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How to Make Great Fresh Mozzarella Cheese

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Author: mikemwa

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Fresh Mozzarella

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This has been **Revised** a little bit because some people have had a little trouble with the original. Even I had a few bad batches. The main differences are the times in the microwave. Follow the instructions carefully and you should end up with an almost 100% foolproof batch of Mozzarella Cheese

If you like fresh home made Mozzarella Cheese then try out this Instructable. If you have never had fresh Mozzarella Cheese, try it out any way. There is a world of difference between the packages stuff you buy in the store and the cheese you make yourself. It will only take a couple hours out of your life but it will be well worth it.

There are a lot of recipes on the internet but a lot of them seem to skip an important step or 2 or don't really explain it well enough, so I have made many batches through trial and error combining things that I have learned and experimented with (so you don't have to) and come up with this recipe that seems to work real good.

There are also a lot of recipes out there saying make Mozzarella Cheese in 30 minutes. Realistically, it ain't gonna happen if you want to do it right. Plan on it taking about an hour and a half to 2 hours. As you make more batches you can cut it down to maybe an hour or so.

I use whole milk for mine but you should be able to use skimmed, 1%, or 2% milk also. If you have access to farm fresh milk your even better off and I'm jealous. You can also use goat, buffalo or camel milk.

Step 1 Equipment you will need:

Related



How To Make Great Homemade Mozzarella
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Kitchen laboratory: Proteins and Cheese making
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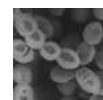
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Quick Simple Individual Pizzas
by mikemwa



Equipment:

1. At least an 8 quart pot either enameled or stainless steel. (Do not use aluminum, cast iron or other reactive pots)
2. Thermometer. (A candy thermometer will probably work but a good digital thermometer is much better for accuracy.)
3. A couple measuring cups or something to dissolve the Citric Acid and Rennet in.
4. A big strainer to strain the Curds from the Whey.
5. A long sharp knife to cut the Curds up with.
6. A slotted spoon to stir the Curds and dip them out with.
7. Large bowl for the drained off Whey. (Glass is best)
8. Small bowl to put the Curds in. (Glass is best)
9. Microwave

Optional:

10. Nylon netting for draining Curds. (I use this with the strainer. You can get this stuff at most fabric stores. It is just nylon netting. Get the plain white and probably not the colored stuff)
11. Plain white cloth if you want to make Ricotta Cheese with the Whey that is left over.
12. Small strainer to dip out the curds.

Ingredients:

1. 1 gallon Milk. Let the milk set out either in the gallon container or in the pot until it gets to about 50 degrees. (I have only used whole milk, although you can also use 2% or skimmed milk. Do not use ultra-homogenized milk though. If you are lucky enough to get milk fresh from the farm, that's even better)
2. 1 Rennet tablet crushed. (The Rennet tablet is used to coagulate the milk. You can also use liquid Rennet if you can get it. You can get The Rennet tablets at a lot of specialty or smaller stores and it is usually in the pudding aisle or in the Ice Cream section with the chocolate, nuts and stuff. About \$2.00)
3. 2 teaspoons Citric Acid divided. 1 teaspoon is dissolved in water and the other one is sprinkled directly into the milk. (The citric acid is what gives the cheese it's stretch. Get it at some health food stores for around \$4.00 for 4 ounces or at a pharmacy which can cost \$12.00 to \$14.00)
4. 1/2 cup water divided in 2. (Do not use chlorinated water. Bottled water is fine.)
5. 1 - 2 teaspoons salt.

Step 2 OK First things First



Using your car as a solar oven.
by Computothought



How to Make Natural Whey
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Guides



**HOW TO MAKE
CHEESE**



FERMENTATION



SUPERBOWL SNACKS



1. Pour 1 teaspoon Citric Acid into 1/4 cup unchlorinated water and stir. Crush the Rennet tablet and pour it into the other cup of unchlorinated water. The Citric Acid should be dissolved by the time you have to use it. Most of the Rennet will be dissolved but there will still be some residue left.
2. If you haven't done so already, pour milk into your pot. Make sure the milk is around 50 degrees when you pour in the Citric Acid

Step 3 Pour in the Citric Acid.



1. Pour the dissolved Citric Acid in the milk and stir for 1 minute.
2. Sprinkle the other teaspoon of Citric Acid in the milk and stir for another minute. You will probably see the milk start to curdle very shortly.

Step 4 Heat milk to 88-90 degrees F. Stirring occasionally.

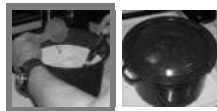


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This is not an error. You are not trying to pasteurize the milk. If you get it too hot or too cold, the Rennet will not make curds. Use a low heat so it doesn't go past the 88-90 degrees. It should take about 10-15 minutes.

Step 5 At 88-90 degrees turn off the heat and stir in the Rennet solution for 15-20 seconds.



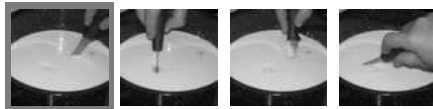
Cover the pot with the lid and LEAVE IT SET UNDISTURBED FOR AT LEAST 15-20 MINUTES until you can get a clean break. I usually let mine set for 15-30 minutes. Time is not critical here as long as you get the clean break.

Step 6 Wait for a clean break.



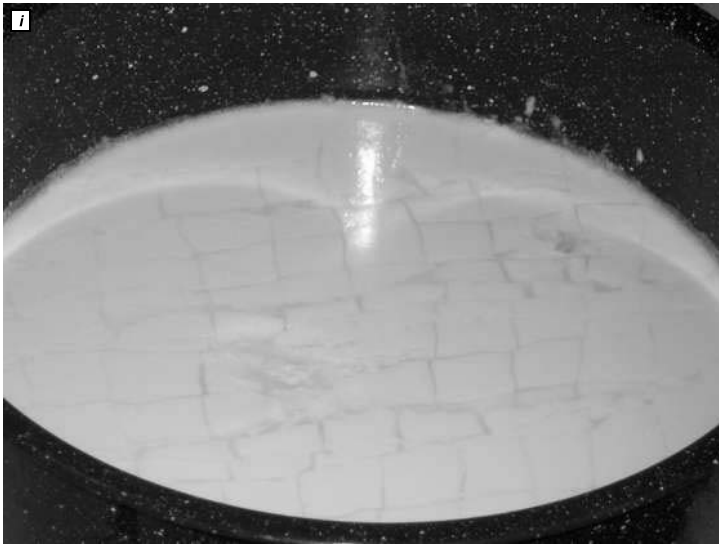
This is what a clean break looks like. When you poke your finger into it and move for an inch or so and lift it out, the Curd and Whey should separate shortly. If it is still liquidy (Is that a real word?) and sticks to your finger let it set a while longer.

Step 7 Cut the Curd.



Cut the Curds into 1/2 inch cubes from top to bottom as shown. Then do the same thing at a 45 degree angle.

Step 8 Let the Curds set undisturbed for 5-10 minutes.



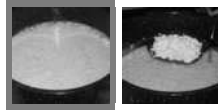
Just let them sit there.

Step 9 Apply low heat and heat to 108 degrees.



Apply low heat and stir the curds occasionally to keep them separated until they reach 108 degrees. This will take about 15 minutes. The Curds will shrink and start to sink as the Whey is expelled from them.

Step 10 Turn off the heat.



Turn off the heat and continue stirring every few minutes for an additional 20 minutes. The Curds will keep shrinking.

Step 11 Drain the Curds.



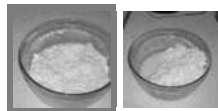
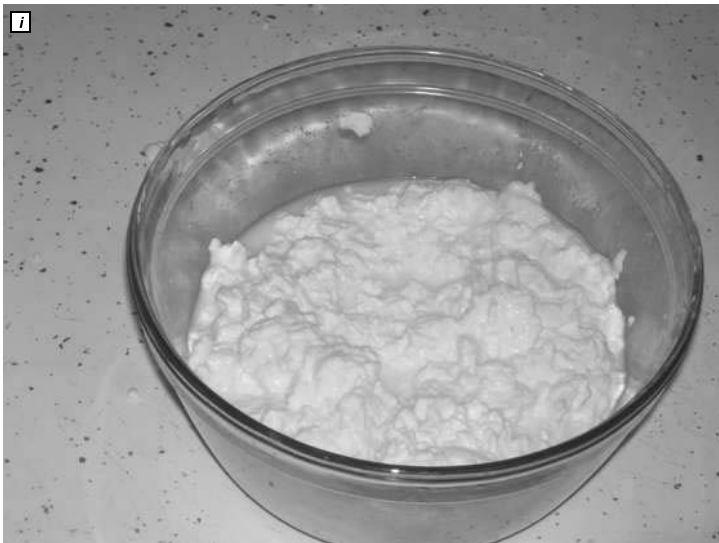
Drain the Curds into a strainer or colander and let set for about 15 minutes. Either use a small strainer to dip them out or just pour into the big bowl through the large strainer. Let the Curds drain until no more Whey comes out of them. This might take 10 - 15 minutes. You can either dump the Whey or save it to make Ricotta.

Step 12 Pour the Curds into the smaller bowl.



Pour the Curds into the smaller bowl and break them up with your hand a little bit.

Step 13 Heat the Curd.



OK here comes the tricky part.

Place the Curds in the microwave on high for 30 - 45 seconds. If you have it on too long you will cook the Curd and it will turn to mush. Better a couple shorter cycles than one that's too long. The Curds will start to separate from the Whey. I have an 1100 watt microwave. If yours is a different wattage you might have to adjust the time.

Step 14 Squeeze the Curds





Using the slotted spoon or your hand **GENTLY** squeeze the Whey from the Curd. Pour off the Whey.

Step 15 Microwave again.



Microwave again for 15 - 20 seconds and pour more Whey off. As you are gently squeezing the Whey out work it into a ball also.

Step 16 Stretching. OK Here comes the fun part.



Microwave again.

Put back in the microwave for another 20 seconds. Add Salt. At this point if it's warm enough it should start to become pliable and stretchy. YEAH!!!!. Grab 1/3 to 1/2 and lift. It should start to stretch under it's own weight. If not put it in the microwave for a few more seconds. As you work through the stretching process also knead it like bread a couple times. If necessary microwave occasionally until your cheese looks like the last picture.

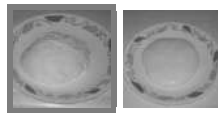
Step 17 Work into a ball.



At this point knead it like bread dough into a ball. If it breaks apart on you just put it in the Microwave again for a bit. As soon as it is nice and smooth and shiny it's done.

Step 18 CHEESE!!!!!!!!!!





You now have some Great Home Made Mozzarella Cheese.

Step 19 Final notes.

Before I perfected this recipe I was getting 12-14 ounces of cheese. Lately I get about 16-18 ounces. It probably depends on how much you work it. Wrap in plastic or put in a Zip lock bag and refrigerate if you can keep from eating the whole thing right then and there. That's when it is at it's best. It should keep in the refrigerator for at least 6-10 days. I keep my fridge set just this side of freezing so things keep a lot longer.

With the left over Whey you can make great Ricotta Cheese. If you would like to check that Instructable out go to:

<http://www.instructables.com/id/Great-Ricotta-Cheese-From-Whey>

Do you like Pizza? Check out my Quick Simple Individual Pizza Instructable at:

<http://www.instructables.com/id/How-To-Make-Quick-Simple-Individual-Pizzas/>

There you have it. Try it out and let me know how it works out for you. If you have any questions, comments, or suggestions leave me a note here or email me at mikemwa@sbcglobal.net.

If you liked this Instructable (Or even if you don't) Please rate it.

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mrwolfe says:

Aug 26, 2010, 6:46 PM

You're kidding, right? UN chlorinated water? The only place you can get unchlorinated water, apart from a rainwater tank, is from a pump in a third world country, or from a laboratory de-ioniser. The water supplies in all western countries are chlorinated to kill bacteria. If it weren't so the incidence of typhoid, dysentery and cholera would be as bad as they were 200 years ago. Are you talking about clean tap water, or are you using some special de-ionised water for your cheese?

Reply



bgeddes says:

Sep 20, 2011, 8:16 PM

Many, many folks here in the good 'ole US of A enjoy fresh clean unprocessed water from a well. They bottle water from the same vein as my well and send it to city folks. No chlorine is added, or necessary.

Reply



ybreiden says:

Aug 26, 2011, 8:27 AM

You can let you water sit out, uncovered over night and most of the chlorine will escape.

Reply



bstapler says:

May 23, 2011, 1:21 PM

You can also use distilled water. This type of water has nothing added to it at all. Most of the time it's made by a process of reverse osmosis, this way it insures that there aren't any additives or chemicals in it.

[Reply](#)



TommyDG says:

May 10, 2011, 9:46 AM

If you use a simple Activated charcoal filter, it will remove the Chlorine.

[Reply](#)



MMMMary says:

Apr 30, 2011, 6:56 PM

I just went to a cheese making class today and they also said not to use chlorinated water. You can boil it for 15-20 minutes or use bottled water...

[Reply](#)



PRO www.microbike.ie says:

Feb 16, 2011, 5:51 PM

There is no chlorine in tap water in here in Dublin, Ireland, Since we have free water, and everyone says we should not drink it unless boiled firstWe have been drinking it for a past 6 years and I cannot recall when I got cholera last time :-DD. On the other hand, quick tip: Tap a jug of chlorinated water and set it aside for a few hours the chlorine will evaporate on opened air..that is natural reaction that occur and you end up with clean better tasting water that you can use for cheese on the other hand I recall that distilled water should not be drunk since there is higher risk of Water intoxication even with smaller amounts, since distilled water has no minerals or better salts(sodium and other electrolytes) and thus I'm not sure if it is safe in cheese or any other food.

"Water intoxication, also known as hyper-hydration, water poisoning, or overhydration, is a potentially fatal disturbance in brain functions that results when the normal balance of electrolytes in the body is pushed outside of safe limits by over-consumption of water."

[Reply](#)



bstapler says:

May 23, 2011, 1:23 PM

I forgot about just letting the tap water sit for 24 hours, that is a good idea. It's the same concept for when adding water to the fish tank.

[Reply](#)



CGreene1607 says:

May 27, 2011, 7:18 PM

This is true for chlorine, but most water systems in the US do not use chlorine anymore; they use **chloramine** (a bond of chlorine and ammonia). Chloramine **does not** evaporate out of water.

De-chlorinating chemicals available at pet stores will break the bond, allowing the resulting chlorine and ammonia to dissipate, but of course I doubt you want to make cheese with water treated with a de-chlorinating agent.

You could always call the water agency and ask which they use, but the safe bet is that they've switched to chloramine. Spend the \$1.50 on a 20 oz bottle of water to get your half cup.

[Reply](#)



TommyDG says:

May 10, 2011, 9:50 AM

Sunlight and heat also will deplete Chlorine.

You're correct about the distilled water removing all those things, but once left open, bacteria, etc. can contaminate the water. Same with boiled water or water run through activated charcoal. Without residual chlorine, the water will not stay clean in open air for long periods.

[Reply](#)



jlausen says:

Oct 26, 2010, 3:55 AM

Mr. Wolfe,

it is apparent you don't know our great country. All rural areas, aka - farm land, have well pumps and are not on chlorinated water systems. The water that comes from my faucet is unchlorinated and has been for the 12 years that I have owned my house. I live in a rural area that is surrounded by small towns that have municipal chlorinated system but it is cost prohibitive to bring town water all the way out to the farms and communities surrounded by the farms. Oh and we have a septic tank too....

[Reply](#)



okff2 says:

Sep 11, 2010, 12:12 PM

ever heard of bottled water?

[Reply](#)



mrwolfe says:

Sep 9, 2010, 12:56 AM

All right, all right, you lot, UNCLE!

2

I didn't mean to, but it looks like I really lit a fire here. I'm not too worried, though, because there have been lots of great suggestions on how to get your water without Chlorine in it.

One thing though , how important is the dechlorinated water? I just did a quick internet survey, and out of 20 recipes (pretty much the same recipe 20 times, really), only 2 mention bottled or distilled water. Most recipes I've seen don't specify "unchlorinated water", just "water". Has anyone tried using ordinary chlorinated tap water? Does it make a difference? Just curious ...

[Reply](#)



heldmyw says:

May 10, 2011. 9:02 AM

I have used both bottled and tap water. It makes no difference at all.

[Reply](#)



jrmarchesini says:

Sep 8, 2010. 5:34 PM

tap water comes chlorinated, yes! But leave it in an open bowl and have it rest for a couple of ours and you will have eventually clean dechlorinated water. Chlorine dissolves eventually in the air with a little rest time.

[Reply](#)



jimdaye says:

Sep 8, 2010. 6:34 AM

We are not hooked to a municipal water system. My water comes from my well..no chlorinated water here, just turn on the faucet. I am wondering if there will be a change in taste though due to the fact that the water is a little hard. One other question— do you have to use powdered citric acid or can something like lemon juice be used?

[Reply](#)



yaki-imo says:

Sep 7, 2010. 8:44 AM

Many municipal water systems in North America do not chlorinate. My town in central British Columbia does not chlorinate. When we visit relatives in places where the city system does chlorinate, we really notice the chemical taste and smell right away. Chlorine does make the water system safer but there are always trade offs...

[Reply](#)



cougarmandan says:

Sep 6, 2010. 5:27 PM

My britta filter makes unchlorinated water by the gallon, and I even have one attached to my sink that makes a continuous flow of it. I use it when I was make wine so the chlorine doesn't affect the yeast.

[Reply](#)



Shiftlock says:

Sep 6, 2010. 3:34 PM

Okay, so mrwolfe didn't think before he wrote the comment about unchlorinated water. I've never seen so many responses to one boneheaded comment.

So, everyone use bottled spring water (Poland Spring, Evian, Aquafina, Dasani, generic-market-brand, etc.) for this recipe. I think the issue is settled now, isn't it?

[Reply](#)



uallacepod says:

Sep 6, 2010. 6:46 AM

"You're kidding, right? UN chlorinated water? The only place you can get unchlorinated water, apart from a rainwater tank, is from a pump in a third world country" You must be joking, huh? You should be more respectful. I'm from Brazil, one of the so called "Third World Countries". And here we ALSO have all of the water supplies chlorinated. Someone of your age shouldn't be so uninformed about other cultures... No hard feelings, these are just my thoughts. :-) Oh, and by the way... Nice instructable. :-D

[Reply](#)



mrwolfe says:

Sep 9, 2010. 12:15 AM

No disrespect intended, uallacepod. To confess, I never thought of Brazil as third world. Brazil is very progressive, in many ways more so than most "first world" countries. You have a vibrant aerospace industry and you have been using E85 fuel in your cars for years, something that most "western" governments are still very timid about. I could go on, but you get the picture.

[Reply](#)



uallacepod says:

Sep 9, 2010. 6:14 AM

Hi, mrwolfe!

I understand your words. :-D

No har feelings about that. I was in a "not so good day", lol.
And also, you've demonstrated knowledge of our "good tech points" when you spoke about some good points that even most brazilians don't know about it. :-)

My best regards, mrwolfe. :-D

[Reply](#)



leftiejenessie says:

Feb 16, 2011. 11:38 PM

There is no such thing as a first world, there is no such thing as a third world, there is just one world!

[Reply](#)



uallacepod says:
Sorry to kill your dreams, leftie. But this is not a physical division and yes, there are "these worlds", lol. :-D

Feb 17, 2011. 5:36 AM

I'm joking... I see your point and agree. But, unfortunately there's still too much difference in the living conditions over the world (see Africa, for example).

Well, I hope these barriers come down as soon as possible.

Respectfully,
uallacepod

Reply



leftiejenessie says:
Yes there are different types of societies, different levels of living conditions, but physically there is only one world and we as a human society need to start thinking and acting as such. One step is to stop calling countries "first world" or "third world" countries because that just implies that they are somewhere else, that we don't have to worry or help, that the choices we make don't affect people's lives elsewhere. I haven't come up with a good phrase though...

Feb 18, 2011. 4:22 PM

Reply



uallacepod says:
Perfect stated leftie! Those words were wise and solidary.

Feb 19, 2011. 6:26 AM

I sincerely hope that more people think as you, my dear.

Also, you already wrote a "good phrase", lol.

My compliments,
uallacepod

Reply



leftiejenessie says:
What was my good phrase? I am trying to think of one to replace 1st and 3rd world. It needs to be short and sweet and preferably catchy so people will pick up on it.

Feb 21, 2011. 11:15 AM

Reply



uallacepod says:
"Yes there are different types of societies, different levels of living conditions, but physically there is only one world and we as a human society need to start thinking and acting as such".

Feb 21, 2011. 12:16 PM

No need to say more, lol. perfect words.

Reply



leftiejenessie says:
And the reason why it should be short is no one is going to remember a long phrase and you can't really refer to a country with that phrase. But really, we should just not have any countries, and then we wouldn't have to come up with a phrase. It would just be one world. But that's a long way off and in order to get towards that we would have to stop isolating ourselves and a representation of that would be by changing the way we speak. By changing the way we speak, we change the way we think, by changing the way we think, we change the way we act, by changing the way we act, we change who we are, by changing who we are, we make the world a better place!

Mar 20, 2011. 1:56 PM

Reply



leftiejenessie says:
I meant (or nice: the English language is so strange! I never mean anything! I nice whatever I say) to reply earlier about this but I forgot. I am trying to find a short phrase (less than three words) so that people might pick up on it refer to what we currently call 1st and 3rd world countries as something less demeaning, insulting, and isolating. Developed and underdeveloped or developing nations is not good either, as that implies that rich countries are mature and developing nations are immature. It is actually the other way around. Countries like the U.S. are like teenagers. People are caught up in what is cool, and they want the latest new tech thing. And hardly anyone listens to people who know what is better for them. So should we call them teenager countries? Or rebel countries? What to call non-teenager countries?

Mar 20, 2011. 1:51 PM

Reply



macrumpton says:
Distilled water is definitely unchlorinated and it is available at any supermarket. I also suspect that pretty much all bottled water is unchlorinated as well. Bringing water to a boil also drives the chlorine out quickly.

Sep 5, 2010. 10:34 PM

Reply



dropkick says:

Sep 5, 2010, 9:19 PM

If you let your tap water sit at room temperature, in a uncovered container, for 24 hours any chlorine it might have in it will dissipate into the atmosphere. And you'll have unchlorinated water.

[Reply](#)



janettetsmith says:

Sep 5, 2010, 2:20 PM

UN kinds: Evian, wells, distilled ...

[Reply](#)



PROcahj1968 says:

Sep 5, 2010, 2:00 PM

RO process will also get rid of chlorine

[Reply](#)



CaptainGroovy says:

Sep 5, 2010, 1:24 PM

You most live city. The truth is unless you are on a Municipal water system in the Untied States most water is not Chlorinated. Typhoid Dysentery and Cholera were only problems for area that used common wells. The truth of the matter is "modern plumbing" is what did a way with yphoid, dysentery and cholera. 200 years ago most people used outhouses and those that did not used chamber pots and cesspools. Additionally people did not take baths or showers often nor did they was their hands combined that with poor food storage Technics or abilities No refrigeration excepts for maybe a "Ice Box"

[Reply](#)



bhannold says:

Sep 5, 2010, 11:57 AM

geezzz.... i drink unchlorinated water every day.... from my WELL!!!

[Reply](#)



wobbler says:

Sep 6, 2010, 9:22 AM

I hope you've had a full Health and Safety check and can confirm that you are still alive. You need to be careful, my grandad used to drink water like that AND cut off the mouldy bits off his food and eat the rest. He only lived to 89, so it just goes to show how dangerous stuff like that can be. His dad lived to be 98, so I suspect he was much more careful about what he ate and drunk than his carefree son.

[Reply](#)



bhannold says:

Sep 6, 2010, 12:30 PM

lol

[Reply](#)



Kinnishian says:

Sep 5, 2010, 11:36 AM

Not to mention, chlorine bubbles out of the water if you let it stand for a bit. I don't know if tap water will not have other things that are bad for the cheese, but a common trip for watering plants is to leave out tap water for few-several days to let the chlorine 'bubble' out.

[Reply](#)



binary says:

Sep 5, 2010, 9:56 AM

are you kidding??? you did no research before posting this ridiculous response.

getting your hands on unchlorinated water is as simple as going to the store and picking up a bottle of water. DO READ the label though. not all bottled water is unchlorinated.

as for the other tips of leaving a glass of water out so that the chlorine evaporates after 24 hours in new and interesting advice. i will be checking out how my county treats their water and might consider leaving the PUR out on the counter from now on for this added benefit even though it filters most of the chlorine out. yet another way to get unchlorinated water.

BTW mikemwa! GREAT instructable!!! i am considering trying this if i can easily get my hands on the rennet and citric acid. thanks.

[Reply](#)

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