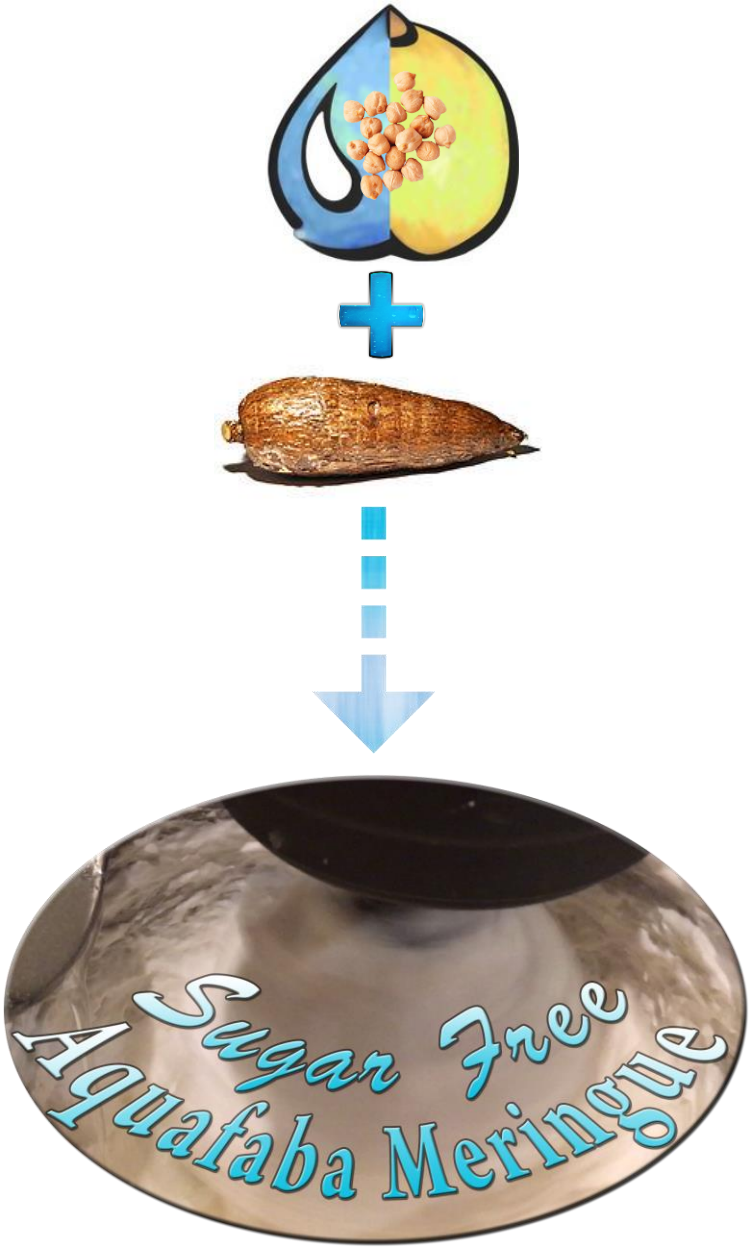
SUGAR FREE AQUAFABA MERINGUE



Note: This is a living document and will be updated as I refine and expand it
Date: 5/12/2016 (use this date like a version number to track changes)

Acknowledgements

Person	Role
Katrina Stuart	For the breakthrough agar Italian method and feedback/support
Lynne Dlc	For the method of adding cream of tartar to aquafaba before mixing and feedback/support
Moira Wright	For the amazing editing she did for this entire document!
Facebook Members	Of Vegan Meringue and Plantified Facebook groups for their feedback
Taste Testers	Anyone who has ever eaten my aquafaba creations!

Contents

The Sugar Free Quest

I have been on a quest to find a way to create sweet and stable whipped aquafaba (AF) without the use of sugar, or with very little of it, ever since I was added to the "vegan meringue" Facebook group by my nephew. I started experimenting with the magical bean water in January, 2016, almost a year since Goose Wohlt coined the term "aquafaba". I was fascinated by aquafaba after I whipped some up in my KitchenAid blender for the first time. It truly is magical, and being a performing magician since the age of 16, I felt like I was performing magic, only now it was right in my kitchen!

I am not diabetic and simply prefer to avoid cane sugar as much as possible. I have been a vegetarian since age 18 and vegan for more than 10 years. The desert I am known for making the most is vegan cheesecake (chocolate and vanilla).

Figure 1- My kitchen with just some of the experimental ingredients

I have tried many ingredients (list will be coming soon of what works and what does not work so far) to sweeten and stabilize whipped AF, natural and not so natural. For example, I like fresh squeezed orange juice and it is wonderful in creating a sweet, whipped aquafaba cream, but does not stand up over time or in the heat of an oven for dried meringues or lemon meringue pie topping. It lasts long enough to consume – up to two hours, as a whipped cream, and that is about it.

As I progressed in my search I started to set the bar higher: either zero grams of sugar or very low levels of it. For a while I was convinced that cane sugar was

the only thing that stabilizes and sweetens whipped aquafaba well enough to be practical in use. But that did not stop me from searching and keeping a look out.

Cane sugar was working the best for me, with guar or xanthan gum added to stabilize the meringue. I would always put organic sugar in the blender to make it powdered sugar, which was suggested by "The Gentle Chef" Skye Michael Conroy's lemon meringue pie recipe (the first aquafaba-based lemon meringue pie documented, according to Goose Wohlt).

Figure 2 - My first aquafaba lemon meringue pie - sugar based

My first lemon meringue pie based on aquafaba was a huge success and filled with lots of cane sugar. I used premade vegan pie shells because I wanted to focus on the lemon curd and the meringue. I shared this with several people, not knowing how it was going to really taste. It was awesome! I was told it was better than any lemon meringue pie, vegan or not. The meringue was marshmallow-like, due to the guar gum, and had this incredible mouth-feel to it. But it was a little "runny" inside, as can be seen here. I did not mind this! It tasted great! But it was filled with several cups of cane-sugar! I started to make more of these and share them. They were a big sugary hit! But I am not one for eating so much sugar. Only a few people minded the marshmallow effect, possibly because that is not what they were used to. Also, a fair amount of gum was needed to make the meringue stable

enough and both guar and xanthan have a strange after taste if you use too much.

I started the quest to find out if I could make low sugar aquafaba creations, and at the same time try to lower or eliminate the gums. I wanted to stabilize the meringue to be less deflate-able and runny, without making a gummy mess. I soon learned it was not going to be easy to find a sugar-free solution and that others have tired, using such things as Xylitol. I wanted *simple and easy* and without the need to wait a day for meringues to dry out. The more gum or combination of gums you have the longer it takes to dry meringues. I learned this early in the process. Others also report that using artificial sweeteners cause longer dry times.

Although maple syrup has lots of sugar content, I tried it in an aquafabanized key lime pie I made and it was delicious. However, I found it is not easy to implement maple syrup in whipped AF. My tests with it failed. I set another bar: **The answer has to be as easy and reliable as using cane sugar**. Otherwise, I was just going to stop creating so many sweet things with aquafaba, and only use it once in a while (Thanksgiving, Christmas).

I tried questionable processed sweeteners as well, some of which have nasty side effects and some which taste horrible on the tongue.

Finally, after a few months, I found a product that totally replaces sugar for both soft and dry aquafaba meringue!

Goose Wohlt's first Facebook post about vegan meringues was documented as having been made from just two ingredients - the brine of chickpeas and sugar… Impressive! I was also fascinated that the man who coined the term "aquafaba" (after seeing it used to make chocolate mousse in a video), is a software engineer like myself. Magical bean water and software!

Figure 3 - Goose Wohlt's first Facebook post about his vegan meringues

…I set another bar: the sugar replacement has to be able to **perform solo, without any other stabilizers**, just like software engineer, Goose Wohlt, demonstrated on March 6, 2015. My sugar-free aquafaba meringue does just that. It is as sweet as anything made with sugar. Personally, I can't tell that I am eating sugar-free meringue. It has the same texture and mouth-feel as desserts made with cane sugar. Dried meringues crunch. They melt in your mouth. They taste wonderful! And the sugar-free lemon meringue pie topping (recipe below) is out-of-this-world AquafabaLicious and AquafabAmazing! Of course, taste is subjective, and you may not agree with my results. I ask you to only follow the recipe in this document exactly. If you can use the same brands I use, even better. Note, I am in the USA. I have also shared my sugar-free creations with at least 15 people and have had all positive results. This includes a chef and graduate from the Culinary Institute of America.

Figure 4 - Whipping AF and the sugar-free sweetener together (nothing else)

I said bye-bye to sugar!

Figure 5 - Two Ingredient Sugar-Free Sweet Whipped Aquafaba Meringues

I said bye-bye to sugar, and not just for use with aquafaba, but for anything that needs to be sweetened!

The first presentation here is the simplest and uses just two ingredients: aquafaba and the natural sweetener I found to replace sugar. These are the first solo meringues (shown above). While they do not maintain their edges perfectly, they do come out crisp and melt in your mouth. They are solid all the way

through and taste perfect. One and a half to two hours at 200F, just like with sugar-based AF meringues. There is no aftertaste! You will not be able to determine that you are eating sugar-free meringues. I have never seen anything quite like it. The product is new and has not been around for long, perhaps a bit longer than when aquafaba was discovered.

After going "solo" I started to add things, like lemon juice and Cream of Tartar.

I tested with standard ingredients that are used to stabilize whipped aquafaba:

- Cream of Tartar
- Lemon juice (citrus)
- Guar gum
- Xanthan gum
- Vinegar

In other words, everything is the same as when using sugar, except there is no sugar!

Along the way I found there is this interesting item that will add to the stability, and at the same time create a nice color and very unique taste:

- Organic Rose Petal Powder

About the magic sweetener

- It is available on Amazon.com
- It is available direct from the company that makes it via their web site
- It is available to be shipped internationally directly from the maker
- It is not dry
- It is a clear syrup
- It tastes great raw and has no bitter aftertaste
- When used in cooking to sweeten food you can't tell it's not sugar

The Magic Sugar-Free Ingredient Is…

FiberYum® Brand Cassava-Derived IMO Syrup

From Wikipedia:

Manihot esculenta (commonly called **cassava** (/kəˈsɑːvə/),[2] **Brazilian arrowroot**,[2] **manioc**,[2] **tapioca**,[2] and **yuca**) is a woody shrub native to South America of the spurge family, Euphorbiaceae. It is extensively cultivated as an annual crop in tropical and subtropical regions for its edible starchy tuberous root, a major source of carbohydrates. Though it is often called **yuca** in Spanish and in the United States, it differs from the yucca, an unrelated fruit-bearing shrub in the family Asparagaceae. Cassava, when dried to a powdery (or pearly) extract, is called *tapioca*; its fermented, flaky version is named *garri*.

Cassava is the third largest source of food carbohydrates in the tropics, after rice and maize.[3][4] Cassava is a major staple food in the developing world, providing a basic diet for over half a billion people.[5] It is one of the most drought-tolerant crops, capable of growing on marginal soils. Nigeria is the world's largest producer of cassava, while Thailand is the largest exporter of dried cassava.

Early experiments with Aquafaba and FiberYum® Cassava Syrup:

Figure 6 – Heated Cassava Syrup Test, April 12, 2016

FiberYum®
is available to order
INTERNATIONALLY!

Figure 7 – Heated FiberYum® Syrup added to whipped aquafaba, April 12, 2016

Figure 8 - FiberYum competition - VitaFiber works just as well

At First You Test

The first tests were done with Madhava Cassava Syrup and Raw Revolution's FiberYum IMO sweetener, which is derived from the fiber of tapioca power, which comes from the cassava root.

Figure 9- Going solo with only aquafaba and FiberYum® cassava-based syrup

Figure 10 - Sugar free dry meringue mushrooms (AF+Cassava Syrup+Guar Gum version) glued with vegan chocolate and airbrushed with natural vegan food coloring from www.confectioncrafts.com

Figure 11 - The meringues not shaped like kisses are 2-ingredient only

Figure 12 - Sugar-free cocoa covered aquafaba crunchy meringues

Figure 13 - Rose Petal Meringues using only aquafaba, FiberYum cassava syrup, lemon juice and rose petal powder

The above shot shows the 4-ingredient rose, lemon, cassava and aquafaba meringues shortly after being piped onto parchment paper.

Now let's look at them after they have dried out in the 200F oven for 2 hours…

Figure 14 - Dried in the oven at 200F for 1.5 to 2.0 hours: Rose Petal Meringues

Figure 15 - FiberYum sugar-free meringues with blueberries on a huge meringue

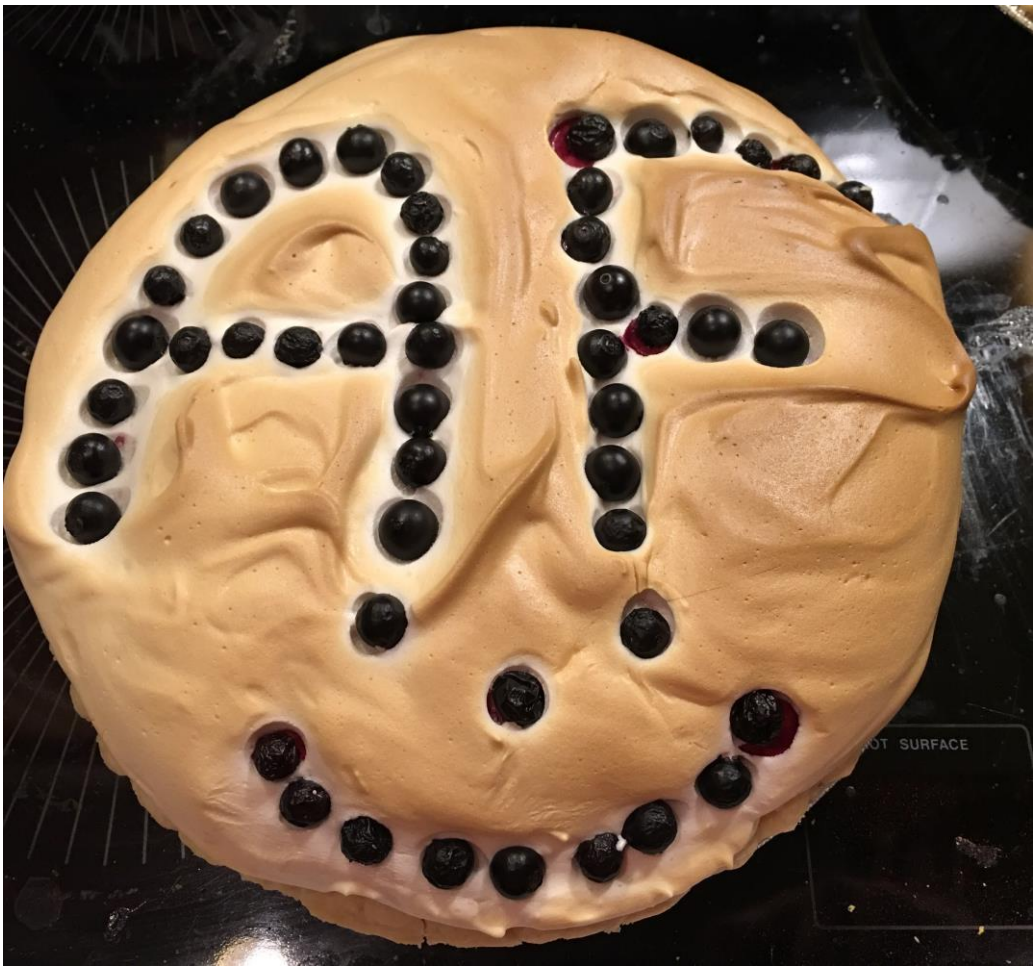


Figure 16 - Lemon Meringue Pie with blueberries on top forming the aquafaba "AF" foaming at the mouth – Low-Sugar using Madhava Cassava Syrup and way over cooked (not paying attention)

Figure 17 - Another pie from the same double batch as the "AF" pie

You can see how the meringue is struggling to stay up, with limited xanthan gum, and the blueberries are not helping any. However, it tasted absolutely AquafabAmazing! The one with the "AF" and smile was given to Mother Earth's Storehouse in Poughkeepsie, NY. They loved it! I printed out my recipe adapted from The Gentle Chef and gave it to them weeks before I made this pie with Madhava Cassava syrup. This blueberry version was the second one I gave them – the first being sugar-based. I also gave them some dried meringues. I even had the opportunity to give some of my sugar-free FiberYum based meringues to a teacher from the CIA (Culinary Institute of America) and they were favorably accepted. That's not an easy audience mind you. He could not tell it was not filled with sugar! I have spread the aquafaba word to several of the CIA restaurants and they seem excited.

The first pie inspired the head baker at Mother Earth's in Poughkeepsie, NY. She happens to be a graduate of the Culinary Institute of America. She has since used my sugar-based recipe, which was adapted from Chef Skye Michael Conroy, and adapted it herself (mainly the crust and the filling) to make and sell several mini-pies on at least two occasions. I bought some of them myself and they were great! That is when I started to try coconut in my LMP filling because that is what she used and I really liked it. I had been telling several people that work at Mother Earths what I have been trying to accomplish with sugar-free aquafaba.

Figure 18 - I tested Madhava Cassava Syrup before discovering FiberYum

It was at Mother Earths' store in Poughkeepsie that I found Madhava Organic Cassava Syrup for sale, which led me to research and find FiberYum. It turns out that the company behind FiberYum is only an hour drive away from my house. When I order FiberYum it only takes a day to get it. It is available to order internationally direct from the company but the shipping/import cost may be high. After I discovered FiberYum I started to use it alone to sweeten everything I was making with AF – lemon meringue pie, dry meringues, aquafaba ice cream and more. I still have lots of Madhava Cassava syrup, and it will work just like FiberYum as described in this document, with a minor difference: Madhava's syrup is slightly sweeter than FiberYum. After all, Madhava's brand has 10g of sugar in it. FiberYum has ZERO. My recipe herein is for FiberYum and has not been fully tested with the Madhava brand syrup at the current proportions and ingredients.

Figure 19 - Aquafaba lemon meringue tarts at Mother Earth's Poughkeepsie, NY

This was all very experimental at first, without documenting measurements, and just feeling out how this syrup could work. Madhava Cassava Syrup has 10g of sugar in it and is not a true pre-biotic like FiberYum is, which has zero sugar. Both are based on the Cassava root (tapioca) but they are not quite the same, though they taste very similar. As I said, Madhava's syrup is slightly sweeter.

Choosing FiberYum IMO Syrup

Before I even considered cassava based sweetener I was investigating and buying other sugar-free and low-sugar sweeteners. I ordered over the Internet various forms of yacon powders and syrups, for example, all of which are low in sugar, low glycemic index, yet still have sugar in them.

Yacon syrup and powder did not work for me but I really wanted it to – I had high hopes for it! When I got the syrup and saw it was very similar to molasses I just knew it was going to fail and it did. It is also very dark and would not be good for making light colored meringues!

It was when I was testing yacon powder with the Madhava Cassava syrup that I noticed something interesting. I put both into the AF as I whisked it up. The whipped meringue was holding up fairly well with these two things added to sweeten it and I was able to make very nice dried meringues. They took 2 hours to dry, as is the case for sugar based meringues. The problem with most sweeteners, other than cane sugar, is that it deflates the whipped up aquafaba so badly that it is not able to be used for making dried meringues or soft meringue pie topping.

With both yacon powder and Madhava Cassava syrup combined with the aquafaba, I did not know which one was working – the yacon powder or the cassava syrup. I performed more experiments. The yacon powder and yacon syrup alone were too much and caused deflation quickly as I added more and more to the whipped AF to sweeten it.

Then I tested Madhava Cassava syrup alone. IT WORKED GREAT! It did not deflate the whipped AF and it held its own for various dried meringues and lemon meringue pies, all of which I posted on the Vegan Meringue Facebook group, mostly without mentioning that everything I had been posting was either very low sugar or zero sugar. I think I have well over a month's worth of creations I posted that were all made with cassava syrup. I wanted to perfect the lemon meringue pie recipe I had been working on ever since adapting Chef Skye's creation to my own liking, before releasing the details.

After I found that Madhava Cassava syrup was working well I searched the Internet and found FiberYum, a zero sugar IMO cassava syrup. The story of the company (Raw Revolution) behind FiberYum is interesting to me because I am a vegan and health conscious. The company was started in 2004 by Nurse Alice Benedetto, of Ardsley, NY, after she searched for "wholesome

snacks" for her toddler, finding mostly high-sugar, processed children's foods. Read more at Nurse.com and at RawRev.com

FiberYum® IMO Sweetener

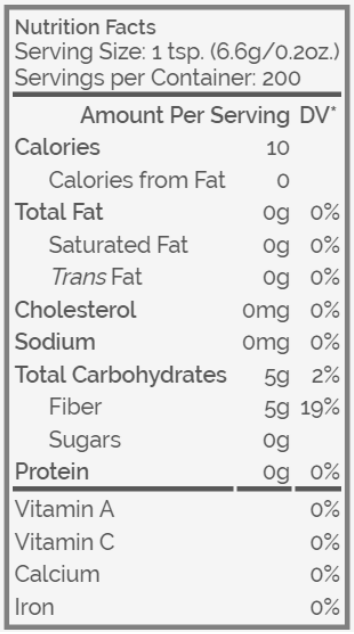
FiberYum is isomalto-oligosaccharide (IMO) syrup, an all-natural, sugar-free, low-calorie, high-fiber, gluten-free, low-glycemic, digestion-resistant, prebiotic, non-GMO sweetener available in a versatile liquid form. Made from tapioca -- not corn.

FiberYum is the brand name given to the cassava syrup by the company, Raw Revolution, located in Howthorne, New York, USA (914-326-4096). The company makes vegan protein bars and use FiberYum cassava syrup to sweeten some of them.

Interviewing the company over the phone I found that:

- FiberYum can be ordered internationally from www.FiberYum.com.
- If you have any questions you can call the company at 914-326-4096 (English only)
- FiberYum is not currently organic but they are working on producing an organic version, which will obviously be more expensive
- There is another company in Canada producing a similar product (I have not investigated)
- Madhava Cassava syrup is not the same as FiberYum and contains 10g sugar

FiberYum brand cassava syrup nutrition label:



Nutrition Facts
Serving Size: 1 tsp. (6.6g/0.2oz.)
Servings per Container: 200

Amount Per Serving		DV*
Calories	10	
Calories from Fat	0	
Total Fat	0g	0%
Saturated Fat	0g	0%
Trans Fat	0g	0%
Cholesterol	0mg	0%
Sodium	0mg	0%
Total Carbohydrates	5g	2%
Fiber	5g	19%
Sugars	0g	
Protein	0g	0%
Vitamin A		0%
Vitamin C		0%
Calcium		0%
Iron		0%

Figure 20 - FiberYum Cassava Syrup Nutrition Label

Where to buy:

FiberYum.com or the direct link to the parent company, Raw Revolution.

Amazon.com (more expensive, possibly less if you factor in shipping)

Note: It is less expensive at the FiberYum/RawRev site than it is at Amazon.com. I bought 3 of the 2.5lb containers initially and got free shipping as a result. The company is located only a few counties away from me (in Westchester), only one hour away, but I have no affiliation with them. Not only do you get a 2.5lb container of the sweet stuff, you also get two free vegan protein bars with each container! This may be a one-time promotion, however.

You can add the following promo code to **get 10% off your first order**: *FIBERYUM10*.

Sources:

http://fiberyum.com

http://www.rawrev.com

Raw Revolution owns FiberYum. They make products that also use FiberYum, such as these protein bars.

Description of FiberYum from the company:

> IMO, technically known as isomalto-oligosaccharide, can be made from various forms of vegetable starch, often corn. FiberYum brand IMO comes only from Tapioca (Cassava) making it Paleo friendly and Corn-Free. It is a

high fiber syrup and super low-glycemic alternative to sugar sweeteners that has awesome amounts of prebiotic fiber (greater than 90% soluble fiber) - that is why Raw Revolution uses it to make their Glo Bars taste so good. It's also why Glo Bars have some of the lowest sugar / carbohydrate quantities among all protein, nutrition and meal replacement bars that don't use artificial ingredients. * Non-GMO * Corn Free * Sugar Free * Super Low Glycemic Index * No Artificial Ingredients * Tested For Heavy Metals * Gluten Free * Kosher * **Vegan** Derived from tapioca, our premium quality IMO syrup is **Sugar Free**, Corn Free, Gluten Free, Non-GMO, Vegan, Kosher, and tested for heavy metals - an all-around great sugar replacement. What can you use IMO for? So glad you asked. Make your own no / low-sugar, high-fiber energy / protein bars, pancake syrup, smoothies, baked goods, teas and more - Any place where you might use agave, corn syrup, molasses, honey, rice syrup, sugar cane juice, and so many others. It is great for diabetics, medical / health conditions that require low sugar levels in your diet, and sports / wellness fanatics who are carb conscious. IMO supports healthy intestinal flora growth and sets the stage for probiotics to work well along with helping to maintain healthy cholesterol levels and aid mineral absorption.

Ingredients: Isomalto-oligosaccharides (IMO) from tapioca (Cassava) starch.

At least two companies I know of make vegan syrup from cassava root using natural enzymes: FiberYum and Madhava (which is 10g sugar).

Figure 21 - Back label of 2.5 lb bottle of FiberYum

The next quest: Stabilization

After I was comfortable using Madhava and FiberYum, I started to focus on stability and getting the lemon meringue pie perfect. This required a closer look at stabilizers such a guar and xanthan gums and most recently, agar and gellan gum. Inspired by Katrina Stuart, at Plantified, I started to first look into gellan gum, which she was experimenting with to create a perfect pavlova and a vegan egg substitute, for which I had been following on her Facebook group. Around April 14, 2016 was when the discussions started and I learned more about gellan gum.

Further investigation led to a book by Alicia Foundation. It is explained that you must mix gellan gum with the liquid to be gelled and then bring it to a boil. It warns that if you do not use enough liquid it will thicken quickly and will not be easy to work with. This is what I experienced when adding the gellan to the boiling FiberYum. I did not want to use water because I thought that would affect the whipped aquafaba. I tried with less gellan and while it looked like it might work, it was a solid failure.

I did find a way to use gellan gum to create the most wonderful vegan ice cream I have ever had. I call it FabaCream because it is so good that it deserves its own name. A positive aspect of gellan gum is that there is absolutely no after-taste. I have included in this document the recipe for FabaCream.

Agar Powder

Katrina Stuart discovered and documented for all to see that combining agar powder with boiling sugar syrup (Italian method of making meringue) greatly stabilizes the aquafaba meringue for sugar-based lemon meringue pie. I now call this the Katrina-Italian method.

One of Katrina's complaints about the typical aquafaba meringue topping is that it tends to run "like snot". She cured the snot with agar powder for the lemon meringue pie. As soon as I saw her post I knew this was going to work for FiberYum lemon meringue pie. If it were not for Katrina I would not have been completely happy with my sugar-free lemon meringue pie recipe. It is truly amazing what agar does for the aquafaba meringue topping, regardless if the syrup you boil the agar in is FiberYum, VitaFiber or cane sugar syrup.

I already had agar in my kitchen because I was experimenting with it some, but not to this extent. I applied the Katrina-Italian method of adding agar powder to boiling syrup (FiberYum based) and poured it into the AF as it was being whisked at full speed. It worked perfectly and I posted my results on Katrina's Facebook group. I used 2 teaspoons of agar to about ¾ cup of aquafaba.

I was super excited! Then I found I am incredibly sensitive to the taste of agar. The first agar test pie was made with 2 teaspoons of agar powder. It was so strong that I had trouble eating the whipped aquafaba. Test pie #2, also posted on Katrina's Plantified Facebook group, used only 1 teaspoon agar and it was still stable and tasted much better. Eating the pie and taking both the meringue and the tart lemon curd in the mouth together helped mask out the agar taste for me. It was pretty good, but not good enough. Several people tried it and did not complain of a strange taste. Agar is simply dehydrated red sea algae and was discovered in Japan in the 15th century. While it tasted very odd to me I knew it was at least natural.

Test pie #3 only used ½ a teaspoon of agar powder and it made my sugar-free lemon meringue pie perfect! It does the job of stabilizing the meringue and at the same time leaves virtually no after-taste for me. This is the key I was looking for.

Gellan Gum

Everything I have read on gellan gum says that it is a direct replacement for agar, but is even more powerful with the same amount. This was simply not the case in multiple tests I did with gellan compared to agar. Perhaps it is some sort of chemical reaction with the FiberYum that prevents it from working, and maybe gellan would work with sugar better.

After getting it to work with ½ teaspoon agar I tried the exact same thing with ½ teaspoon of High Acyl gellan gum and it simply did not hold up. I could barely cut through the meringue, it was so sticky and a total snotty pie. Katrina would not be happy, to say the least. I did not even post the results on her group, out of fear of shocking her senses. As you can see below, the pie is imploding on its snotty self.

Figure 22 - Gellan Gum failure - whereas agar applied in the same amount would have been a success

Xanthan and Guar Gums

I am not a huge fan of xanthan or guar gum for only one reason: the strange feeling and aftertaste it leaves on my tongue. However, I know it is required in certain recipes, including the lemon meringue pie topping. I have made pies and dried meringues with and without it, and have lowered the dose that I have typically used with success. My recipe below for vegan meringue can therefore be used to make both a soft meringue pie topping as well as dehydrated meringues that melt in your mouth.

Drying out whipped aquafaba meringue

To dry this whipped aquafaba meringue recipe I include below, in the oven at 200F, it will take up to 4 hours, depending on the size of the meringues. This is not due to the FiberYum, as I have tested many times making dried meringues with FiberYum and have dried them out in a matter of 1.5 hours. Why so long then? I have to assume it is a combination of the xanthan gum and agar and the sheer density of the meringue my recipe creates. It could also be that the boiling syrup hitting the aquafaba and heating it up causes the structure of the AF to get dense enough to prevent air from penetrating easily. The more dense the meringue the longer it will take to dry out, in the cases where using FiberYum, VitaFiber or Madhava Cassava syrup. It might be different for cane sugar.

Figure 23 – ½ teaspoon agar-stabilized meringue (agar test pie #3)

Some of the ingredients of the Lemon Meringue Pie:

(lemon zest, lemon curd pie filling, organic coconut cream and organic corn starch)


NATIVE FOREST
UNSWEETENED
ORGANIC
Coconut Cream
PREMIUM
NET WT 5.4 FL OZ 160mL


ORGANIC CORN STARCH
RAPUNZEL
non-GMO
NET WT. 8 OZ (227g)
USDA ORGANIC

Recipes

Homemade Aquafaba using Chickpeas

What type of beans to make aquafaba with

I am finding it easier to make AF with chickpeas due to how dense and hard they are. Not only that, there seems to be more AF in a can of chickpeas than any other type of bean I have tested. Contrary to my previous and initial opinion of chickpeas (garbanzo beans) having too strong of a taste or smell, I have found ways to mitigate this quite easily. The main technique is to simply whisk the AF long enough that it aerates the smell and strong taste right out of them. Second, you just need to use the right ingredients to mask the bean flavor. This is covered in my recipe that follows, in great detail.

Two ways to make aquafaba

I have two ways of making aquafaba. I prefer this over using canned beans, which are more expensive and of course less ecological than making your own. I am pretty sure the energy and natural resources put into making a can of beans is more than what it takes to make AF on your own. On the other hand, I realize most people do not have the time to make their own and would just rather use a can of beans, which can be less work. If you are going to be making lots of creations with aquafaba then it is worth making your own, I think.

Preliminary – The proportions and processes here are still being refined because I have focused so much of my time on making the perfect sugar-free vegan lemon meringue pie with aquafaba – a huge challenge in itself. In particular, the slow cooker method has not been tested in a while, but I am confident in the pressure cooker method and proportions here, when using chickpeas and bottled water.

14 cups bottled water (I prefer bottled, Iceland brand)

4 cups chickpeas (or other beans)

The first step is to rinse the dry beans and strain and examine them for any foreign objects.

Figure 24 - Cuisinart CPC-600 Pressure Cooker

Using a pressure cooker

Set to cook for 16 minutes.

Let pressure cooker cool so that you do not burn your hands.

Proceed as directed below under *final processing*.

Using a slow cooker

Place beans and water in the slow cooker and cook overnight at low temperature.

Final processing

Place beans and brine in large mason jars using a ladle and wide mouth funnel placed into the mouth of the jar in order to not spill the beans or AF. Do not cover the jars after filling them! Place jars of beans/brine in the refrigerator for 24 hours at least.

Figure 25 - Chickpeas strained - you can dehydrate them in the oven and store them for later use

After 24 hours or more you can strain the beans using a fine mesh strainer or yogurt maker strainer. Freeze the aquafaba in pre-measured molds so you know how much is in each mold or cube.

Figure 26 - Straining chickpeas with a yogurt strainer

Figure 27 - Frozen aquafaba using silicone mold

A good technique for freezing and measuring aquafaba was posted by Nina Kristine Olofsson.

Sugar Free Vegan Lemon Meringue Pie

Important Equipment Requirements:

- Stand mixer with balloon whisk attachment (such as KitchenAid)
- Hand blender with whisk attachment
- Blender (any heavy duty type will do)
- Handheld grater or rasp for making lemon zest
- Fine mesh strainer

For the blender, I use Vitamix brand (latest, mine). When I bought mine it came with two containers – one for wet ingredients (64oz) and one for dry ingredients, like nuts (32oz). I use the small one for making cashew butter and the like. I think any heavy duty blender will do though.

International conversions:

1 cup = 240 ml
1 tablespoon = 14.787 ml
1 teaspoon = 4.929 ml
½ teaspoon = 2.4645 ml
¼ teaspoon = 1.23225 ml
1 fluid ounce (oz) = 29.575 ml

Sugar-Free Vegan Lemon Meringue Pie – Lemon Filling Ingredient List			
Item #	Item Name	Quantity	Source
1	Store bought 9 inch vegan pie crust & tin shell (or an awesome homemade crust)	1 pie crust	Link
2	Lemon zest (typically 2-4 lemons)	2 Tablespoons (firmly packed)	Link
3	Fresh squeezed lemon juice from as many lemons as it takes to make 3/4 cup	3/4 Cup	Link
4	Water (I prefer bottled water, Iceland brand, PH 8.88)	1 1/4 Cup	Link
5	Organic Cornstarch	5 Tablespoons	Link
6	FiberYum® Prebiotic IMO Cassava Syrup	3/4 Cup	Link
7	Unsweetened Organic Coconut Cream	5.4 fluid ounces	Link

The lemon curd pie filling recipe may be updated as I make more pies. My goal here was to cut down on fat content of the filling and to focus on the sugar-free aspects and the meringue stabilization. I have tried many different variations, from tofu to cashew to coconut milk to aquafaba to beans to nothing but water and lemon juice and the sweetener and cornstarch, etc. You get the picture.

I ended up using a 5.4oz can of coconut cream because I just could not live without the creamy texture it brings to the table. You will not be sorry if you follow this lemon curd pie filling recipe.

I did not have time to perfect a crust.

Note: You can use any filling recipe you like, but *do follow* my meringue recipe *exactly*. It will work.

Sugar-Free Vegan Meringue Ingredient List			
Item #	Item Name	Quantity	Source
1	Chilled Aquafaba	Roughly 3/4 cup	Link
2	Cream of Tartar	1/2 teaspoon	Link
3	Xanthan or Guar gum	1/8 teaspoon	Link
4	Madagascar Pure Vanilla Powder	1 teaspoon	Link

5	FiberYum® Cassava Syrup	1 Cup	Link
6	Super Agar	1/2 teaspoon	Link

My recipe for whipped aquafaba has been adapted and modified from various methods discovered, documented and tested by members of Facebook group Vegan Meringue

IF YOU FOLLOW THIS LEMON MERINGUE PIE RECIPE EXACTLY IT WILL WORK! (and taste great)

I need to make this point because I am one who very seldom follows baking recipes exactly. I always like to improvise and get creative. In making this sugar-free lemon meringue pie and documenting it, I realized how critical it is to follow at least some of the recipe. For example, the amount of agar powder can make or break the pie for me due to the after-taste caused by too much agar.

Lemon Meringue Pie Step-by-Step Instructions

1. Prepare Aquafaba

If you are using canned chickpeas:

Open one 15oz can of organic and **unsalted** garbanzo beans and strain the beans so that the liquid aquafaba is captured in a bowl, preferably your mixer bowl. No reduction over heat for the canned bean aquafaba is required. Use a fine mesh strainer and separate the AF from the beans. This will yield close to 3/4 cup of AF.

Place the beans in another bowl and refrigerate both the beans and the aquafaba liquid, uncovered. The beans can be used later in any way you wish, such as dehydrating them or just plain eating them from the bowl. Try not to waste the beans!

If you have made your own aquafaba:

Measure slightly less than 3/4 cup of aquafaba and place in uncovered mixing bowl and in the refrigerator. It is OK to leave the aquafaba in the refrigerator for hours, even 24 hours.

Let the aquafaba chill for at least 1 hour or more

The reason for leaving the AF in the refrigerator for a while is to cool it down and to allow it to "breathe". I believe that the cooling helps the foaming process while beating with whisk. Letting the AF breathe may allow some of the smell and bean taste to dissipate.

By the time you have beaten the AF into stiff peaks (with no sweetener added yet) it will taste completely neutral and you will not be able to detect any bean taste. This has been my experience using all methods outlined here, using chickpeas from Eden Organic. Your results may vary. See my notes below about using vanilla to negate the bean taste.

2. Cook Pie Crust

Pre-heat oven to 375F

After pre-heated, place the 9" pie crust into the oven for about 15 minutes. After a few minutes open the door and check if the crust is "blowing up" (large bubbles under the crust). Use a knife or fork to gently poke a few holes in the crust to release the air and cause it to go back down. I prefer this method for store-bought crusts because it is much easier to penetrate the crust when it is not frozen or heated.

Remove pie crust from oven and let cool

3. Lemon Zest & Juice

Prepare your blender to be used

Wash all lemons in hot water and make sure the labels are removed (or cut off) and the ends of the lemons are cut off so there are no stems. You are going to need a grater to make lemon zest.

Grate several lemons - enough to make 2 firmly packed level tablespoons.

Add 2 firmly packed tablespoons lemon zest into the blender

Using the same lemons you just made the zest from, slice, juice and strain them into a bowl using the fine mesh strainer. Cut, juice and strain as many lemons as it takes to get 3/4 of a cup strained juice. Remember to strain the juice so no seeds or pulp remains.

Add 3/4 cup lemon juice in the blender with the zest

4. Water

Add 1 1/4 cups of water to the mix in the blender

5. Cornstarch

Add 5 level Tablespoons of organic cornstarch to the blender mix

6. Coconut Cream

Add 5.4 fluid ounces of organic unsweetened coconut cream to the mix

Alternatively, you can use a regular size 13.5 oz. can of coconut milk but removing only the cream from the can and discarding the liquid.

7. FiberYum Sweetener

Add 3/4 cup FiberYum® sweetener to the blender mix

8. Blend

Cover the blender and start it up at slow speed.

Slowly increase the speed to maximum and blend for at least 4 minutes

9. Cook

Place the blended lemon filling mix into a medium to large size pot on the stove and turn heat to medium

Use a silicone spatula to occasionally stir the mix so that it does not stick to the bottom of the pot. The goal is to cause the mix to bubble (boil) for about 2 minutes or more. Increase your stir rate as the mix becomes thicker. Turn off the heat and continue to stir for a few more minutes. Remove from heat.

10. Fill Pie Crust & Chill

Pour the lemon curd filling into the cooked pie crust shell and chill

Place the pie in the refrigerator for at least 2 hours. In 2 hours you can start making the aquafaba meringue topping.

Sugar-Free Aquafaba Meringue

The amount of aquafaba in a can of chickpea beans is nearly 3/4 of a cup! At least this is the consistent fact with Eden Organic brand chickpeas, which use no salt. If your brand yields a different amount, you may need to adjust my recipe accordingly.

1. Combine AF, CoT, Gum

This is a critical step – combining the first 3 ingredients before beating with whisk

The first thing you need to pay attention to is the first three ingredients: Aquafaba, Cream of Tartar and xanthan gum. **You must add all of these in the mixing bowl at the same time, before beating with whisk.** Doing this allows you to achieve a very stiff meringue base to add more ingredients to.

Add 1/2 Teaspoon Cream of Tartar and 1/8 teaspoon xanthan gum to the mixing bowl which will have your chilled nearly 3/4 cup of aquafaba.

Note: Some people do not want to use xanthan or guar gums because it may create a "marshmallow" mouth-feel to the meringue. I myself have not noticed this effect unless I use much more gum, like 1 teaspoon or more. You can try to eliminate the 1/8 teaspoon gum here, but if you do I suggest increasing the agar by 1/8 teaspoon more in the subsequent steps below.

2. Whisk Aquafaba Mix

Using large balloon whisk attachment, begin whisking the AF, CoT (Cream of Tartar) and gum at slow speed to work the dry powders into the AF for about 3 minutes.

The idea here is to not start out at full speed in order to allow the foam process to grab hold and so the dry powders do not end up on the sides of the bowl. This should take only a few minutes, where upon you can throttle up to **max speed**.

Stop once in a while and use a silicone spatula to scrape the sides of the bowl clean and move the fluffed AF to the center near the whisk attachment.

Whisk until the balloon whisk attachment is completely filled with whipped aquafaba when the mixer is powered off:

Figure 28 - This is how you know you have whisked long enough – Balled up AF

Without accomplishing the above goal, as shown in the picture, nothing from this point forward will work so well, and therefore it is critical you get these steps down right.

The following **video** shows in slow motion what it looks like.

Figure 29 - Whipping the AF with balloon whisk attachment using KitchenAid mixer: AF + CoT + Xanthan

3. Add Vanilla

Add vanilla powder to mixer at full speed

You likely will not have vanilla powder, so you can try the liquid form, but I have not fully tested this enough to know the final results.

Continue to mix at full speed for at least 1 minute and stop the mixer and scrape the sides of the bowl with a spatula to get any of the powder (or liquid) that flew out to the edges. Continue this process a few more times.

Test the whipped meringue for bean flavor

If it has any bean taste add another teaspoon of vanilla but no more. It should completely mask the bean taste. I have noticed that homemade aquafaba only needs one teaspoon typically, while canned chickpeas need about two teaspoons of vanilla powder.

4. Heat FiberYum Syrup

Add 1 full cup of FiberYum syrup into a small pot on the stove

Turn the heat on medium to medium-high and occasionally stir the syrup until it is thinned out

When heated the syrup is "wet" and will accept the next ingredients easier.

Add agar to thinned syrup in pot

Combine 1/2 teaspoon of Super Agar powder in the small pot.

Whisk the syrup and the powders together

Blend the syrup with a small handheld power immersion blender with whisk attachment at the slowest speed or by hand with a whisk. The goal is to fully blend the agar with the syrup to the point where the syrup becomes milky white. This may take a few minutes.

Stir the pot of syrup with a silicone spatula and bring the mix to a boil for about 1 to 2 minutes, **scraping the bottom with the spatula to prevent scorching**. Medium-high heat setting should work for most stoves.

5. Add Boiling FiberYum

Pour the boiling FiberYum syrup into the beating aquafaba

As the aquafaba, cream of tartar and xanthan gum continues to mix, carefully pour the pot of boiling FiberYum mix into mixer bowl near the inside edge of the bowl. Do this at a rate which will get all the syrup into the bowl within 1 minute or less. You need to work fast so that the syrup does not get cold and gel or skin. Use a spatula to get as much of the syrup out of the pot and into the mixing bowl.

Pouring boiling FiberYum, mixed with agar powder: **Video**

Make sure you turn off the stove top

Continue to beat the meringue at top speed for at least 3 minutes or longer.

6. Add Meringue to Pie

Use a large silicone or wooden spoon to load the meringue onto the pie

Get the lemon pie out of the refrigerator and use a very large spoon or spatula to plop the whipped meringue on top! All of it, unless you have just way too much, in which case you could make piped dry meringues.

Form the meringue in any way you wish. Look at some of the pictures in this posting to get ideas or on the web. Create "peaks" with the back of a metal spoon by tapping the back of the spoon on the meringue and lifting up quickly.

You can also use a piping bag and star tip to create many shapes on the lemon curd filling. Place pie in the refrigerator for 60 minutes or longer to form some stiffness.

7. Torch or Bake Meringue

Once the pie is chilled for an hour you may brown it or just eat as is.

Using the oven to brown the topping

Get the pie out of the refrigerator and place into oven that is set to "broil" mode. Leave the door open and turn the pie every 15 seconds or so as it is under the red hot elements of the stove (if electric). Keep a very close eye on the topping to make sure it does not get too brown and remove it immediately if it does.

Using the chef's torch to brown the topping

See this link

Dehydrated Aquafaba Meringues

You may have more whipped AF left over after you have covered your pie and if so you can use it to pipe onto parchment paper and make dried meringues. It may take up to 4 hours at 200F to completely dehydrate the meringues due to the amount of stabilizers in the meringue which tend to seal in the moisture. One technique you can try is cracking the over door slightly with a long spoon handle. This allows moisture to escape faster.

Figure 30 - The meringues took 4 hours to dry but was worth it

To see how these dried meringues crunch, check this video

Faba Cream

Recipe below!

Figure 31 – Strawberry Faba Cream version 1 – it is so good it even smiles

Figure 32 – Faba Cream, recipe included below

Sugar-free (or sugar-based) Faba Cream ingredient list			
Item #	Item Name	Quantity	Source
1	Chilled Aquafaba	Roughly 3/4 cup	Link
2	Cream of Tartar	1/2 teaspoon	Link
3	Xanthan or Guar gum	1/8 teaspoon	Link
4	Madagascar Pure Vanilla Powder	1 teaspoon	Link
5	FiberYum® Cassava Syrup	1 Cup	Link
6	Gellan Gum - KelcoGel LT100 High Acyl	1 teaspoon	Link
7	Optional Vanilla Beans	1 bunch	Link
8	Optional Dehydrated Fruit (Raspberry)	1 package	Link
9	Optional Dehydrated Fruit (Strawberry)	1 package	Link
10	Optional Dehydrated Fruit (Peaches)	1 package	Link
11	Optional Dehydrated Fruit (Blueberries)	1 package	Link
12	Optional Sugar Syrup instead of FiberYum	See link	Link

1. Make Aquafaba Meringue

Follow the detailed recipe for the lemon meringue pie topping above using the ingredients listed in the table above

To make Faba Cream, you simply need to change one thing in the lemon meringue pie recipe for the pie topping. Instead of using ½ teaspoon agar power you use 1 full teaspoon of gellan gum.

If you plan to just make vanilla flavored Faba Cream increase the vanilla powder or liquid while making the meringue. Do this by slowly adding more vanilla than called for in the recipe for the meringue topping until you have taste tested it to your liking.

After you have added the boiling FiberYum syrup mix, you may wish to scrape vanilla beans for their seeds to add into the mix. A video explains how to do this.

2. Add Dehydrated Fruit

This step is optional if you want more than regular vanilla Faba Cream.

Fruit also adds fruit sugar to the product, so if you are sensitive to sugar please check the nutrition labels of your dehydrate fruits of choice and consult your doctor where required.

Do not use fresh fruit. I have and it crystalizes and makes eating the Faba Cream very difficult and the taste and feel is much different.

I personally like strawberry and raspberry the most.

Add to a small (cereal) bowl any amount of the completed meringue mix and then add dehydrated fruit as desired. I am not giving out measurements here because this is purely a matter of individual tastes. Some like more fruit, some like less. Just use your intuition here.

Use a spatula to mix the fruit in the small bowl. This helps mash some of the dried berries so their color comes out into the cream mix.

Fill small ceramic cups with the cream mix and then place in freezer for at least 4 hours.

I have noticed that Faba Cream gets soft quickly after removing from freezer, but it is initially very hard, just like milk based ice cream.

I have not eaten cow's milk based ice cream for at least 10 years. Eating Faba Cream reminds me of when I used to eat cow's milk ice cream because the texture seems to be the same. You may have a different opinion, especially if you have only been a vegan for a short time.

I have shared Faba Cream with about 6 people so far. All have said it is great!

3. Using Sugar Syrup

Replace FiberYum with organic sugar syrup

You may try this, but I have not verified it in making Faba Cream yet. Based on Katrina Stuart's method, you can make sugar syrup and add gellan gum instead of agar. I suggest trying one teaspoon gellan gum to the amount of aquafaba called for in my recipe for the pie topping.

Figure 33- Raspberry Faba Cream test batch #3

Figure 34 - Faba Cream ready for the freezer

Figure 35 - Mixing dried raspberries with AF meringue

Figure 36 - Dried blueberries whipped up into the meringue

Figure 37 - I recently bought 150.00 USD worth of FiberYum - this is 1/3 of that purchase

Similar IMO Sweetener Products

I asked Raw Revolution, the company that makes FiberYum, if any other company makes a similar product. They told me one in Canada does. It is called VitaFiber. Their site is located at http://bioneutra.ca I am in the process of testing this sweetener with aquafaba.

If you have found similar sweetener products, I have a group on Facebook you can join to share it. https://www.facebook.com/groups/sugarfreeaquafaba

IMO Sweetener Heath Concerns

The first thing I want to know when consuming something different or new is whether or not it is healthy and vegan. When I read that the company behind FiberYum was started by a nurse out of concern for her children eating junk food, my fears about FiberYum were eased. The company also calls itself "a

vegan company". I looked into how FiberYum is made. It is non-GMO but it is not organic, yet they are working on an organic version.

If you read through the Amazon reviews of FiberYum you will see it has a very high rating with nearly 5 out of 5 stars for at least 33 reviews (as of 5/6/2016).

One or two reviews mention it is not for people with diabetes. It is unscientific to use Amazon reviews to determine if a product is healthy or not for you, so the best thing to do is find out if there are controlled studies on FiberYum.

No formal testing has been done with FiberYum on health effects, but the company is looking into it. Their claims that it is a low-glycemic sweetener is based on research on IMO syrups in general that have been studied and determined to be low-glycemic.

FiberYum is made by extracting the pre-biotic fibers cassava tapioca. The details of that process are unknown to me.

My advice: consult your doctor and test your own blood sugar after eating anything with a sweetener you have concerns about. It may be that FiberYum is not for you and that it indeed does adversely affect your blood sugar. Everyone is different.

Table 1 - FiberYum.com description of the IMO sweetener

Isomalto-oligosaccharides (IMO) fiber syrup, 10lb./160oz./1gal jug. The same as used in our own Raw Rev Glo bars! Premium quality IMO syrup made from tapioca. CORN-FREE, Non-GMO, Gluten Free, Vegan, Kosher, tested for heavy metals. **Make your own low-sugar, high-fiber energy/protein bars, pancake syrup, smoothies, baked goods, and more!**
This is a delicious, super low-glycemic alternative sweetener with awesome amounts of soluble prebiotic fiber. IMO supports healthy intestinal flora growth and sets the stage for probiotics to work well.
Make special foods for glucose intolerance, intestinal problems, etc.

Ingredients: Isomalto-oligosaccharides (IMO) from tapioca starch.

Nutrition Facts
Serving Size: 1 tsp. (6.6g/0.2oz.)
Servings per Container: 800

Amount Per Serving		DV*
Calories	10	
Calories from Fat	0	
Total Fat	0 g	0%
Saturated Fat	0 g	0%
Trans Fat	0 g	0%
Cholesterol	0 mg	0%
Sodium	0 mg	0%
Total Carbohydrates	5 g	2%
Fiber	5 g	19%
Sugars	0 g	
Protein	0 g	0%
Vitamin A		0%
Vitamin C		0%
Calcium		0%
Iron		0%

* Percent Daily Values (DV) are based on a 2,000 calorie diet.

Figure 38- Sugar free meringues made with FiberYum sweetener and aquafaba. Cocoa powder sprinkled on top

FAQ

Where else can I use FiberYum?

Good question. I am not sure where else it works so well because I have only been experimenting with it when combined with aquafaba, but I have seen it advertised as being able to replace sugar.

I stopped used cane sugar years before I found FiberYum. I started using sugar to make whipped aquafaba in January, 2016, because that is what everyone was using and people on the Facebook group were having issues using things like Xylitol, Stevia, etc. After a few weeks with sugar in my house again I was either going to find a replacement that works or simply stop making sweet things with aquafaba.

Do I need to refrigerate FiberYum?

No! It's just as stable as honey. You can leave it out at room temperature. Note however that Madhava Cassava syrup (10g sugar) does need to be refrigerated after use.

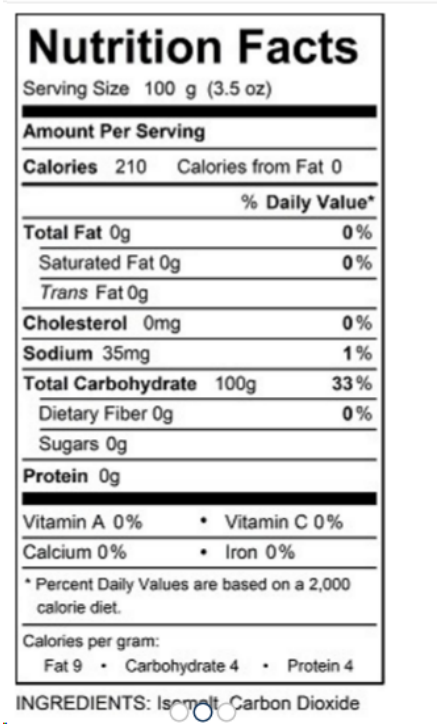
Post your results with FiberYum or other sugar-free or low-sugar alternatives

If you post your cassava results on the vegan meringue Facebook group please tag with the words #FiberYum or #sugarfreeaquafaba. If you post your recipe you can tag me so that I can possibly include a link here or you can post in the new sugar-free aquafaba group.

Sugar-free sweeteners I have tested

	Sugar-Free Sweetener	Conclusion
1	FiberYum Powder	Works for dried meringues and LMP but is not as effective as FiberYum syrup
2	Pure Isomalt (Non-GMO Vegan OU Kosher Certified)	Works for FabaCream. Made AF mix too unstable to make LMP. Dried meringues may work – did not try. Made into a syrup with ¾ cup Isomalt crystals added to ½ cup water and boiled with one

		of the gums or combination of: agar, gellan, locust bean gum
3	VitaFiber® IMO Syrup (Canadian company, referred by the makers of FiberYum)	Almost identical to FiberYum, this product (both syrup and powder) works exactly the same as FiberYum.



Nutrition Facts

Serving Size 100 g (3.5 oz)

Amount Per Serving

Calories 210 Calories from Fat 0

	% Daily Value*
Total Fat 0g	**0%**
Saturated Fat 0g	**0%**
Trans Fat 0g	
Cholesterol 0mg	**0%**
Sodium 35mg	**1%**
Total Carbohydrate 100g	**33%**
Dietary Fiber 0g	**0%**
Sugars 0g	
Protein 0g	

Vitamin A 0% • Vitamin C 0%

Calcium 0% • Iron 0%

* Percent Daily Values are based on a 2,000 calorie diet.

Calories per gram:

Fat 9 • Carbohydrate 4 • Protein 4

INGREDIENTS: Isomalt, Carbon Dioxide

Figure 39 - Isomalt Nutrition Label

Sweetener comparison conclusion

The Isomalto-oligosaccharides (IMO) syrups, FiberYum and VitaFiber, win hands down over any other sweetener I have tested. They are easy to work with and have a pleasant and sweet taste.

Pure Isomalt (syrup from ¾ cup to ½ cup water and boiled) taste is good, but not as pleasant as FiberYum syrup.

Pure Isomalt has 35mg sodium whereas FiberYum has 0mg.

Pure Isomalt has 100 carbohydrates vs 75 in FiberYum per 100g serving.

Pure Isomalt has 210 calories vs 150 calories in FiberYum per 100g serving.

Pure Isomalt has 0g fiber and FiberYum has 5g per 6.6g serving

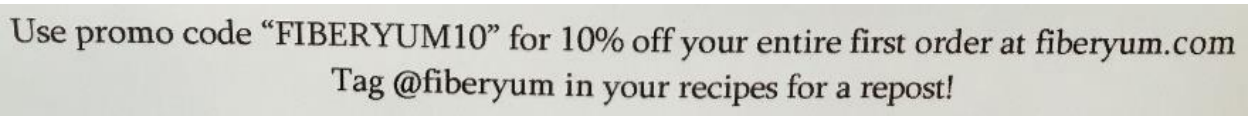
Other sugar alternatives (but not all sugar-free):

http://jenniferskitchen.com/health-information/list-of-sweeteners

Reference Links

The History of American Lemon Meringue Pie

www.FiberYum.com



More about Isomalto-oligosaccharides (IMO):

https://en.wikipedia.org/wiki/Isomaltooligosaccharide

VitaFiber – www.bioneutra.ca

Interesting facts about Agar:

http://www.peta.org/living/food/gelatin-alternatives

http://www.thekitchn.com/vegetarian-and-vegan-substitutes-for-gelatin-tips-from-the-kitchn-189478

Sugar free *cassavanized* & *aquafabanized recipes*:

- Tame the Meringue (KG)
- Lemon curd filled meringues (KG)
- Organic rose meringues (KG)
- Organic chocolate powdered meringues (KG)
- Lemon meringue pie (KG)

Some low sugar, fruit-based or sugar-free ***aquafabanized*** Recipes:

- Blythe Buttery - Brownies/Blondies
- Linda Robshaw – Coconut Macarons
- Goose Wohlt – Chocolate Chip Cookies
- Katrina Stuart - Banana Buckwheat Pancakes

Madhava Launches Into Sweet New Categories

http://madhavasweeteners.com/product/organic-cassava/

Note: Madhava Cassava Syrup is not sugar-free, but is low sugar with 10g per serving.

Cassava crop origin mystery 'demystified'

How to use the Caribbean super food, Cassava

Sugar-free posts on Vegan Meringue Facebook Group

A list of other sugar free related posts on Vegan Meringue group (via Lynne Dlc)

Truvia
https://www.facebook.com/groups/VeganMeringue/permalink/528905603963777/

Stevia & erythritol
https://www.facebook.com/groups/VeganMeringue/permalink/516376075216730/

Stevia
https://www.facebook.com/groups/VeganMeringue/permalink/532149463639391/

Erythritol
https://www.facebook.com/groups/VeganMeringue/permalink/525345284319809/

Xylitol
https://www.facebook.com/groups/VeganMeringue/permalink/507820756072262/

Maple syrup meringues (or cherry extract)
https://www.facebook.com/groups/VeganMeringue/513474978840173/

Maple syrup meringues
https://www.facebook.com/groups/VeganMeringue/permalink/541089949412009/

Agave meringues with cocoa
https://www.facebook.com/groups/VeganMeringue/permalink/528400574014280/

Monk fruit/Erythritol blend
https://www.facebook.com/groups/VeganMeringue/permalink/544649745722696/

Figure 40 - I made so many lemon meringue test pies that my compost was happy