Stilton Approximation How-to

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Stilton to me is a magical cheese. It's delectable on its own, as a snack with fruit, as a lunch with a piece of bread, crumbled into salads, or in an entree, such as sprinkled on top of fresh sauteed parsnips. It's not an especially difficult cheese to make, but to make it well requires paying attention to all the little details and using the best milk possible. It is not an instantly gratifying cheese. It takes about five days from start until you can move it to the cave, and at least another 60 days for the flavor and texture to develop. But the effort is well worth it.

Here are our general notes about Stilton:

- It can't properly be called Stilton unless it actually meets the DOC requirements, such as the milk has to come from Derbyshire, Leicestershire or Nottinghamshire counties.
- The cheese curds need to be dry enough when molding to form mechanical openings. This is usually accomplished by letting the cheese rest without whey overnight, then milling, salting, and packing the curds.
- The milk is ripened to let the pH decrease to about 6.4. Bulk (not DVI) starter is often used, leading to a faster pH drop immediately.
- The best rennet is single strength calf rennet, added at a rate of about 8 ml per 100 lbs milk.
- The cheese is not pressed, but instead is left to acidify for four days before moving it to the aging cave.
- Stilton is not cooked to higher temperatures but maintained at 86 F.
- The affinage conditions are 54-55F at 90-95% RH.
- A natural brown rind forms as the blue mold dies off.
- The cheese is smoothed after demoulding to give is a uniform appearance and prevent contamination to the inside

Please note that Stilton is a reserved name and this how-to does not make a true Stilton, but a close approximation based on the manufacturing process of Stilton.

Ingredients, Equipment, and Supplies

Quantity	Description
4 gallons	Milk, whole, PF -0.85-0.9 (usually 4.5% butterfat)
1/4 tsp	P. roqueforti culture, mild lipolysis strain. Use the right amount per manufacturer guidelines. Might be less than 1/4 tsp.
1 tsp	Single strength calf rennet. Use ~8 ml rennet per 100 lbs milk.
1/2 tsp	Aromatic mesophilic starter with Leuconostoc, such as FD or Aroma B. Again use manufacturer guidelines. Should be somewhere around 6 DCU per 100 lbs milk (1% bulk equivalent).
1-2 cups	Cream. If your milk is not high in fat, add a little cream to increase the fat content to hit the PF target.
8-9 tsp	Salt. Use around 2 tsp salt per gallon of milk of flake salt. Salt content is 3%-4% commercially. It does vary among makers and batches.
1 cup	Distilled ice cold water, for diluting rennet.
Pot or vat big enough to contain milk	
Thermometer, 0-212 F. pH meter if you have it	
Colander, spoon for stirring	
Muslin cloth or curd drain bags (optional). 4 gallons makes a LOT of curd	
Cup or bowl that floats, such as yogurt cup.	
Measuring equipment, cups, spoons	
Cake spatula/knife	
Ladle to scoop curds, and 6-8" mold, bottomless is easiest.	

Process

Step	Step Time	Time from Step 1	pH Target
Gather all your ingredients and equipment in one place.	N/A	0:00	N/A
Sanitize (clean and disinfect) all the tools by filling the pot with a few inches of water, and putting everything that fits in it, closing the lid and letting it steam for 30 seconds. You can also dip everything in a solution of 1 gal water with 1 tablespoon of chlorine in it. If using chlorine, rinse with water after. Or use your normal sanitizing schedule (starsan, paracetic acid, phosphoric acid, etc).	0:05	0:05	N/A
Pour the milk in the pot and heat on the stove to 86F. It is very important to not overheat. The mesophilic culture include bacteria that produce diacetyl and CO2, and that bacteria favors lower temperatures and cannot compete well at the normal 88-90F of mesophilic bacteria such as Lactococcus.	1:00	1:05	6.6
After reaching the proper temp, add the DVI culture and P. roqueforti mold culture. Ripen until pH is 6.45, which is about 60-90 minutes. Adjust this time when using bulk culture, because it takes less time.	1	2:05	6.45
Dissolve 1 tsp rennet in the 1 cup ice cold water. Add to milk and stir with 10-15 up-down strokes to evenly distribute the rennet. Stop agitating, put the cup to float on top and let it sit. Aft er 8 minutes check the cup by nudging it. When you nudge it and it doesn't move, that's the surface gel point. Note the time it has taken to reach the surface gel point and multiply by 4 to get the total time to wait from adding rennet to cutting curd. It usually takes about 15 minutes to surface gel and 1 hour before cutting.	1	3:05	6.45
Either cut the curd into 1" pieces or ladle it into muslin bags. Ladling produces a softer cheese, but is more of a pain to deal with. Cutting the curd helps the curds to release whey.	0:15	3:20	6.3
Commercially, the curd is cut, then let heal for 5-10 minutes, then stirred to help the curds release whey. If you are using this method, it is important to keep a careful eye on the curds, especially if you don't have a pH meter. If the pH is high, above 6.4, the curds will have a tendency to mat. So you need to stir them to prevent matting. There will be a tipping point when you do not need to stir often, which usually takes about 30 minutes. Settle the curds under whey until whey pH is about 6.0, and drain the whey. This stirring and settling process usually takes about an hour.	1	4:20	6.0
Drain the whey from the curds, leave in the pot, cover them to prevent contamination, and leave for 6-8 hours (overnight). During this time, the acidity will increase, and pH will decrease to 4.6.-4.8. You may need to press the curds lightly and figure out a way to	6	10:20	4.6-4.8

drain the whey. The curds should be fairly solid, acidic, and not too dry or too wet after 6-8 hours. If you mold the curds and have too many crevices on the surface, that's too dry of a curd. It's a delicate balance to achieve a soft paste, yet have opening to achieve the blue veining. The process in this how-to should work for most people, but adjust for your equipment if necessary.			
Mill the curds into smaller pieces (1/2"-1"). Salt the curds at a rate of 2 tsp per gallon milk. Salt evenly. It helps to add half of the salt, mix the salt in by tossing the curds, and salt/mix again.	0:10	10:30	4.6
Pack the curds into molds. Do not press.	N/A	N/A	N/A
Turn the molds over every 15 minutes four times, then every half hour four times, then every hour for 2-4 times. By this time, the top and bottom of the cheese will have formed, and you can leave them in the mold.	N/A	N/A	N/A
Leave the cheese in the mold to drain for 4 days, flipping 1-2 times every day. This is at room temperature.	N/A	N/A	N/A
At the end of four days, take the cheese out of the mold. It should show some signs of blue mold already. Take a cake spatula or knife and smooth the sides, top, and bottom of the cheese to eliminate openings. It's also possible to reserve some of the original curd (few tablespoons) by not packing all of it into the mold, and use it to fill in pockets and openings.	N/A	N/A	N/A
After smoothing, move the cheese into your aging room or chamber. Age for 7-10 days at 55F and 90-92% humidity.	N/A	N/A	N/A
After 7-10 days, pierce holes into the cheese. A stainless disinfected skewer works well for home use. Re-pierce after 3-4 weeks and again after 4-6 weeks to encourage the blue mold to grow.	N/A	N/A	N/A
Age minimum 60 days.	N/A	N/A	N/A