

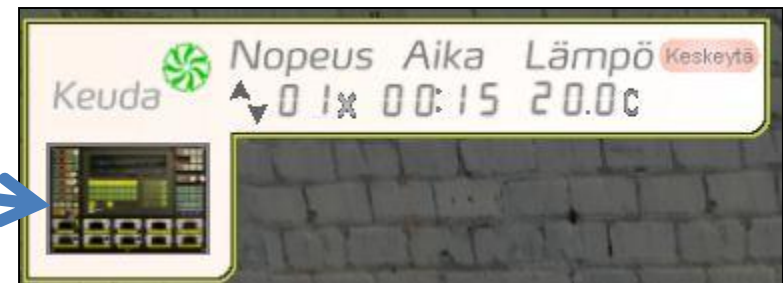
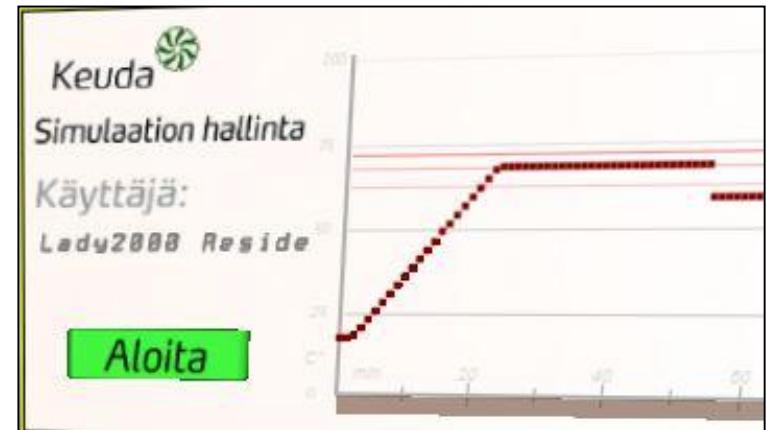
VIRTUAL BREWERY OF KEUDA THE INSTRUCTIONS OF MASHING

THE CONTROL OF SIMULATION

- The button “ALOITA” starts the simulation.
- The graph of temperature shows the progress of mashing.

HUD

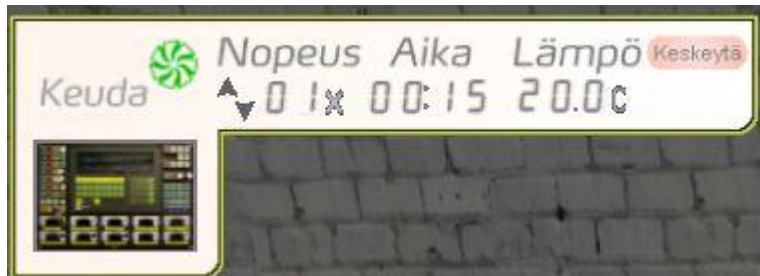
- Speed, time and temperature of simulation.
- Click by a mouse to open the controlpanel



VIRTUAL BREWERY OF KEUDA THE INSTRUCTIONS OF MASHING

Take the HUD, the recipe and the blue jacket from the cabinet in a corridor

- Click the cabinet, choose KEEP and the **KeudaHUD** goes to your INVENTORY (OBJECTS/Recent). By choosing WEAR, you get it for use.
- The HUD (Heads Up Display) pops up to the up left corner of your monitor.

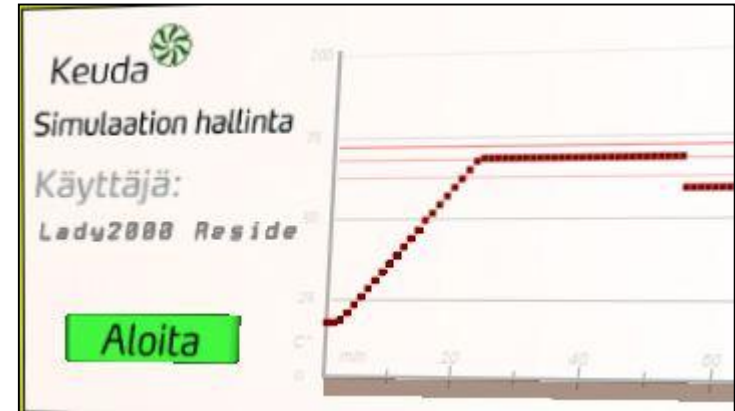


- In the same way, you get the recipe (**KeudaResepti**) on hand and the blue jacket (**Prosessinhoitajan takki**) on (Helma and Top)

VIRTUAL BREWERY OF KEUDA THE INSTRUCTIONS OF MASHING

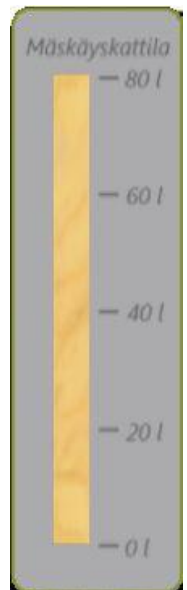
Go to the brewery

- Stand in front of the control of simulation.



Start the simulation by the button ALOITA

- To the left of the monitor pops up the indicator of volume of the brewkettle (liters).



VIRTUAL BREWERY OF KEUDA THE INSTRUCTIONS OF MASHING

THE SEVEN STEPS OF THE SIMULATION

1. Filling the brewkettle with water.
2. Heating the water by circulating it through the heat exchanger TOH.
3. Weighing the malts.
4. Adding the malts to the brewkettle.
5. Heating the mash by circulating it through the heat exchanger.
Raising the temperature 60°C \rightarrow 62°C \rightarrow 72°C \rightarrow 82°C .
6. Testing the mash by iodine.
7. Pumping the mash for lautering.

VIRTUAL BREWERY OF KEUDA THE INSTRUCTIONS OF MASHING

THE STEPS OF THE SIMULATION (1/7)

1. Filling the brewkettle with water (40 l).

- Open the water valve WV1 (click the WV1 button on the control panel).
- Shut the valve (click again the same button), when there is 40 l water in the brewkettle.
- If there is too much water, take it off by opening the bottom valve P1 by hand (behind the equipment).

VIRTUAL BREWERY OF KEUDA THE INSTRUCTIONS OF MASHING

THE STEPS OF THE SIMULATION (2/7)

2. Heating the water to 68 °C

- Open the valves V1 ja V7 for circulation by the button KL.
- Start the pump MWP by button MWP.
(pump stops with the STOP button which is next to the MWP button)
- Start heating by buttons AK1, AK2 and AK3.
- When the temperature is 68 °C, stop heating.
(heating stops by the STOP button which is next to the AK1 button)
- When waiting for the heating of water, you can do the step 3.



VIRTUAL BREWERY OF KEUDA THE INSTRUCTIONS OF MASHING

THE STEPS OF THE SIMULATION (3/7)

3. Weighing the malts (10 kg)

- In front of the control of the simulation there is weighing.
- Fill the vessel with 10 kg of malts by clicking with a mouse the up/down arrows.

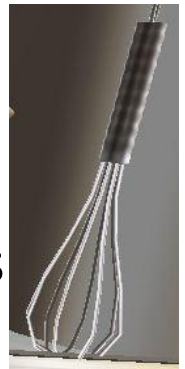
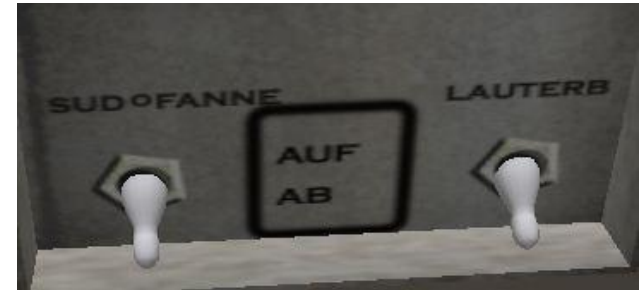


VIRTUAL BREWERY OF KEUDA THE INSTRUCTIONS OF MASHING

THE STEPS OF SIMULATION (4/7)

4. Adding the malts to brewkettle

- Start the mixing by a button RW
- Open the cover of the brewkettle with switch SUDFANNE-AUF (down the right corner of the equipment)
- Add the malts and mix by a beater =
Click by a mouse the malt vessel and avatar gets it in her hand-> Walk to the green area in front of the brewkettle and the malt vessel disappears = malts are poured to the brewkettle -> Click the beater next to the brewkettle to make avatar to mix by hand.
- Shut the cover of the brewkettle with switch SUDFANNE-AB.



**VIRTUAL BREWERY OF KEUDA
THE INSTRUCTIONS OF MASHING**

THE STEPS OF THE SIMULATION (5/7)

5. Raising the temperature of mashing

- When adding the malts the temperature has fallen. Raise the temperature to 63 °C by button AK1.
- When β -amylase has started stop heating (the button STOP next to button AK1) and wait for 20 min.
- Raise the temperature to 72 °C by buttons AK1-AK3.
- When α -amylase has started, wait for 10 min.



VIRTUAL BREWERY OF KEUDA THE INSTRUCTIONS OF MASHING

THE STEPS OF SIMULATION (6/7)

6. Testing the mash by iodine

- Make a iodine test

Open the cover of the brewkettle (SUDFANNE –AUF) and take a sample of mash and drop iodine on it (= click the iodine equipment). If the result is black colour, wait for 5 min before making a test again.

- When the sample doesn't anymore change to black, close the cover of the brewkettle (SUDFANNE –AB) and raise the temperature to 80 °C by buttons AK1-AK3.
- Stop heating.

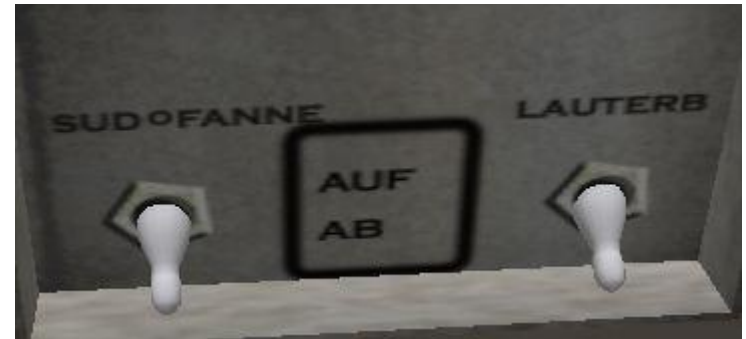


VIRTUAL BREWERY OF KEUDA THE INSTRUCTIONS OF MASHING

THE STEPS OF SIMULATION (7/7)

7. Pumping the mash for lautering

- Open the cover of the lauter.
(LAUTERB – AUF)
- Pump a little bit water into the lauter:
Start pump HWP and open valve WV3 (close by the same button). If there is too much water, take it away by the bottom valve P2 (behind the equipment).
- Stop the pump HWP.
(The STOP button is next to HWP button).





THE STEPS OF SIMULATION (7/7)

7. Pumping the mash for lautering, continue...

- Open the valves V1 and V5 by button TM-Z to get the mash to the lauter. Look at the animation at the back of the equipment.
- Wash the brewkettle with waterpistol (next to the brewkettle).
- Stop mixing RW and pumping MWP.
(STOP button next to RW button and STOP button next to MWP button)
- Close the valves by button KL.
- Close the cover of the lauter (LAUTERB – AB).



MASHING IS OVER.