsp brown flaxseeds, two cups of water and five to ten drops of peppermint essential oil.

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**WS** April 1, 2015 at 10:35 AM

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Hello Amina,

Some people's hair does get stringy with plain, un-thickened flax seed gel. Using a thickener like xanthan gum (1/2 teaspoon per cup strained gel makes a thick gel for less-stringy hair) can help your hair pull into thicker "sections."

You might need to use a leave-in conditioner under your flax seed gel to avoid a tangly feeling or else add some oil to the strained gel and mix it thoroughly.

Flax seed gel works in so many people's hair - but if you can't find a modification or combination of products (like flax gel + leave-in conditioner) that works for you - then it just doesn't work. Keep trying!

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[Reply](#)



**AMD** February 4, 2016 at 8:06 PM

I just made this and its awesome. Thanks for the post!

[Reply](#)



**Unknown** February 16, 2016 at 1:16 PM

I've been using your recipe with great results! I've been experimenting with adding aloe vera gel, a little olive oil with a few drops of rosemary essential oil. It seems to be helping my dry hair stay hydrated a couple days between washes.

I'm wondering if it is possible to re-use the flax seeds to make a new batch? I assume they don't keep longer than the finished gel if not frozen, but would that work...perhaps needing a little longer boiling time?

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**WS** February 17, 2016 at 1:00 PM

I don't get good results from re-used seeds at all and that's what I've heard from other people as well. I have \*read\* that you can re-use seeds, but I don't know if the person who wrote that actually does it. I get a very weak gel from re-using the seeds. During the first boil, you remove much of the mucilaginous material that makes the gel. I put my "used" seeds in the compost pile.

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[Reply](#)



**Unknown** February 27, 2016 at 9:33 AM

Hello and thank you again for this post. Do you think it would be appropriate to add tea tree oil to this recipe? I am making it with aloe to calm dermatitis and am wondering if tea tree oil would be beneficial as well.

[Reply](#)

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**WS** February 29, 2016 at 3:59 AM

Hello Migdalia,

I am inclined to think that using tea tree oil and aloe in a styling gel won't have much effect on the scalp unless you tend to get a fair amount of gel on your scalp during styling. If the product is mostly in your hair, it won't have much effect on your scalp.

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[Reply](#)



**Unknown** June 2, 2016 at 11:21 AM

Heyy :) Can you tell me how to make psyllium gel ( without flax ) using the husks? Thank you :)

[Reply](#)



**Unknown** June 18, 2017 at 2:34 PM

Great recipe! I'm making a fresh batch right now and adding xanthan gum. I put the flax seeds in a nylon before boiling, then put the little pouch in the boiling water for 5 minutes. And voila no straining required. And, this means the xanthan gum can go in right away, no need to re-head after straining.

[Reply](#)



**Karyn Hughes** September 1, 2017 at 6:47 AM

Hi, I'm needing to add a preservative to a batch because I'm traveling internationally and won't have a refrigerator. I bought some Optiphen Plus - have you ever used preservative in flaxseed gel? I'm worried because it has a humectant and I get frizzy. Wondering if there is a good anti-humectant to add or if it's minor enough that I shouldn't worry about it.

[Reply](#)[Replies](#)**WS** September 5, 2017 at 6:40 PM

Hello Karyn,

I think the humectant-action in Optiphen Plus is minor enough that you needn't worry about it creating frizz.

[Reply](#)**Unknown** December 27, 2017 at 8:48 AM

Thank you for the recipe! I've made a batch yesterday and am experimenting with different add-ins. I'm wondering about honey and/or agave nectar. You said it won't work in humid weather, but what about very dry weather? I'm in Canada, in the middle of winter, and our dew point today is -22C (-9F). I'm wondering if this acts like glycerin, best if used under ideal humidity conditions?

[Reply](#)[Replies](#)**WS** December 31, 2017 at 5:39 PM

Hello Jane!

I may have answered this already. Honey and agave tend to provide hold in dry weather - though they can both become a bit brittle. The solution to that is to use a little oil or leave-in conditioner. They're not quite like glycerin in terms of making hair frizzy or feel crusty (for those who have that problem) - though you might get a different result from each.

[Reply](#)**S** June 18, 2018 at 1:03 PM

I currently use your Basic Recipe for my own flaxseed gels.

However, are the boiled and extracted seeds still healthy to eat?

And can you share us a video that shows very clearly how thin or thick the gelly threads should be that hang from your fork/spoon you're stirring with?

[Reply](#)[Replies](#)**WS** July 1, 2018 at 6:04 PM

Hello Sera, The high fiber content is still there. The oils may go rancid quickly now that the seed coats have been broken. I think to be certain you're getting all you want out of eating flax seeds, and for safety's sake, it is better to eat seeds from which gel has not been extracted.

[Reply](#)**LL** November 5, 2018 at 9:43 AM

Hi, I made the flaxseed gel with just xanthan gum and it works pretty good. It gives good definition but if I want a bit more volume what might be a good ingredient to add?

Thank you!

[Reply](#)**LL** November 8, 2018 at 8:32 AM

Can Flaxseed gel overmoisturize hair? Or am i using too much because my hair is looking like it is wet.


[Reply](#)[Replies](#)**Unknown** November 10, 2018 at 5:54 PM

Hello LL,

I feel like flax gel can make my hair feel heavy if I boil it longer. Xanthan gum and proteins can make hair feel or look more substantial. Starches as thickeners might be more volumizing than xanthan gum.

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