Sana

SMART BREAD MAKER®

INSTRUCTION MANUAL

smart bread maker

www.sanaproducts.eu

Sana GRAIN MILL®

After grinding, flour starts to oxidize immediately. Unfortunately, this means a gradual decline of nutritional values. So, when you open a package with wholewheat flour at home, it has no original content of valuable substances any more. However, how to have fresh unweathered flour always at hand? Get yourself the Sana grain mill which is able to grain smooth and wholemeal flour from any dry grains including maize. A 360W engine and extremely resistant grinding stones grind 100g of grains in 1 minute. It is not necessary to use any additives and preservatives. In addition, thanks to the low temperature, essential oils and vitamins are not destroyed during grinding. Products from this flour nourish and cure your exhausted body.

WHITE FLOUR VS. WHOLEWHEAT FLOUR

Compared to wholewheat, white flour contains by about 60% less calcium, 76% less ferrum, 85% less magnesium, 78% less zink, 77% less vitamin B1, 80% less vitamin B2 and 86% less vitamin E.

CONTENTS

IMPORTANT SAFEGUARDS

Curing your bread maker: Before baking, do not forget to cure the heat element inside the bread maker. Set the program Bake No. 4 for 15 minutes and 180 °C. Then place the bread maker with the opened lid under the cooker hood and switch on! The bread pan has to always be in the bread maker during this process in order not to damage the lid.

Before using the electrical appliance, the following basic precautions should always be followed:

1. Read all instructions.
2. Before using, check that the voltage of the wall outlet corresponds to the one shown on the rating plate.
3. Do not operate any appliance with a damaged cord or plug or after the appliance malfunctions, or is dropped or damaged in any manner. Return appliance to manufacturer or the nearest authorized service agent for examination, repair or electrical or mechanical adjustment.
4. Do not touch hot surfaces. Use handles, knobs or oven gloves.
5. To protect against electric shock do not immerse cord, plugs, or housing in water or other liquid.
6. Unplug from outlet when not in use for more hours, before putting on or taking off parts, and before cleaning.
7. Do not let cord hang over edge of table or hot surface.
8. The use of accessories not recommended by the appliance manufacturer may cause injuries.
9. This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliances by a person responsible for their safety.
10. Do not place on or near a hot gas or electric burner, or in a heated oven.
11. Extreme caution must be used when moving an appliance containing hot oil or other hot liquids.
12. Do not touch any moving or spinning parts of the machine when baking.
13. Never switch on the appliance without properly placed bread pan filled with ingredients.
14. Never beat the bread pan on the top or edge to remove the pan, this may damage the bread pan.
15. Materials not intended for baking must not be inserted into the bread maker as this can give rise to the risk of a fire.
16. Never cover the bread maker with a towel or any other material, heat and steam must be able to escape freely. A fire can be caused if it is covered by, or comes into contact with combustible material.
17. Turn any control to OFF, then remove plug from wall outlet.
18. Do not operate the appliance for anything other than its intended use.
19. This appliance has been incorporated with a grounded plug. Please ensure the wall outlet in your house is well earthed.
20. Do not use outdoors.
21. If the supply cord is damaged, it must be replaced by the manufacturer or its service agent or a similarly qualified person in order to avoid a hazard.
22. The appliances are not intended to be operated by remote-control system.
23. Save these instructions.

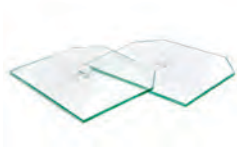
SANA SMART BREAD MAKER
Your „smart“ home bread maker

- 7 adjustable programs
- You can bake small bread loaves as well as large ones (0.5-1.7 kg).
- The most frequently used programs are duplicated.
- Kneaders do not need to remain in a loaf.
- It can cope well with pure rye dough kneading.
- Baking is possible without "artificial" ingredients and thanks to stainless steel also without Teflon.
- It is possible to make traditional natural yeast.
- Three-speed kneading
- Digital thermostat for different kinds of fermentation – with the sensitivity of 1 °C
- Two-phase rising for traditional preparation of leaven and sour dough
- Three-phase baking allows custom setting during baking
- Food heating with variable temperature
- Wide range of supplementary accessories made from stainless steel, glass and ceramics
- Simple “intuitive” control
- Very low power consumption

Max. power:	ca 815 W
Dimensions:	w 40 x h 30 x d 24
Weight:	ca 10 kg

PACKAGE CONTENT

(depending on the version purchased)

	3 models of Sana bread maker: BASIC – STANDARD – EXCLUSIVE stainless chassis baking pan made of galvanized plate transparent top viewing window glass sensor buttons	**7.5 kg**
	Al-Teflon baking pan and kneaders up to 1.7 kg of bread Model: BASIC	**0.5 kg**
	Stainless baking pan and kneaders up to 1.7 kg of bread Model: STANDARD – EXCLUSIVE	**1 kg**
	„Baguette maker“ Composed of a hard metal stand and two Al-Teflon forms Model: EXCLUSIVE	**0.5 kg**
	„Tempeh maker“ is a stainless bowl with a set of glass-ceramic lids for production of traditional tempeh cheese. Model: EXCLUSIVE	**1 kg**
	Saving glass lids	**0.5 kg**

	Needle multi-thermometer with temperature alarm and timer Model: EXCLUSIVE	---
	Needle thermometer (illustrative photo - the model may vary according to current availability) Model: STANDARD	---
	Small + large measure cup + hook for removal of kneaders from bread	---
TOTAL	Minimum weight circa	**10 kg**

PROGRAMS

Learn to operate a single program and everything else will be a piece of cake!

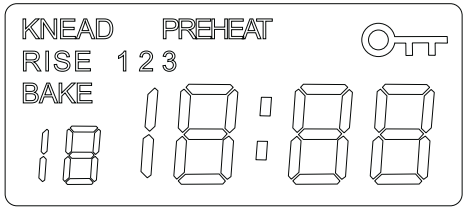
No.	PROGRAM TYPE	EXAMPLES OF USE
1	1. main program	Bread, dough, baguettes, Easter cake… (usually for the most used recipe)
2	2. main program	Equal to program No. 1 (usually for the second most used recipe)
3	3. main program	Equal to program No. 1 (e.g. for experiments and special recipes)
4	Baking	Separate baking (e.g. for baking breads until done, specialist baking)
5	Jam	Setting possibility not only for jam but also for lard or scraps
6	1. fermentation	Three-phase fermentation – another novelty for preparation of fermented food
7	2. fermentation	Equal to program No. 6

DISPLAY

PROGRAM PHASES

kneading, preheating
rising, 1, 2, 3
baking

program number



FURTHER DESCRIPTION

key - key lock

4 large digits for time and temperature, for example:

10:25 (10 hours 25 min.)

12 0 ° (120 °C)

PAUSE + TIME AND TEMPERATURE SETTING (increasing) Press and hold the button for 1s for pause on/off

TIME AND TEMPERATURE SETTING (decreasing) Press and hold the button for rapid value decreasing

TEMPERATURE DISPLAY
In the running mode (does not set up the temperature)
Hold for 2 s - kneading on/off
(max. time of kneading is 1.5 min)

MENU
program 1 - 7 switch

FUNCTION - STEPS
Leads you through all program phases

LIGHT/SOUND
Light on/off - max for 15 s.
Hold for 2 s – sound on/off.

KEY LOCK
Hold for 2 s - key lock/unlock

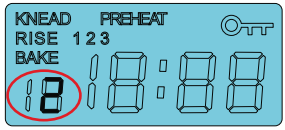
START/STOP
Hold for 2 s - program on/off.
Short touch returns you to the home menu + counts the time.

- You can use the "LIGHT" and "°C" buttons even when buttons are locked.
- When baking is finished, the time measuring still continues. If you forget to remove baked bread or you want to wait an hour for the bread to cool, every 30 minutes until you turn it off the bread bakery beeps.

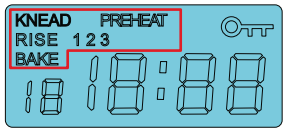
BREAD MAKER CONTROL AND PROGRAM SETTINGS

Plug the power cable into the outlet. The bread maker turns on automatically.

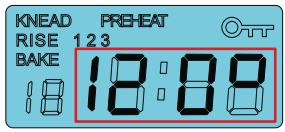
Press the Menu button to select the required program.



The function button leads you through all steps of setting of values for your selected program.



Use „+" and „-" buttons to increase/decrease all values for particular programs.



During the baking cycle, you can stop the bread maker by pressing and holding the „PAUSE" button for 2 seconds. Press and hold this button to start the bread maker again.

Press briefly to return values of particular programs to their default values. Press again to end value setting and the overall time is counted. Hold the button for 2 seconds to start the selected and set program.

Program Off: Hold this button for 2 seconds to lock/unlock the control panel (the control panel is unlocked for 5 minutes and the key sign on the display is flashing)

Program On: Hold this button for 2 seconds to lock/unlock the control panel (the key sign on the display is permanently on/off)

MINIMUM AND MAXIMUM VALUES FOR THE MAIN PROGRAM SETTINGS

PROGRAM No. 1 + 2 + 3

Main programs Program No. 1 Program No. 2 Program No. 3	BAKING PROGRAM DESCRIPTION	Time setting OFF=0
Delayed start Preheating	Start time setting Preheating temperature setting	0 – 10 hrs 20 – 55 °C
Knead 1	Kneading time setting Kneading efficiency: P0=0%, P1=10%, P2=50%, P3=100%	0 – 15 min P=0, P =1, P =2, P=3
Rise 1	Rising time setting Rising temperature	0 – 5 hrs 20 – 55 °C
Knead 2	Kneading time setting Kneading efficiency: P0=0%, P1=10%, P2=50%, P3=100%	0 – 15 min P=0, P =1, P =2, P=3
Rise 2	Kneading time setting Rising temperature	0 – 5 hrs 20 – 55 °C
Bake 1	Baking time setting + baking temperature	0 – 2 hrs 50 – 230 °C
Bake 2	Baking time setting + baking temperature	0 – 2 hrs 50 – 230 °C
Bake 3	Baking time setting + baking temperature	0 – 2 hrs 50 – 230 °C

Each function of the program No. 1, 2 or 3 has 2 setup steps (e.g. time + °C or time + motor power).

Delayed start (or preheating) is often used within baking breads with quick leaving agents. We do not use this function within "healthy" baking because long term natural fermentation is better than the delayed start. In addition, pouring flour into the water without prompt mixing makes the mixture inhomogeneous. Another problem with the delayed start is also a loss of control over kneading and dough consistency.

Knead 1. We prefer to start the program in the second step – fast kneading. Fast kneading is the highest motor speed (marked as motor power "P = 3"). With this setting, the bread maker can knead even the largest amount of dough in just two minutes! We add one minute as a reserve and we have three minutes in total. With the "°C" button, you can start/stop kneading during any program. If you decide to start kneading manually, it's not necessary to set further kneading in the chosen program. (Kneading can be turned off manually or it switches off in max. 1.5 min automatically.)

As you can see, you do not need any special hoper within this procedure! Another risk of automatic hoper failures is thus avoided. Because there is no problem to wait a few minutes to finish kneading, you can still remove the kneaders. Actually, it is a "perfect" system of folding kneaders, because they do not remain in the bread at all! Additionally, you do not have to worry about failures of the folding mechanism.

Another advantage of this procedure is the possibility to smooth the dough surface with watered fingers.

And if you like working with rye, you can knead 100% rye dough, though rye does not have the proper gluten for reverse drawing of the dough to kneaders. There is nothing easier than putting dough from the walls to the kneaders with a wooden spatula. With the fast kneading function (P = 3), even rye dough is finished in 3 minutes!

And one more advantage of fast kneading: controlled about-two-minute-long kneading has much less gear and bearing wear compared to 20 minutes of kneading in conventional bread makers.

- For fast kneading (i.e. the highest motor performance „P=3"), do not set up longer time than 3-5 minutes to prevent motor from overheating or damage! Fast and short kneading = long service life!

Rise 1. Rising is so variable that it is possible to set a quick process with industrial leaven as well as slow rising with natural leaven and special two-phase rising as well.

Knead 2. Short kneading between "Rise 1" and "Rise 2" is rarely used with healthy bread. Although, the dough becomes more vivid, fluffy and nicer, this does not mean it will be of a higher quality, because of more oxygenation causing degradation of important nutrients. However for occasional cakes with large pores, this method is really attractive.

Rise 2 is usually omitted. When baking from home-made leaven, it is really reasonable because rising needs a specific range of temperature which allows the propagation of live cultures. Home-made leaven contains several healthy cultures and each of them propagates at a different temperature.

Bake 1, 2, 3. 3-phase baking is a novelty in this field. Now you are able to adjust the temperature distribution during baking.

BASIC RECIPE SETTING ACCORDING TO THE FOLLOWING INGREDIENTS

Sample setting for basic bread with program No. 1 - with glass lids

Remember, basic bread is made of just flour and water. Other ingredients are just accessories to be added appropriately! Refine according to your results.

500g of water, 700g of flour, 150g of leaven, 5g of salt, 2tbsp of oil, spices and seed to taste

(for quick industrial baking agents or yeast, adjust the rising time according to the manufacturer)

Delayed start Preheating	OFF min OFF °C	OFF = 0 minutes – the function is off When off, temperature does not matter.
Knead 1	0:00 hrs P = 0	When start kneading manually, do not set the timer. Motor power (speed) – off
Rise 1	2:00 hrs 27 °C	An approximate time for optimum amount of leaven Optimum temperature for leaven and sour dough is 25-29 °C.
Knead 2	OFF P = 0	0 minutes – the function is off Motor power (speed) – off
Rise 2	2:00 hrs 37 °C	An approximate time for optimum amount of leaven Optimum temperature for second rising of dough is 35-39 °C.
Bake 1	0:15 hrs 160 °C	For healthier baking, set lower times and temperatures. (For first short baking, you can set higher temperature)
Bake 2	1:25 hrs 150 °C	With glass lids, the final time and temperature are lower and for smaller loaves of bread, the values need to be reduced proportionally
Bake 3	OFF min OFF °C	Time for 3. baking is off. Do not set up the temperature.
TOTAL TIME	5 : 40	This bread is ready in 5 hours and 40 minutes.

16 steps in total for setting one recipe. Adjust the values according to your results!

<u>Sample setting for basic bread with program No. 2</u> - without glass lids

Remember, basic bread is made of just flour and water. Other ingredients are just accessories to be added appropriately! Refine according to your results.

500g of water, 700g of flour, 150g of leaven, 5g of salt, 2tbsp of oil, spices and seed to taste

(for quick industrial baking agents or yeast, adjust the rising time according to the manufacturer)

Delayed start Preheating	OFF min OFF °C	OFF = 0 minutes – the function is off When off, temperature does not matter.
Knead 1	0:00 hrs P = 0	When start kneading manually, do not set the timer. Motor power (speed) – off
Rise 1	2:00 hrs 27°C	An approximate time for optimum amount of leaven Optimum temperature for leaven and sour dough is 25-29 °C.
Knead 2	OFF P = 0	0 minutes – the function is off Motor power (speed) – off
Rise 2	2:00 hrs 37 °C	An approximate time for optimum amount of leaven Optimum temperature for second rising of dough is 35-39 °C.
Bake 1	1:50 hrs 140°C	Healthier slow gentle baking process at a lower temperature is set here.
Bake 2	0:23 hrs 180°C	For final phase of baking (ca 23 min), higher temperature is necessary. Without „glass lids“, the baking time is much longer!
Bake 3	OFF min OFF °C	Time for 3. baking is off. Do not set up the temperature.
TOTAL TIME	6:13	This bread is ready in 6 hours and 13 minutes

16 steps in total for setting one recipe. Adjust the values according to your results!
Notice how much energy is saved when baking with “saving glass lids”.

Remember also that the thermometer has „the last word" at the end of baking!

If you measure about 95 °C in the coldest part of the bread, the bread is done (see the STAINLESS BAKING PAN chapter).

Also keep in mind that with small loaves (e.g. 0.5 to 1 kg), it is reasonably necessary to lower the temperature and/or the baking time. It can be easily found with a needle thermometer!

PROGRAM No. 4 – BAKING IN THREE PHASES

Baking Program No. 4	PROGRAM - description	Time setting OFF=0
Bake 1	First baking time setting + baking temperature	0 – 5 hrs 50 – 230 °C
Bake 2	Second baking time setting + baking temperature	0 – 5 hrs 50 – 230 °C
Bake 3	Final baking time setting + baking temperature	0 – 5 hrs 50 – 230 °C

6 steps in total for setting one recipe – 2 steps for each function.

- *If you have mastered setting of the first program, you have also mastered programs No. 2 and 3 and also baking with program No. 4.*
- *The use of the baking program is very wide – from baking breads, pastries and Easter cakes to special low-temperature preparation of meat and vegetable.*
- *In our small cookbook, which is included in this manual, you can find basic recipes for lower-temperature cooking. We look forward to new delicacies directly from you!*
- *Using this program, it's possible to start kneading manually even in case of thinner dough.*

PROGRAM No. 5 – JAM
(preparation of lard, scraps, etc. is also possible)

Jam Program No. 5	PROGRAM - description	Setting (0 = OFF)
Mixing + baking 1	Time setting Temperature setting Kneading speed: P=0, P=1 (10%), P=2 (50%), P=3 (100%)	0 – 2 hrs 50 – 230 °C P=0, P=1, P=2, P=3
Mixing + baking 2	Time setting Temperature setting Kneading speed: P=0, P=1 (10%), P=2 (50%), P=3 (100%)	0 – 2 hrs 50 – 230 °C P=0, P=1, P=2, P=3
Mixing + baking 3	Time setting Temperature setting Kneading speed: P=0, P=1 (10%), P=2 (50%), P=3 (100%)	0 – 2 hrs 50 – 230 °C P=0, P=1, P=2, P=3

9 steps in total for setting one recipe – 3 steps for each function.

There have also been many more functions enabled in the program for making jams. It is no problem if you need to mix and warm the mixture at a changeable temperature. You can select not only the kneading speed from 0 to 100% but also different times and even temperature distribution during heating. **Now** you can also prepare "juicy or crispy" scraps and lard – epicures' favourite recipes!

Sample simple setting for jam in program No. 5		
Mixing + baking 1	15 minutes 190 °C P=0	1. step - preheating time setting 2. step - preheating temperature 3. step - motor, and thus the kneaders are switched off
Mixing + baking 2	60 minutes 170 °C P=1	4. step - heating time 5. step - heating temperature 6. step – motor power (speed) is 10%
Mixing + baking 3	30 minutes 50 °C P= 0	7. step - cooling time 8. step - minimum temperature 9. step - kneaders are switched off

PROGRAM No. 6 + 7 – FERMENTATION (RISE)

Fermentation Program 6 Program 7	PROGRAM - description	Time setting OFF=0
Fermentation 1	Time setting Rising temperature (accuracy 1 °C) Heating rate setting (max=t5)	0 – 20 hrs 20 – 100 °C t1, t2, t3, t4, t5
Fermentation 2	Time setting Rising temperature (accuracy 1 °C) Heating rate setting (max=t5)	0 – 20 hrs 20 – 100°C t1, t2, t3, t4, t5
Fermentation 3	Time setting Rising temperature (accuracy 1 °C) Heating rate setting (max=t5)	0 – 20 hrs 20 – 100 °C t1, t2, t3, t4, t5

9 steps in total for setting one recipe – 3 steps for each function.

What is the t1, t2, t3, t4 and t5 heating rate?

When you want to heat up a larger amount of food (e.g. various dough or larger container with yogurt), you can set faster heating "t2" or "t3" at first and then after warm-up, set the "t1".

t1 is designed rather for maintaining precise temperatures – maximum fluctuation is only +/- 1 °C.

t2 - t5 ensures faster heating, but temperature fluctuations are then much higher! Therefore, they are set for faster initial heating, a larger volume of food or for higher fermentation temperatures – approximately over 40 °C. Higher temperatures (over 40 °C) would not be reached by the bread maker with the heating rate "t1".

For comparison: t1 = 15 W, t2 = 30 W, t3 = 60 W, t4 = 120 W, t5 = 240 W!

Maximum time:

For programs 6 and 7, you can set up to 3 x 19:59 – this is nearly 60 hours! When the program is running, just one of the three blocks is counting down. This number is flashing on the display. If the program is still off, the display shows the total time of all three blocks.

However, if this sum exceeds the maximum range of the display 19:59, just the first conflicting digit will be flashing – i.e. "1"0:00. (Sample total sum before start: 9:55 = 9hrs: 55min, 18:20 = 18hrs: 20min, 0:12 = 0hrs: 12min, flashing 1:30 = ? hrs: 30min…)

TEMPERATURE DISTRIBUTION

Baking pan temperature in °C	Temperature distribution	Temperature measurements
min = 20 °C	Setting fermentation temperatures with fine resolution (1 °C) Programs No. 1+2+3	Exposing the dough (and other foods containing water) to temperatures around boiling point or higher causes a large production of steam which absorbs heat quickly and thus it is impossible to measure the expected heat in the baking pan. In order not to call higher baking temperatures by words ("low, medium, high"), we used a medium without water for measuring – it was oil! In the oil, we were able to measure the real temperatures up to 230 °C! The second condition was measuring at room temperature – i.e. about 22 °C.
30		
40		
50		
55		
20	Temperatures for special recipes (resolution 10 °C) (fermentation temperature, meal warming up, low-temperature treatment…)	
30		
40		
50		
60		
70		
80		
90		
100		
50	Temperatures for baking and special recipes - resolution 10 °C. (meal warming up, low-temperature treatment, baking, jams, lard…)	
60		
70		
80		
90		
100		
110		
120		
130		
140		
150		
160		
170		
180		
190		
200		
210		
220		
max = 230 °C		

STAINLESS BREAD PAN

for kneading, rising and baking in the multifunctional bread maker

Although stainless steel is more adhesive than Teflon, you do not have to worry about sticking of the bread to the baking pan even if it is not greased. However, you have to forego unhealthy quick baking habits. With this quick baking, there is "burning" and production of carcinogenic hydrocarbons, including thick, hard crust over the entire surface of bread. Similar properties of tissues (mainly of blood vessel and heart) are now the main cause of the most severe diseases. Bread is one of the main foods and therefore, we should prefer a lower temperature and long baking time – or rather "steaming"

Attention, successful baking in stainless bread pans is subject to temperature setting maximum up to 140-160 °C! (Short-term higher temperatures at the beginning or at the end of baking are tolerated.) Minimum baking temperature is about 120-130 °C. Try it.

The second condition for easy removal of the bread from the bread pan is that the bread must cool down in this stainless pan! To make the wet bread surface quickly dry, turn the lukewarm bread out and scrape off the soggy part with a knife. Then store the dry and cooled bread.

ATTENTION: You cannot bake small loaves at higher temperatures and for longer times! The exact time will always be assessed by a needle thermometer - see the picture on the next page!

Stainless bread pan for multifunctional bread makers are made of stainless steel for food purposes. The material composition ensures long life and therefore the lower part with seals is detachable using stainless screws to enable the seals to be exchanged and for cleaning.

Stainless material is not recommended when using unnatural **leaving agents, too much sugar or other sweets. They increase the risk of burning!** Bread pan does not need to be greased.

After removing the stainless steel bread pan from the bread maker, drape over a dishtowel and cover it with a glass lid or an impermeable bag (preferably bio-bag made from vegetable starch).

The kneading paddles are also made of stainless steel. The paddles are mechanically extremely durable and unhealthy aluminium and Teflon do not abrade. Supplied in matt (sand blasted - without any chemical treatment).

Simply fine-tune the baking temperature by sticking a needle sensor in the coldest part of the bread which is about one centimetre below the top edge of the bread (when using “saving steam” glass lids, the coldest part is exactly in the middle) and wait until the temperature reaches about 95 °C.
If you use „saving” glass lids, the coldest part of the bread will be right in the middle.

SAVING GLASS LIDS

Put these glass lids onto the pan after the last kneading. Usually, this is after the first three minutes of kneading. They help to keep the heat in the form of steam in the baking pan. The bread surface is softer and the baking time is reduced by up to an incredible one third!

When you measure the temperature of the bread, just slide the lids aside to create a narrow gap in the middle to insert the needle. By setting the size of the gap, you can also let the steam escape to dry the bread crust (we do not recommend to use the "dry" method of preparation too often).

In ½ - 1½ hours after baking, you can remove the baking pan (even without oven gloves) and put a cloth under the glass lids. The cloth is moistened with emerging drops and prevents the surface to dry. Although, if you leave the glass lids in the bread maker 1-2 hours longer, the bread quality does not suffer much. If you do not remove the lids in time, drops will flow down onto the bread. (As you can see with drops, the environment in the baking pan is not dry and the bread does not dry out.)

WARNING: Glass lids are chemically tempered but still we do not recommend exposing them to too large temperature differences or using them for a high-grade baking! Do not put warmed glass lids on cold or wet surfaces!

If there is a handle that does not allow you to lay lids, remove it.

Styles of baking bread and pastries:

1. **Classic method in hot dry heat without a baking pan** (dough must be thicker to maintain the bread shape which is an undesirable characteristic for a healthy life style).
2. **Baking in open baking pans** which allows you to work with thinner dough and the bread keeps its shape.
3. **Baking in baking pans with „saving glass lids“,** makes the bread softer, significantly shortens the baking time and the enclosed space does not allow the bread surface to dry out.

„TEMPEH MAKER“ AND ITS USE

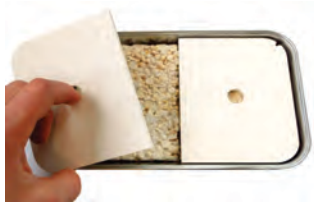
Tempeh maker is a new product for easy production of traditional tempeh cheese. You will really appreciate working with the porous ceramic lids as they stabilize the humidity in the bowl better with inoculated cheese. When your cheese is good (it has a nice clean look, smells gently like mushrooms, has no colour spots and is not wet or sticky), then you will appreciate working with ceramics.

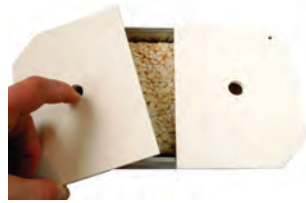
Tempeh set

Sana exclusive package includes also a complex set for Tempeh cheese preparation:

1/ stainless basin
2/ small ceramic lid
3/ large ceramic lid
4/ glass lid
5/ baguette maker stand
6/ coconut or rice brush
7/ multithermometer with temperature alarm

One basin is for about 500 g of cheese. Minimum load for smaller ceramic lids is up to ca 250 g in case of so-called „contactless" technique and 300-500 g in case of contact technique. We use larger ceramic lids only for contactless maturation, except the case of a full basin where the lid is in contact with the cheese.





Holes in the middle of ceramic lids (along with a small gap along the circumference) are used not only for the necessary partial air access, but also for a more practical grip.

To prevent large air access and the rapid drying of porous ceramics, cover them partially with one glass lid. Thus you create two covered visors for observing cheese.

Each lid has a hole for the cable from the thermometer. When the production is more frequent, temperature monitoring in tempeh cheese is demanding. In the second half of the maturation time, the culture produces extensive heat and this requires continuous correction. There is a thermometer with the temperature alarm or a special USB-thermometer for these purposes. If the cheese temperature is higher than the set temperature in the bread maker due to the maturation, decrease the set temperature.

If you own a baguette maker, you can use it as a stand for basins. However, you have to remove the side brackets (see blue arrows) to enable the basins to stand there.

The order of assembly from the bottom: Baguette maker stand (it can be placed in the upper or lower level), upper basin of the baguette maker, first basin with tempeh and smaller ceramic lids and glass lid. If you have two stainless basins, put the second one onto the first one instead of glass lid which will be on the top. Lead the sensor cable according to the red arrow.

After pouring legumes into a basin, it is recommended to smooth the surface with a damp ceramic lid because it does not stick to legumes so much.

Beginners can experiment with shorter and lower cheese forms. If this fails, then they will not be so disappointed.

Another advantage of porous ceramic is the use for storage of the finished cheese. The finished cheese is simply cut in half and placed between wet ceramic lids.

Good advice: After cutting in half, attach the bottom "sticky" sides to each other and attach the lid to the surfaces of cheese that were at the top. They are drier and do not clog pores of ceramic lids so much.

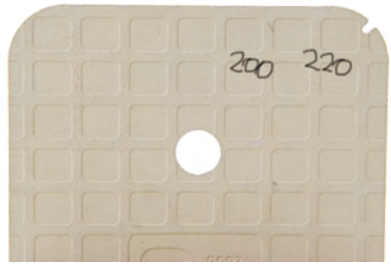
Store the cheese in the form of a „sandwich". In this state, the „live" cheese stays fresh for several days. The best course would be to finish the maturation by placing the warm ripening cheese into a freezer - until the temperature drops below +10 °C. This is the only way to stop self-heating. Then you can put it into a refrigerator with the temperature below +10 °C (it is difficult to cool the ripening cheese without a freezer). Because the culture is still alive, the cheese matures very slowly in the refrigerator.

Freezing: You can also freeze the cheese, but remove the ceramic lids beforehand.

To avoid having to constantly moisten the ceramic lids, insert them into plastic bags. The products will not go bad there as a result of the precipitated water. The porous ceramic absorbs free water (also precipitated drops) from both sides and maintain the proper environment both in cheese and in the bag.

When using non-absorbent lids during tempeh preparation, the cheese would go bad.

After using ceramic lids, do not forget to brush the surface thoroughly (especially those parts that were in contact with the cheese) and then simmer uncovered for a few minutes.



Pre-moistening of ceramic lids:

Before use it is necessary to moisten lids to about 10-50%. It is recommended to weigh the lid completely dry and fully soaked and engrave the values in the corner of the lid. If the dry weight of the lid is 200 g and the weight of the fully soaked lid is 220 g, then 50% wet will be 210 g.

Environmental product declaration

- Ceramic lids are made of clays, kaolin and other natural rocks.
- Fully soaked ceramic lids take at least one day to dry at room temperature.
- Protect surface against grease, dirty water, etc.!
- When ceramic lids stop sucking water after time, grind the surface with sandpaper with grain size of about 120.
- Ceramic lids are subject to wear and can be purchased separately.

THERMOMETER WITH TIMER FUNCTION

with alarm temperature set to 150 °C + wide timer range from 1 sec. to 99 hours.

This thermometer equipped with timer function is designed for use in the kitchen and for „do-it-yourselves" as well.

Temperatures out of the measurement range are viewed on the display as follows: „--".

Temperature measurement range: –20 °C to + 150 °C

For temperature measurement, a stainless measuring sensor with cable (5) is used.

When the temperature exceeds 70 °C expose the metal end only, not the plastic parts or cables!

Attention! Always remove the sensor end cover before starting the measurement (8). Please note, the thermometer case is not waterproof and neither is the needle opening (7). Always keep in mind that it must not be immersed into liquid. You can use a clip or a peg to secure the needle in a container in a vertical position, so the water level does not reach the plastic slider on the other end of the needle (7).

Positioning and assembly

This thermometer with timer function is possible to stand on a table in a vertical position or a slope using a stand or it may be secured to a metal surface using a magnetic holder.

Measurement and temperature control up to 150 °C

Insert the sensor (needle 6) into the socket on the right side of the case (connector 5).

Switch the button 4 into position THERMO.

Use buttons 1+2 to set the temperature to be signalized (this value must be always higher than actual temperature).

Use button 3 to switch over the sound alarm (symbol "waveline" is viewed instead of "bell" symbol).

Touch buttons 1+2 at the same time to switch off the alarm (symbol „waveline" changes back into „bell" symbol).

Timer function - downward time counting

Switch button 4 to the TIMER position.

Use buttons 1+2 to set the required time period (within the range 99 hours to 59 seconds.

Use button 3 to switch off the activated alarm after the period set elapsed, but please note, the previous time setting on the display remains unchanged.

Touch buttons 1+2 at the same time to switch off the function and clear the display.

Battery replacement

The 1.5 V AA alkaline battery is located in the rear part of the equipment under the stand.

Safety instructions (applied to all thermometer types).

- Property damages caused due to not observing instructions in the user manual will result in non-acceptance of such warranty claims.
- The manufacturer takes no responsibility for property damages and injuries caused due to not observing safety regulations.
- Do not use the thermometer near inductive or transmitting devices such as cell phones, microwaves, induction ovens etc.
- Do not expose the device to direct sunlight and extremely high or low temperatures, keep it out of water and moisture.
- Do not expose the device to shocks or shaking, do not use it in dusty environments. Do not allow children to touch and operate it.
- The ends of replaceable sensors are subject to common wear, prevent them from burning out or cable damage.

Preserve the environment and follow health protection instructions and regulations!

Always keep unused batteries in a safe place out of reach of children and pets to prevent swallow hazard. Check the batteries on a regular basis, they can leak out and the electrolyte may cause skin burn or damage to the product. Avoid short circuiting the batteries and expose them to fire, there is dangerous explosion hazard. Used batteries and electrical appliances are dangerous waste. Such waste has to be disposed properly in compliance with relevant environmental regulations. There are special disposal containers available in retail stores or in waste and recycling centres.

Maintenance of the thermometer (for all types).

Do not use any liquids or liquid cleaning agents and chemicals to clean the thermometer. Only professional persons from authorized service centres can carry out repairs of the device. Please note again, neither the upper end of the metal needle nor the plastic body of the thermometer **can be immersed** into any liquid – these parts are not waterproof.

THERMOMETER WITH AN EXTRA WIDE MEASUREMENT RANGE

Measurement temperature range: -50 °C to 200 - 300 °C (depending on the type)

A stainless steel end for measurement available

When the temperature exceeds 70 °C, expose the metal end only, not the plastic cover!

3 buttons: ON/OFF, °C/°F, HOLD (hold the measured value)
(Use the fourth button to read the minimum or maximum temperature.)

Battery type and replacement: there is an arrow on the top of the thermometer indicating the rotation direction of the battery cover. Turn the cover to loosen or tighten (approx. a ¼ rotation). Battery type: AG 13 (357 A), 1,5 V.

BAGUETTE MAKER AND ITS USE

a/ assemble the wire construction of the baguette maker as in the picture and insert one or layers of forms

b/ make suitable dough according to our (or any other) recipes, shape it and place in a form

c/ remove the bread pan form the bread maker and insert the construction with dough into the baking compartment and close the lid

d/ set the corresponding program values and then start

e/ check the baking process with a thermometer and adjust the time of the program according to measured values (remember that the lower form bakes faster and must be removed before).

PAY ATTENTION!

- **Never run** any program without inserting a reasonably large product containing water into the baking compartment of the bread maker to avoid damage of plastic parts of the lid that are "cooled" with steam lose from the product.
- **Press the function** (step) button to store the last change of setting for each step in the memory.
- **All programs** remain set even after the bread maker is switched off.
- **In case of sudden power failure,** the program will run for at least another 15 minutes!
- When the running program is **coming to** the next function, you will hear a short beep. There is a long whistle at the end of the program.
- **If the temperature in the bread maker** is below 5 °C or the internal temperature sensor is broken: the bread maker whistles and the display shows „LLL"
- **In case of bread maker overheating** (230-240 °C), the program shuts down heating, the bread maker whistles and the display shows „HHH"
- **If you do not want to use the hook** for „pulling" kneaders out of the finished bread (each kneader damages up to 4 slices of bread), always use "fast kneading" (i.e. set the motor power to P3) and then remove the kneaders. In three minutes, you are able to knead the largest amount of dough, including "heavy" completely rye dough, which we can help with a wooden spatula! Do not be afraid of the high speed of the kneaders, it is only about twice the speed of conventional bread makers.
- **Measuring cups** are less practical for owners of digital kitchen scales. With daily basic food preparation, the function "tare" (fast reset) shortens the preparation time. If the scale is able to measure with accuracy of 1 g, you can easily weigh salt and spice as well.
- **Sensor buttons** are very sensitive and therefore we recommend locking the keyboard after switching the program on. Buttons can be locked/unlocked automatically (in this case, the key flashes on the display for a while). This is particularly advantageous when the bread maker is within the reach of children or when you have increased moisture in the kitchen. Because of different finger properties of everyone, find the best place on the button which responds most sensitively to your touch – e.g. on the left, right or inner edge of the button symbol.

- **Yeast and other accelerating raising agents.** The name „Sana“ (Latin meaning „to heal“) shows we do not want to recommend artificial raising agents or other accelerating raising agents. High-quality healthy food preparation is guaranteed only with well-proven natural traditional methods!
- **Ensure the proper range of cereal!** If the bread is of a low quality (e.g. it is soggy after baking or the dough “falls” during rising), check first whether you use flour of “bakery (bread) quality”. Most often, this problem applies to the most widely used wheat. If wheat is not of a bakery quality, do not look for an error in the bread maker or its programs but at the miller who is responsible for the flour quality.
- **Ingredient measurement:** One of the most important steps for making good bread is proper amount of ingredients. It is strongly suggested to use a measuring cup or a measuring spoon to obtain accurate amounts, otherwise the bread will be heavily influenced. Using modern digital scales, you do not have to use a measuring cup and preparation of your recipes will be even faster and more accurate!
- **Weighing liquid ingredients:** Water, fresh milk or milk powder solution should be measured with measuring cups. Observe the level of the measuring cup with your eyes horizontally. When you measure cooking oil or other ingredients, clean the measuring cup thoroughly without any other ingredients.
- **Dry measurements:** Dry measuring must be done by gently spooning ingredients into the measuring cup and then once filled, levelling off with a knife. Scooping or tapping a measuring cup with more than is required. This extra amount could affect the balance of the recipe. When measuring small amounts of dry ingredients, the measuring spoon must be used. Measurements must be level, not heaped as this small difference could throw out the critical balance of the recipe.
- **Adding sequence:** The sequence of adding ingredients should be abided, generally speaking, the sequence is: liquid ingredient, eggs, salt and milk powder etc. When adding the ingredient, the flour can't be wetted by liquid completely. The yeast can only be placed on the dry flour. And yeast can't touch with salt. After the flour has been kneaded for some time, you can add fruit and other ingredients into the mixture. If the fruit ingredients are added too early, the flavour will be diminished after long mixing. When you use the delay function for a long time, do not add perishable ingredients such as eggs, etc.

- Bread pan removing and inserting:

Grab the edge of the pan with your fingers and pull upward to release e.g. its right side. Simultaneously, the other side is released too and the pan can be easily removed.

When inserting the bread pan, place it on the carrier in the middle of the bottom of the baking compartment and press on the right and left side. If the pan does not fit in on both sides, remove it again, turn the kneader shaft and repeat.

Attention: If the pan is hot, leave it cool down or use oven gloves.

- **Teflon and galvanized surfaces** of home bread makers are subject to wear. The same is with bearing and gear belts.

- **Some parts of the bread maker and some accessories are made by hand in small quantities.** Therefore, there could be any minor deficiencies in finishing, packaging or design. However, we believe you will definitely be satisfied with their practicality and long life.

- **Baking pan washing:** Stainless or Teflon baking pan cannot be washed in dishwasher. In general, the food stainless steel is very resistant to mechanical and chemical action. However, this does not apply to the stand with bearings. Some chemical cleaners would corrode it.

Good advice: Based on our experience, we recommend not to clean the stainless inside of the bread pan thoroughly - do not polish it excessively because the metal material would affect the biochemical value of our food more intensely. Laboratory analyses have clearly shown that the thinner our food is and the better contact with metal it has, the more the amount of vitamins decreases. This phenomenon is most relevant for liquid foods (sauces, milk, drinks, etc.). On the contrary, the biological value of firmer texture (various cakes, steaks or dough) is in the contact with the metal almost unchanged.

- **Removing „baked“ kneaders from the bread using a hook.** You will use it only for special recipes or in the case you forget to remove kneaders after the last kneading. In such cases, turn the loaf upside down, insert the narrow side of the hook into the hole made by a kneader axis, hook the kneader and pull it out.

We hope you will discover new recipes with new functions of your bread maker. We are looking forward to new ideas that you can send also via the internet – please visit our website www.smartbreadmaker.com. Particularly, we would be grateful for recipes directly from the nature – in bioquality!

Although you can find lots of interesting recipes on the internet, remember, that the best recipe for bread is just flour and water. Other ingredients are only for our taste and eyes, not for health.

Correct disposal of this product

This marking indicates that this product should not be disposed with other household wastes throughout the EU. To prevent possible harm to the environment or human health from uncontrolled waste disposal, recycle it responsibly to promote the sustainable reuse of material resources. To return your used device, please use the return and collection systems or contact the retailer where the product was purchased. They can take this product for environmentally safe recycling.

TROUBLE SHOOTING GUIDE

No.	PROBLEM	CAUSE	SOLUTION
1	Smoke from ventilation hole when baking	Some ingredients adhere to the heat element or nearby, for the first use, oil remained on the surface of heat element.	Unplug the bread maker and clean the heat element, but be careful not to burn yourself, during the first use, dry operating and open the lid.
2	Bread bottom crust is too thick	Warm bread was baked too long in the bread pan, therefore too much water was lost.	After baking, remove the bread with the bread pan a let it cool. The next time, decrease time and/or temperature.
3	Is very difficult to take bread out	Kneader adheres tightly to the shaft in bread pan.	After taking bread out, put hot water into bread pan and immerse kneader for 10 minutes, then take it out and clean.
4	Ingredients not mixed evenly and baked badly	1. selected program menu is improper. 2. after operating, open cover several times and bread is dry, no brown crust colour 3.Stir resistance is too large so that kneader almost can't rotate and stir adequately.	1. Select the proper program menu. 2. Don't open cover at the last rise. 3. Check kneader hole, then take bread pan out and operate without load, if not normal, contact with the authorized service facility.
5	Hear the motor noises but dough isn't stirred	Bread pan is fixed improperly, dough is too large to be stirred or the kneaders worked free from the axis.	Check whether bread pan and kneaders are fixed properly and dough is made according to the recipe and the ingredients are weighed accurately.
6	Bread size is so large as to push cover	Too much yeast, excessive flour or water. Too high temperature or too long rising.	Check the above factors, reduce the amount properly according to the recipe.
7	Bread size is too small or bread does not rise	No yeast or the amount of yeast is not enough, moreover, yeast may have a poor activity as water temperature is too high or yeast is mixed together with salt, or the environment temperature is lower.	Check the amount and performance of yeast, increase the environment temperature properly.

No.	PROBLEM	CAUSE	SOLUTION
8	Dough is so large to overflow bread pan	The amount of liquids is so much as to make dough soft and yeast is also excessive or the dough rose too long.	Reduce the amount of liquids and improve dough rigidity or adjust the time of rising.
9	Bread collapses in the middle when baking dough	1. used flour is not strong powder and can't make dough rise. 2. too much yeast, yeast temperature is too high or the time of rising is too long. 3. excessive water or yeast makes dough too wet and soft.	1. Use bread flour or strong powder. 2. Use yeast under room temperature or reduce the time of rising. 3. According to the ability of absorbing water, adjust the water amount in the recipe.
10	Bread weight is very large and the structure is too dense	1. too much flour or short of water. 2. too many fruit ingredients or too much whole wheat flour.	1. Reduce flour or increase water. 2. Reduce the amount of corresponding ingredients and increase yeast.
11	Middle parts are hollow after cutting bread	1. Excessive water or yeast or no salt. 2. water temperature is too high.	1. Reduce properly water or yeast accordingly and check salt. 2. Check water temperature.
12	Bread surface is adhered to dry powder	1. there are strong glutinosity ingredients in bread such as butter and bananas etc. 2. not stirred adequately or short of water.	1. Do not add strong glutinosity ingredients into bread. 2. Check water and the mechanism of the bread maker.
13	Crust is too thick and baking colour is too dark when making cakes or food with excessive sugar.	Different recipes or ingredients have a big effect on making bread, baking colour will become very dark because of too much sugar.	If baking colour is too dark for the recipe with excessive sugar, touch start/stop to interrupt the program 5-10 min before intended finishing time. Before removing the bread you should keep the bread or cake in bread pan for about 30 to 60 minutes with cover closed.
14	**The display shows incorrect and unusual values.**	The display has started incorrectly and needs to be restarted.	If the "small restart" (switch off and on) does not help, unplug the bread maker for at least 30 minutes a restart it completely.

MINI RECIPE BOOK

By Ota a Petra Reiss

LET'S START WITH TRADITIONAL LEAVEN

If you decide to make your own leaven for the first time, you will need a lot of patience. We put ca 100 g of rye or wheat flour into a jar and add ca 80 ml of water – approx. 27 °C. After stirring it for a while we should get pulp consistency. Next, we put a cover onto the jar but not a threaded one (leaven must "breathe"). Then we put the covered glass into the bread maker, start the function "fermenting", set the temperature at 27 °C (+/- 2 °C) and leave the covered jar in the bread maker for about 6 hours. Then we take away a part of the dough, mix it with the same amount of fresh water and flour and let it ferment again under the same conditions. This is called "leaven feeding" and it is necessary to do it every couple of hours for 3 days. In the end, the leaven produces within 2 – 4 hours enough bubbles and its volume multiplies. This is the right time to use it for preparing bread dough or into other bakery products!

If – at any moment of the process – the leaven produces an unpleasant smell, stop everything and start again. Finished leaven (so called "established leaven") should be of pleasant, slightly sour smell and of medium dense consistence. When making dough, you should always leave ca ¼ of it in the jar for future baking. In theory, it is possible to use the basic leaven every 2 – 4 hours to make new dough.

Storing of traditional leaven

Be careful about leaven storage! It was already explained that it is impossible to store leaven and industrial yeast in one refrigerator. In fact, we do not need to have any yeast at home as it is possible to use home-made leaven instead of unnatural lightening agent in all kinds of dough. The leaven must not be too thin. It should be of pleasant, slightly sour smell and must not be frozen or dried! Next "leaven feeding" is necessary after about 5 days.

DO NOT FORGET...

…that to make ordinary bread, only flour and water is needed. Other ingredients are additional and should be used adequately! Then it depends on bakery-skills only.

LEAVEN BREAD

Simple wheat bread with seeds

600 g of organic wholemeal bakery wheat flour
150 g of ripe wheat or rye leaven
400 g of quality water
Up to 100 g of different kinds of seeds (sunflower, pumpkin, ground flax)
10 g of coarsely ground caraway
3 – 6 g of sea salt

Wheat bread with boiled cereals (suitable for children's snack)

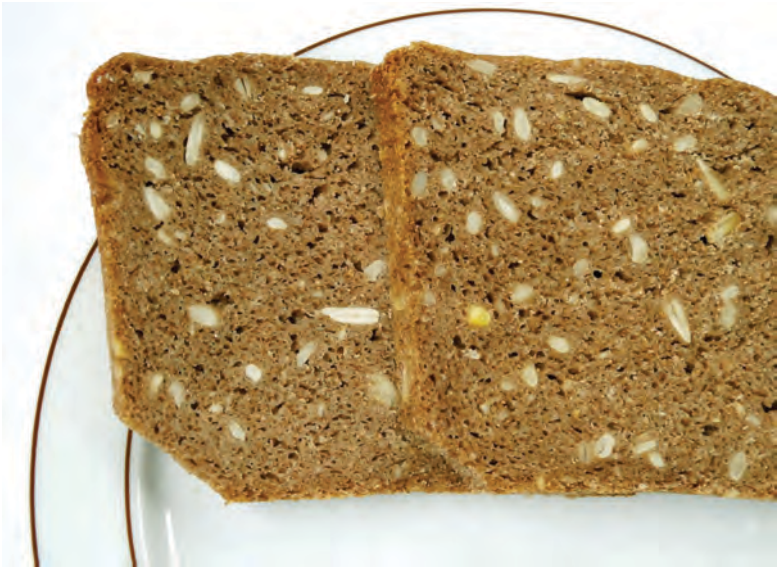
600 g of organic wholemeal bakery wheat flour
150 g of ripe wheat or rye leaven
400 g of quality water
200 – 400 g of boiled cereals (rice, oat, millet, groats …, the amount does not matter much)
10 g of coarsely ground caraway (it is possible to add a little fennel, coriander…)
10 – 20 g of oil, e.g. olive oil
3 – 6 g of sea salt

Good advice: cumin and other spices with sharp edges are necessary to crush or grind, so they do not harm the lining of the digestive tract, especially with children.

Rye bread

600 g of rye flour
200 – 250 g of wheat or rye leaven
400 g of water
5 – 8 g of sea salt
10 g of bread spices
Up to 20 g of olive oil
Ca 100 g of various seeds

We put leaven into a vessel, add water and mix it a little with a wooden spatula. Next, we add flour and other ingredients. Rye flour is sticky and it is difficult to mix, therefore we help the blades with a spatula. If we have enough time, we let the dough rise for about 2 – 2 ½ hours, at 27 – 30 °C. After the first rising phase we mix it for about 3 minutes again and then we remove the blades. The dough aerates more and rises better then. The second rising phase should be set for 3 – 4 hours and then baking follows. If we do not interrupt rising with the second mixing, we let the dough rise for about 6 hours at 27 – 30 °C. According to the results, you can adjust temperatures, times or the amount of leaven. Baking is always the same. First we bake the bread for about 15 minutes at 160 °C and next 1 ½ hour at 130 – 150 °C.



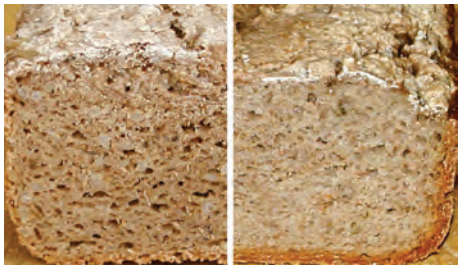
Our recipes support healthy lifestyle. Therefore we are not concerned with products and ingredients that are not suitable for our good health (mineral lightening agents, GM yeast). We also avoid strange combinations of ingredients: milk with sugar and flour (except of feast baking), multigrain bread etc. Ideal bread for everyday use is simple: 1 – 2 kinds of cereals and water! Actually, leaven is only a mixture of fermented flour and water! All other ingredients are there just for better taste and look, not for health!

For exacting customers, we have also prepared special recipes for younger or elder boarders, for people with hard mental / physical work or sportspeople. There is a special kind of bread for each sport – e.g. bread for sprinters, marathon runners or bodybuilders. It is also possible to make special bread for different illnesses.

When you have made your first loaf of bread (nice and tasty), you should know you have made just the first step. Now it is time to improve your baking skills and to adjust your bread to your family needs. And this task is never ending!

An interesting kind of bread: white – dark. If you put a divider into the vessel, mix the white and the wholegrain dough separately and then remove the divider, you will get an interesting dough structure while rising. The "pattern" looks great and everybody can cut the loaf from the side he / she likes best.

It is also possible to make bread containing more barley flour (left picture) or buckwheat flour (right picture). However, neither of the flours is able to make leaven, therefore you cannot expect big rising here. We recommend more wheat leaven and longer rising time.



LEAVEN BAKERY PRODUCTS

Scrolls (filled with sauerkraut)

600 g of organic wholemeal wheat smooth flour (spelt, winter crop…)
Up to 150 g of wheat flour can be replaced by rye-, barley-, oat- or buckwheat
200 g of ripe leaven
270 – 300 ml of milk (plant milk)
6 g of sea salt
100 – 150 g of olive oil or butter
1 handful of freshly chopped parsley
1 spoon of dried thyme
600 g of sauerkraut cut into strips
2 spoons of coarsely ground caraway (to sprinkle on the top)
1 egg to spread on the top

First we mix leaven with milk, next we add flour, salt, oil / butter, spices and we make smooth dough. We let it rise in the bread maker for about 1 – 1½ hours at 28 °C, then we knead it shortly again and leave it in the bread maker to rise for 1½ hours again.

We roll out the well risen dough to get a large, flat plate. We put the squeezed sauerkraut on it. We brush the edges of the dough with whipped egg and make a big roll. Then we slice the roll and put the slices onto a baking tray (covered with baking paper), brush their surfaces with whipped egg and sprinkle with grounded caraway. We let the scrolls rise a little on the baking tray and then we put them into the oven. We bake them for about 25 minutes at 170°.

Baguettes

The same dough may be used to make small baguettes (without sauerkraut) too. It is possible to add sunflower seeds, ground flax seeds etc. The best spice for baguettes is finely / coarsely ground caraway. We can sprinkle the baguette surface with caraway or sesame.

It is possible to bake the baguettes directly in the bread maker (using special forms) for 10 minutes at 160 °C and then for 15 minutes at 130 – 150 °C. We stick a roasting thermometer (with a measuring metal needle) into a baguette and measure the temperature inside. If it reaches 90°C, we finish baking.

Wholemeal flat pancakes

Digestibility of gluten may be easier when natural leaven is used but sometimes we can also make flat pancakes without it (not fermented). We can either add wholemeal wheat flour, or leave it out and replace it with buckwheat flour. We use lower temperature for a longer period of time. Stack hot pancakes on top of each other to keep them warm and to prevent them from drying out quickly. Always make sure the pancakes are pliable and if they are not fresh, steam them before eating!

Note: The fermentation process includes also gluten fission (which is hardly digestible for us) and leaven bakery products gain a lot of new nutritious substances. Sometimes it happens that leaven bakery products do not cause any problems even to people allergic to gluten.

The fermentation process includes also gluten fission (which is hardly digestible for us) and leaven bakery products gain a lot of new nutritious substances. Sometimes it happens that leaven bakery products do not cause any problems even to people allergic to gluten.

Leaven fruit cake

Dough (approximately):

500 g of wheat flour, We can also put boiled millet into the dough – this kind of cereal is very good in combination with fruit.
150 g of leaven (approximately – if there is less leaven, the dough rises more slowly)
50 g of vegetable fat (or sunflower oil / rapeseed oil + olive oil - in this case we use less water)
It is possible to use raisins too (boiled ones are better). You can try also roasted ground flax seeds, sunflower seeds . . .
1 spoonful of liquid malt (e.g. barley), or cane sugar (if we want to use sweet fruit, there is no need to sweeten the dough at all)
A big pinch of salt
Lukewarm water – ca 330 ml (this dough should be thinner than ordinary bread dough so that it does not dry out so quickly)
To make it smoother, we can mix ca 50 g of dried vegetable drink (e.g. buckwheat) into the water.

Note: Dough made with leaven does not burn so easily, compared to ordinary batter (made from flour, sugar etc.).

If we do not want to add boiled cereals, it is necessary to add at least 100 g of flour more. The cake dough does not need to be risen so much (compared to bread dough).

Streusel:

According to your taste, mix some grated coconut, cinnamon (ginger spices are very tasty too), flour (wheat or buckwheat, maize meal, barley flour), a little vegetable fat or oil, malt (or cane sugar, maple syrup, apple concentrate…). You may add ground nuts etc. If malt is used, it is necessary to dissolve it in hot fat first.

Preparation:

First we mix leaven with water, then add all other ingredients and mix everything a little. We set the function "fermentation" in the bread maker - for about 3 hours. Temperature should be at 30°C. The dough has risen enough when there are little bubbles visible inside. (In case temperature in your kitchen is above 22 °C, you can spread the dough onto a baking tray, water it a little and let it rise again).

Lay out the baking tray with baking paper and spread the dough onto it – the layer should be quite thin (this amount should be enough for two medium sized trays). If you do not want to use baking paper, spread a little vegetable fat or oil on its surface and dust it with flour (or grated coconut).

We put various fruits onto the dough. Depending on what you like, you can combine sweet and sour fruits (may be also preserved). I would recommend: sweet apples or pears + apricots, plums, blueberries, strawberries etc. In case the fruit is too juicy, squeeze it a little before you put it onto the cake. You may thicken it also with some starch (organic "maizena", arrowroot etc.).

If we want to make the fruit taste smoother, we add 2 spoonfuls of sesame paste tahini or ground roasted sunflower seeds.

This cake is very tasty even if there is no cottage cheese because leaven dough is slightly sour itself.

Time needed for baking depends on the dough layer (ideal height is ca 1 ½ cm). It is much better to have two lower cakes than one high.

If there is some dough left, we can fry tasty flat cakes on a pan.

We bake the cake in a hot oven for about 10 – 15 minutes first. Then we take it out, sprinkle it with streusel, lower the temperature in the oven and bake for another 15 minutes. The streusel will not get too dark this way. The cake is baked enough when there is a nice smell in your kitchen. Baking time will vary according to the type of oven, so it is necessary to try it.

GLUTEN-FREE DOUGH

Gluten-free flat cakes

Maize meal, rice flour, buckwheat flour etc.
Salt, caraway…
Oil
Water

Maize and rice flour doesn't absorb cold water, therefore pour boiling water on the flour and let is swell up. Then we thicken it with buckwheat flour because it has the ability to absorb water, in contrast to the previous two. If we did it the other way round, buckwheat flour would soak all the water and the other flour would not swell up at all. (Keep this rule for all absorbent and non-absorbent cereals!)

Caution: at first you can only estimate the density of the dough made of flour which doesn't absorb water very well, for the next batch adjust the amount of water accordingly.

We leave the mixture of all ingredients to rest for a while and then we form small flat cakes. They dry out quite quickly, so it is good (for children necessary) to steam them before serving.

It took us about 4 days to create our first leaven in our multifunctional bread maker. Every following stage was finished within 2 – 3 hours (in 5 times bigger amount!) In the picture, there are 100% natural sourdough culture made of rice and maize without any starters or baking agents.

Surprisingly, testing special kinds of bread for people allergic to gluten also had excellent results!

As you can see in the picture, the leaven culture is so strong, that even a 50% share of boiled rice with seeds did not influence the speed of rising. If we add boiled cereals, we can decrease negative effects of smooth flour (mucus creating, stickiness or even oxidation). Cereals can be combined or changed.

We can add boiled buckwheat, quinoa, amaranth and rice, the best balanced cereal of all. Also soaked nuts or seeds can be used. It is not well known that even dried herbs can be ground and put into the dough to ferment there. It is a great possibility for those who do not like herbal tea!

WHAT TO SPREAD ON BREAD ?

Spread from yellow peas (halved is the best)

Yellow peas (halved)
Soaked seaweed "kombu" (a stripe)
Marjoram, Dried parsley leaves, Lovage
We can add dried or stewed carrots, parsley and celery (finely chopped celery is very tasty)
Smoked tofu (not necessary)
Onion according to your taste
Sesame (olive) oil
Salt or SHOYU, TAMARI, Cayen pepper may be added (but not for small children)

We put peas into a bowl with cold water and leave it there for at least 4 hours. Then we strain the water (because peas are flatulent). Next we put them into a pot with cold water (there should not be too much water, just to cover the peas) and start to cook. We keep removing foam from the surface and do not cover the pot until there is no foam on the surface at all. It might overflow and make the cooking stove dirty. Then we add the seaweed KOMBU (cut into cubes, including water where we let it soak).

When the peas are nearly soft, we add SHOYU or TERIYAKI (mixture of SHOYU and different spices, ginger etc.), salt, spices and finely grated smoked tofu. We warm up the pan, put chopped onion there and add sesame oil. When the onion is roasted, we add grated carrot, parsley and celery and wait until all vegetables are soft. Then it is time to add the peas (look more like a mash). We mix everything together and warm up a little. Healthy people may like some olive oil with it (but this should stay cold, after adding it we must not cook the spread any more).

We put hot spread into preserving jars and screw the tops (they tighten by heat). If stored in a fridge, we can eat it for about one week. It is not even necessary to use a blender to make the spread. The hot peas get mushy while mixing with the other ingredients. It is possible to thicken the spread with the quality starch such as KUZU, ARROWROOT or bio MAIZENA.

Lentil spread

Lentils
Soaked seaweed "kombu" (not necessary but lentils get soft sooner and are more digestible then)
Quite a lot of onion, pepper, carrot, parsley, celery, marjoram, ginger or garlic
Salt + soya sauce or UME – vinegar
Smoked TOFU
Flour for thickening
Oil

Note: *There may be ingredients in the recipes that you are not familiar with. I warmly recommend trying them. They are available in all good health food shops.*

First we roast onion, then add grated carrot, parsley and celery. Next, we add salt, boiled lentils, chopped smoked tofu and cook together. We season the mixture with ume-vinegar, salt, soya sauce and spices according to our own taste. I recommend marjoram + garlic, ginger + garlic or garlic + hot chilli curry (Sonnentor) + ginger or coriander. If necessary, we may thicken the lentils with flour mixed up with cold water. In the end, we may add a little sesame oil (or other oil) and mix everything in a blender (to get a consistence of spread). However, it is much better to store just the lentils (not mixed up with oil) and to make little amount of spread more often (just what we eat at once). Mixed food oxygenates faster and its quality gets worse. Put hot lentils prepared according to this recipe into preserve jars and screw the tops (they tighten by heat) – this method is called "Swedish preserving" – temperature ca 80°C. If stored in a fridge, you can eat it for more than one week.

I recommend buying vacuum tops – they are worth the money because you can preserve fresh food 3 times longer than usual. And there is no need to cook so often. Lentils prepared according to this recipe can be used as a side dish or spread. In the other case it is better to spread a little margarine on the bread first.

Chickpea spread (Hummus)

ca 600 g of boiled chickpeas (must be soft)
30 ml of olive oil
Lemon juice (according to your taste)
4 cloves of garlic
A few spoons of Sesame paste tahini
Sea salt, pepper, parsley (pepper may be replaced by finely ground chilli peppers, coriander...)

First, I put chickpeas, some broth and oil into a blender and mix it. Next, I add lemon juice, garlic mashed with salt, coriander etc. I do not add parsley leaves into a blender. I just chop them finely and stir into the ready spread.

AMASAKÉ - DESSERT WITHOUT SUGAR

Dessert made from fermented rice, wheat and other cereals. It is very suitable for little children without any added sugar or sweetening agents. When complex-sugar molecules split, the food gets sweet in a natural way.

First, we let the wheat sprout (the jar with wheat must be stored in a dark place, the sprouts should be more than 1 cm long, we must rinse it at least twice a day). We may either grind the fresh wheat or let it dry and grind it later (it is also the way how to prepare culture for next time). If we do not want to waste time with making wheat sprouts, we can use original rice "KOJI".

We rinse the rice, pour water on it and boil according to the basic recipe. The ratio of rice and water is 1 : 1 ¼ (it is necessary to measure precisely). When the rice is boiled enough, we let it cool down so that we can touch it (ca 50 °C). Next, we mix it with sprouted wheat. In case you use "KOJI", the ratio is 1 : 5. We put the pot into a warm place – at least 40 °C (onto a radiator, into an oven, under a blanket). If you have a multifunctional bread maker (the new generation), it is convenient to use it. Just set the temperature and you can be sure that the necessary heat will be reached everywhere inside. We stir it from time to time and try how sweet it is. The whole process lasts about 6 hours. When the rice is sweet enough, we finish the fermentation process by heating the mixture at least up to 90°C. This temperature must be reached in the whole volume! We must stir it all the time, it gets burned easily!

We can use Amazake to make various desserts: we add agar, carob, roasted nuts, chicory coffee, seeds etc.

Prepare wheat sprouts.

Cook rice.

Mix chopped sprouts with rice.

After fermenting for several hours, cereals change into malt mash.

HOME-MADE YOGHURT

If you have the possibility to buy organic milk or goat's milk (it is even better), you can make your own home-made yoghurt (not "improved" by additional chemicals.

Heat up milk – its temperature should reach at least 75 °C (boiling is better). Then let it cool down to 50 °C. Take a little milk and mix yoghurt containing living yoghurt cultures with it (2l of milk and 50 ml of yoghurt). Usually it is possible to buy "living" yoghurt made from cow's milk only. However, regarding the small amount needed, we can make a compromise in this case.

Pour the mixture into the left-over milk and put it into the bread maker heated up to 40 – 45 °C. Yoghurt production takes about 4 – 8 hours (the more living yoghurt culture you use, the sooner it is ready). Then it has to be cooled down to a temperature below 10 °C, to stop the fermentation process. You can store it for up to 5 days in the fridge.

It should be noted that goat's milk yoghurt is always thinner than yoghurt made from cow's milk. The reason is that it contains fewer proteins. On the other hand, it is easier to digest. It is good to know that yoghurt should not become a main meal. It is suitable for decorating other meals and to make our diet more varied. We recommend combining it with vegetable salads and seeds, rather than with malt and fruit.

”TEMPEH” - A GIFT OF THE MILLENIUM!

It is much safer to “discover” safe, traditional products of the whole world that have been “tested” on generations of our ancestors. Tempeh belongs to this kind of food – it is healthy, tasty and safe. Its qualities have been tested for thousands of years!

“Tempeh” cheese made from sunflower, peas and peanuts – before and after fermentation.

For everyday cooking, it is convenient to learn production methods of the following traditional cultures:

1. Traditional leaven, leaven bread, bakery products, cakes, sweet bread etc. Many secrets concerning leaven products have been revealed during our research that took 10 years. You can share them with us.
2. Making sweets without sugar, using „amazake“ (fortunately, work with this culture is safe and simple, so special courses are not needed)
3. Bigger variety of tempeh cheese products (we have studied this culture for several years. As it is a kind of mould, although noble rot, it is necessary to be careful about it)

With the new „tempeh” maker, you can make tempeh slices (made from a one-bean layer) and you can roast them like steaks.

Preparation

We will need ¼ kg of organic soy beans and a little vinegar. In the evening we put the soy beans into a dish full of water and let them soak overnight. In the morning, we strain the water, put the soy beans into a cooking pot, pour fresh water on them and boil a little. In about 20 minutes we strain the water again, let the beans cool down a little and peel them by squeezing them in our hands. With a little skill you will have it done in 5 minutes. It is convenient to use a shallow, wide pot. The peels do not tend to come to the surface but they are lighter than the beans and so they stay above them. We strain the water with peels very slowly to get rid of the peels and to keep the beans in the pot.

When there is little water, add some fresh and repeat slow straining (four or five times) until there are just peeled soya beans left. If you want to save water, you may use a sieve, throw the peels away and use the water again. Then we put the peeled soy beans into a pot with fresh water mixed with a spoonful of apple- or rice vinegar and boil for at least 1 ½ hours. The beans must be soft, but not overcooked. First we put them into a sieve to let them drip off and then move them onto a kitchen cloth to let them dry.

Vaccination *(Ratio of tempeh culture to soya beans differs depending on producers so you should see the instructions on the package.)*

We put soy beans into a pot, dust them with the tempeh culture and stir thoroughly. Vaccinated mixture should be put into perforated forms, in a layer of max. 2-3 cm. It is often recommended to put them into plastic bags and perforate them with a fork to ensure a little air and to protect the mixture from drying out. However, this is a big mistake! Using soft plastic bags is very dangerous because soya contains a lot of fat which is an active organic dissolving agent and then the tempeh gets contaminated! Instead of plastic bags, we should use jars made from natural materials (stainless steel, glass-ceramic etc.)

Maturation

We put everything into a warm place. Considering the culture origin, it is necessary to keep the temperature at 30 – 32 °C. Long term storing at temperatures above 35°C may cause that we "wake up" other bacteria that cause a very unpleasant smell. If you keep the right temperature, tempeh is ready in about 20 – 30 hours. Its surface should be white (resembling snow) and tough (when you take it out of the form, it does not fall into pieces). If there are black spots visible (spores), do not worry, it is not a serious problem but you should try to improve the production process next time (humidity, temperature, time…) Unpleasant smell, however, is a sign of failure, as well as suspicious slimy surface. Then it is better to throw it away and try again.

Storing

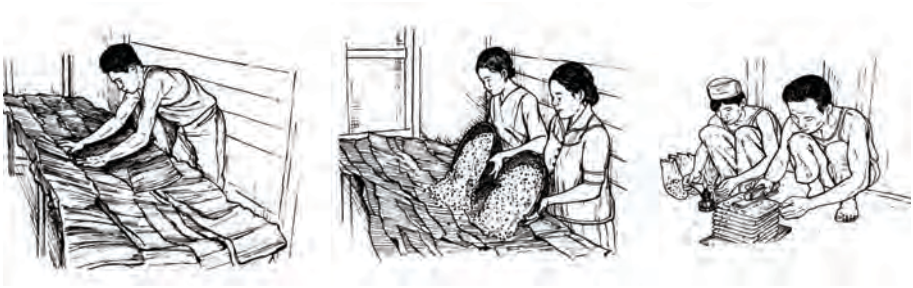
When you take tempeh out of the warm space (ideally from your multifunctional bread maker where temperature is constant all the time), it is necessary to cool it down immediately (in a fridge or a cellar) to stop the activity of tempeh culture. If you do not have a suitable space for fast cooling necessary to stop biochemical exothermic reaction, put tempeh into a freezer first and then (when its temperature is lower than 10 °C) move it to a cool place. Storing in a freezer is possible too. However, it is a compromise.

Consumption

Let's suppose we have been successful and we have a cube of home-made tempeh in our hands now. Why to eat such a strange looking, "mouldy" thing? Considering a very high content of proteins and quite firm consistency, tempeh is quite popular also with people who cannot imagine their lunch without a piece of meat. For some of them tempeh may substitute meat, it is much healthier and has a better taste than industrially produced soya meat, various granulates etc. Vegetarians with physically hard work often complain about being hungry. It would not happen with tempeh. However, the most important thing is that if you cook it in the right way, it has an excellent taste.

Attention

The truth is that some people eat raw tempeh too. We **do not recommend** it at all! The mould would grow even in our digestive system. In case we ate fruit or even the above mentioned coconut product, it would have catastrophic consequences! We must be careful about its heat treating too. If you use thicker tempeh slices, you may never be sure if the middle parts of them are done well. Insufficient heat treating may cause very unpleasant health problems! Therefore it is better to use a roasting thermometer to check if the temperature (even in the middle of the biggest pieces) has reached at least 90 °C!



Akiko Aoyagi and William Shurtleff are experts in soy products, especially tempeh, miso, tofu and natto. They spent many years in Japan and Indonesia studying possibilities of using soy. In 1976 they founded The Soyfoods Center in California.

SOYA CHEESE NATTO

Natto is an ancient Japanese product made with fermented soy beans and bacterial culture „Bacillus subtilus natto". It is a significant source of proteins, calcium, iron, vitamins B6, B2 and enzymes. It supports the digestion process, purifies our blood and makes our skin look smoother and younger. Natto has a distinctive smell (somewhat akin to a pungent cheese). Stirring the natto produces lots of long, sticky strings. Results of our research show that people who are used to eating a lot of milk products do not like natto so much. On the other hand, it is commonly used by vegetarians and people with macrobiotic diets.

HOW TO MAKE NATTO

To make our own natto, we wash organic soy beans and soak them in water for 4 – 6 hours. We strain the water. Next, we put soy beans into a pressure cooker and pour enough water on them. Next, we start cooking them but we do not cover the pot yet. It is necessary to remove foam, impurities and soy peels from the water surface. We keep doing that until there is no foam at all. Then we lower the flame, put a cover onto the pressure cooker and let it boil for 30-40 minutes (without salt) until the soy beans are soft enough to mash them using your fingers only. Low heat is necessary to prevent the beans from creating too much foam which may clog the valves. When you finish cooking, let the pressure cooker cool down (without opening) for about 10 minutes. Then strain the water, remove the soy beans and let them dry and cool. Dust the beans with the starter and stir thoroughly (the amount of starter is specified by the manufacturer on the package).

Next, put the soy beans into a larger dish (made from stainless steel or glass) and take care not have a layer higher than 5 cm. Next, close the dish using an airtight cover to keep the soy beans in moist environment (check the optimum number of holes in the lid). Put it into a warm place or the bread maker (with temperature set at 40 °C) and leave it there without opening the cover for 10 – 30 hours.

Bacterial culture natto must be living, not heat treated. Historically, natto was made by storing the steamed soy beans in rice straw, which naturally contains Bacteria subtilis natto. The soybeans were packed in straw and left to ferment in a warm place.

When we remove natto from the bread maker, we divide the fermented beans into smaller preserving jars and put them into the fridge or a freezer for a short time. Natto must be cooled to stop the fermentation process. If it continued, natto would become inedible.

Natto is aged enough when there is a distinctive smell and you can see typical sticky strings after opening the jar.

NATTO RECIPES

In Japan, natto is usually served with soya sauce or mixed into a bowl of rice. Frequently, it is used with wheat or buckwheat noodles and hot soups. It is also suitable for fresh vegetable salads.

NATTO spread

Natto
Onion
Leak
Oil
Shoyu (soya sauce)
Quality mustard

First, we roast onion in a little oil, add chopped leak, cover the pan and stew until the vegetables are soft. We season the mixture with soya sauce and mustard. Next, we mix natto into the warm spread (its temperature should not be above 40°C to keep its nutritious value and probiotic effect).

SLOW COOKING & BAKING IN SANA
smart bread maker

Allegedly an American invention from the 70's has won the favour of millions of people.

- Suitable for the preparation of all types of meat, vegetables, soups and others
- High preservation of minerals and vitamins
- Energy and therefore money saving
- Saves time thanks to fast operation
- Non-added-fat cooking
- Evenly Baked
- Does not burn or dry out meals
- Easily washable

A few recipes for various types of meat:

We can leave the meat in the bread pan and cover it with energy saving glass lids during roasting or we use a different appropriately sized pot and cover it using a pot-lid or a glass dish. Unlike a classic stew procedure, gravy does not evaporate, because the temperature does not reach boiling point. Furthermore, a classic stew needs to baste in order to avoid burning the meat. Even if we do not usually add any water, the meat releases its juice, because of low-temperature roasting (70 – 100 °C). This preparation makes the meat easily digestible. Besides, we do not have to add any extra fat or oil, unless we want to. The length of preparation is circa 3 – 12 hours depending on the type of the meat and on the

s e t

temperature. The whole family can eat gradually one by one – as they do not come home at the same time – the meal is always ready to serve. We deeply recommend trying out everything to master the SANA bread maker. The length of preparation and temperatures are freely adjustable in three steps according to how fast you need the meat to be ready. Slower preparation is however the most gentle. If we add vegetables, which usually need longer preparation, we put them under the meat.

Beef meat in general:

It takes more time to prepare beef than white meat. If we want to prepare a larger piece of meat in the SANA bread maker, it is convenient to fry the meat lightly on a frying pan (to "tighten up" the meat) and then put the seasoned beef in the pot, which we insert in the SANA bread maker. After removing the meat from the frying pan, we add water to the pan and flavour the sauce as we like, and then we pour the sauce in the pot. We cover the pot with the pot-lid. Beef is a bit dryer than the other types of meat, so we can lard the beef with bacon, which provides more flavour to it. If the meat is immersed, there is no need to turn it over during the cooking process. In the opposite case we recommend turning the meat over from time to time to avoid drying out the top of the meat.

Large hunk of pork:

After quickly frying, the meat is warm enough, so we set the programme number 4: BAKE 1 circa 2 hours at 90 °C, BAKE 2 circa 2 hours at 80 °C and when necessary BAKE 3 at 80 °C.

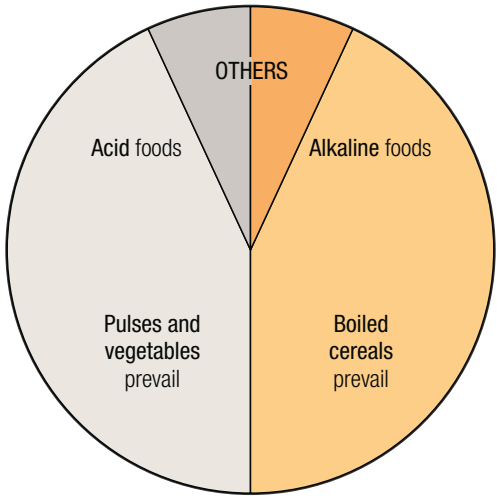
Pork chunks:

We chop up the meat, season with spice and sprinkle with olive oil. We can add a slice of bacon for more flavour and a few spoons of water. We put it in the SANA bread maker and cover it. If the meat is cold (it has not been warmed up before) we set BAKE 1 circa 1, 5 hours at 100 °C. If the meat has been fried, we set BAKE 1 for 1 - 2 hours at 90°C. When necessary, we repeat the programme and set the temperature at 80°C. The meat will probably be done in four to six hours.

Poultry, chicken and rabbit meat:

The preparation is the same as with beef, except we do not have to fry the poultry meat to gain more flavour. We wash the meat, chop it up, season it, sprinkle with oil, and add an onion, garlic, etc if we want to. We put the meat in the pot, cover it with pot-lid, and insert the pot in the SANA bread maker. We set BAKE 1 for circa 1 hour at 100 °C; we set the other steps at 80 °C. The length of preparation depends on an amount of the meat - try it out. Soft meat is usually done in 3 hours, rabbit meat needs more time. It is fine to quickly fry the rabbit meat to produce more flavour, then we salt the meat, add caraway seeds and grease with garlic. We set BAKE 1 for 1 - 2 hours at 90 °C, the other steps at 80 °C.

HARMONIOUS PLATE



Regardless of habits, nationality, religion or gender the correct „harmonic bread“ must be prepared according to the following two components:

1/ expansible (acidity, sweetness, softness)

2/ contractive (alkalinity, toughness, etc.)

Remember that even the best doctor cannot heal better than any chef or baker - unless, of course, he knows the principles of healthy eating!

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