## Instructions & Recipe Cheddar cheese (cheese chunks)



	Ingredier	nts & tools :	HOWE	HEESEMAKER-PASTEURIZER-VAT BY LS BILODEAU
	-	es of raw milk (5.28 US gal)	$\cdot$ 40 to 50 g (1/4 cup) table salt	· Cutting board
	• 10 g of ferments (2 tsp)		Disposable gloves	· Kitchen knife (Chef)
	1 rennet (enzyme coagulant) sachet		· Food strainer	<ul> <li>Bags or containers for cheese</li> </ul>
	· 5 ml o	of non-chlorinated water (1 tsp)		
	STEP		ACTION	
Preparation	1	<ul> <li>1-b) Make sure that the ferrule end cat</li> <li>1-c) Fill the double wall with very hot the funnel until the excess of wat</li> <li>1-d) Pour 20 liters (5.28 US gallons) of</li> <li>1-e) Place in order: lid (2), motor head</li> <li>1-f) Insert the probe in the probe wel</li> <li>1-g) Connect the conductivity sensor.</li> <li>1-h) Connect the motor / agitator consistent of the unit.</li> <li>1-j) Press and HOLD THE BUTTON FO The control panel screen will displate the count up time (always in secons)</li> <li>1-k) Pour VERY HOT WATER CONTINUE head above the funnel to circulate sink. The temperature of the milk</li> </ul>	<b>right side of a sink</b> , the outlet of the <b>overf</b> <b>ip (Valve V1) is well fixed</b> and the <b>valve (up to the marking line</b> <b>raw milk in the vat</b> (up to the marking line <b>I / blade agitator</b> and <b>lid</b> (1). I of lid (2). <b>R 10 SECONDS to start the cycle.</b> <i>ay the current step, the temperature data,</i> <i>nds).</i> <b>JALLY FOR 10 MINUTES</b> into the funnel: use e very hot water in the double wall of the ta will increase. d of step and AUTOMATIC STEP CHANGE. <i>E</i>	alve V2) is closed. er or hold a faucet spray head above 20 liters). ions together. the duration of the current step and e a pitcher or hold an extensible spray ank. Excess of water will leak in the ach time a step ends, an ALARM BUZZER
Pasteurization	2	<ul> <li>is activated and the next step will automatically start (except for steps 8-h and 10-l which are MANUAL CHANGE STEPS).</li> <li>2-a) Press once the control box button to stop the alarm (DO NOT HOLD BUTTON).</li> <li>2-b)Stop supplying hot water. The electric element will continue heating until milk temperature reaches 63°C (145°F)</li> <li>ABOUT 45 MINUTES. When the 63°C is reached, it will automatically be maintained for an ADDITIONAL 30 MINUTES.</li> <li>→ ALARM indicating the end of step and AUTOMATIC STEP CHANGE.</li> </ul>		
	3	<ul> <li>3-a) Press once the control box button to stop the alarm.</li> <li>3-b) Pour VERY COLD WATER CONTINUALLY FOR 10 MINUTES into the funnel: use a pitcher or hold an extensible spray head above the funnel to circulate very cold water in the double wall of the tank. Excess of water will leak in the sink.</li> <li>The temperature of the milk must drop to 34°C (93 °F).</li> <li>→ ALARM indicating the end of step and AUTOMATIC STEP CHANGE.</li> </ul>		
	4	<ul> <li>4-a) <i>Press once</i> the control box button to stop the alarm.</li> <li>4-b) <b>Stop</b> supplying <b>cold water</b>. The temperature of the milk will continue to drop until <b>32°C (90 °F)</b>.</li> <li>→ <i>ALARM indicating the end of step and AUTOMATIC STEP CHANGE</i>.</li> </ul>		
Curdling	5	<ul> <li>5-a) Press once the control box button to stop the alarm.</li> <li>5-b) Remove the lid (1).</li> <li>5-c) Gently sprinkle the ferments (10 g per 20 liters of milk) in the vat bowl.</li> <li>5-d) Replace the lid # 1. Let stir for 60 MINUTES.</li> <li>5-e) Meanwhile, prepare the rennet mixture for step 6: In a glass, mix the rennet (coagulant) sachet with 5 ml (1 tsp) of unchlorinated water. PUT ASIDE.</li> <li>→ALARM indicating the end of step and AUTOMATIC STEP CHANGE.</li> </ul>		
	6	<ul> <li>6-a) <i>Press once</i> the control box button to stop the alarm.</li> <li>6-b) <b>Remove</b> the lid (1).</li> <li>6-c) <b>Slowly pour the mixture of rennet (coagulant)</b> during stirring of <b>90 SECONDS</b>.</li> <li>→ ALARM indicating the end of step and AUTOMATIC STEP CHANGE.</li> </ul>		

		7-a) <b>Press once</b> the control box button to stop the alarm.		
	7	7-b) Remove the motor head / agitator from the unit and disconnect from the control box.		
	/	7-c) Replace the lid (1) and let stand for 30 MINUTES.		
		ightarrow ALARM indicating the end of step and AUTOMATIC STEP CHANGE.		
		8-a) <b>Press once</b> the control box button to stop the alarm.		
		8-b) Remove the lids (1) and (2). Check the density of the product: it should almost have the consistency of gelatin		
		(JELL-O <sup>°</sup> ). If it appears to be too liquid, give it an extra setting time, up to 10 minutes if necessary.		
		Cutting the curd with the supplied Curd Knife:		
		8-c) <b>Orient</b> the <b>blades horizontally, insert the knife</b> to the bottom of the vat and cut in small strokes following along		
	8	the wall of the vat.		
		8-d) Orient the blades horizontally, and cut in the same way as the step above.		
		8-e) <b>Insert</b> the knife underneath the curd, and <b>finish cutting in an upward movement</b> .		
		8-f) <b>Repeat</b> the 3 cutting steps until the curd pieces are evenly sized for an even cooking.		
		8-g) Replace lid (2), the motor / agitator and reconnect connections.		
		8-h) MANUAL STEP CHANGE: HOLD BUTTON THREE (3) SECONDS.		
Draining-Cooking	9	Cooking cheese: Progressive and uniform. The temperature of the milk is 32 °C at this stage. The heating element is		
		activated automatically and will bring the temperature of the milk to 39 °C (102 °F). ABOUT 30 MINUTES.		
		9-a) Be sure that the curd pieces break (no merging together) with agitation and if necessary use a table knife to undo		
		larger pieces or merged curd.		
		$\rightarrow$ ALARM indicating the end of step and AUTOMATIC STEP CHANGE.		
		10-a) <b>Press once</b> the control box button to stop the alarm.		
		10-b) Disconnect the connections and remove the motor head / agitator and take off the lid (2).		
		10-c) Place the cheese filter inside the vat towards the opening of the outlet (Valve V1).		
		10-d) <b>TO AVOID SPLASHING</b> , unscrew slowly the ferrule bolted clamp (Valve V1) and wait for pressure to come out.		
		Before removing end cap, <b>hold a food strainer underneath the outlet</b> to catch the pieces of cheese that could be		
		in it and be able to put them back in the vat.		
	10	10-e) <b>Remove end cap (V1)</b> to continue draining the whey in the sink.		
		10-f) <b>To help drain all of the whey, lift the back side</b> of the vat and slide the locks in the notches of the two (2)		
		adjustable tabs.		
		10-g) Make sure that the cheese filter is not blocked by cheese.		
		10-h) <b>Press</b> the cheese several times to the opposite side of the outlet (V1) to have all of the whey flow out.		
		10-i) When there is no more whey, MAKE A MANUAL STEP CHANGE: HOLD CONTROL BUTTON THREE (3) SECONDS.		
		11-a)Replace the lids (1 & 2) and let the cheese stand for 15 MINUTES.		
	11	$\rightarrow$ ALARM indicating the end of step and AUTOMATIC STEP CHANGE.		
		12-a) <b>Press once</b> the control box button to stop the alarm.		
		12-b)Straight in the vat, split the cheese wheel in two or pieces, stack them and turn them over.		
	12	Let stand 15 MINUTES.		
		ightarrow ALARM indicating the end of step and AUTOMATIC STEP CHANGE.		
		13-a) <b>Press once</b> the control box button to stop the alarm.		
Finishing		13-b)Again in the vat split the cheese wheel in two, stack and turn.		
	13	Let stand 15 MINUTES.		
		ightarrow ALARM indicating the end of step and AUTOMATIC STEP CHANGE.		
		14-a) <b>Press once</b> the control box button to stop the alarm.		
		14-b) <b>Remove cheese</b> and on a cutting board, <b>cut</b> with a knife in small chunks. Our favorite size: cubic ¾ ".		
		14-c) Put back cheese chunks in vat.		
		14-d) <b>Sprinkle</b> with table salt, (between 40 to 50 grams (1/4 cup) or salt to taste.		
		Let macerate 10 MINUTES and ENJOY!		
		After about 15 minutes, the unit automatically shuts off.		
		DISCONNECT APPLIANCE. Open valve (Valve V2) to drain water from double wall of the vat.		
Cleaning				
		Disassemble and clean using a mild soap dish. NEVER USE abrasive cleaners or abrasive scouring pads.		
		NEVER IMMERSE THE APPLIANCE OR MOTOR HEAD / AGITATOR IN WATER OR OTHER LIQUIDS.		