



Solar Recipe and Instruction Book



Cook with the power of the sun – save money & firewood!



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1. Introduction

Dear solar cookers & bakers,

Experience the uniqueness of solar cooking with the SOLAR ASSOCIATION TILOO. Using the power of the sun is a sustainable, ecological and economical way how to cook with the natural resources available and has many advantages, as for example:

- Healthy food, rich in vitamins and nutrients due to a slower cooking process.
- Nothing can get burned nor cook over, no need to supervise.
- Reducing costs of living by using free solar energy.
- Less deforestation by reducing the need for fire wood.
- Lowering CO2 emission.

By providing you with this small recipe and instruction book we would like to give you an idea of how diverse you can make use of cooking with the power of the sun.

Good to know:

- The temperature in a solar cooker can reach 150°-180° C.
- Food can be cooked with 80 – 90° C.
- Boiling point is 100° C.
- Pathogen germs, viruses and parasites are killed at 65° in water, in food at 71° C (pasteurising).
- Dry food such as rice, flour or beans can be put in a well closed paper bag and placed in the cooker exposed to the sun; after that insects can not develop any longer.
- The best time to prepare food in the solar cooker is between 9 am and 4 pm.
- Cooking time depends on weather and quantity of food. In general it takes about double the time of conventional cooking.
- Almost all food can be prepared in a solar cooker. Exceptions are: Pasta as well as any grilled and fried food.

You are welcome to visit us any time in our project in Kanifing South and we are always happy to answer your questions.

Your SOLAR ASSOCIATION TILOO Team.



2. Short instructions on how to use the solar cooker

1. To clean your solar cooker, take a soft towel and wipe the dust or dirt gently from the outside cover. Make sure that the glasses are clean so that the sun beams can enter well through the glass to the inside of the solar box.
2. Wipe the inside gently with a dry or damp towel before baking. Be careful not to rub off the black solar paint!
3. Now place the solar cooker facing the sun.
4. Make sure the shadow of the stick holding the reflector cover is in the middle of the wood bar!
5. Make sure the reflection of the silver reflection cover is pointing inside the solar box. Adjust it with the stick and the rope holding the reflection cover.
6. Now check the weather conditions and prepare your pastries. The more sun you have the quicker the baking procedure takes. Is the weather cloudy or foggy, limit your pastries and bake something that is not using baking powder or Levin (yeast). Like dried biscuits, roasted peanuts, cooked eggs...
7. Preheat your solar cooker at least up to 100 degrees before putting your first product inside.
8. Check every 30 minutes if the shadow of the stick is still in the middle of the wood bar and if the reflection still points inside the solar box of the reflection cover. If not, adjust it!
9. Always use gloves to put a product in your solar cooker or when taking it out. You can get burned!
10. Never leave your solar cooker standing in the rain!
11. Keep it in a safe place after using.
12. Reduce the water quantity 1/3. Solar cooking doesn't produce the same amount of steam as the formal way of cooking.
13. If the black colour went off inside the solar box, please use only a black car spray colour to paint it again or the SPT own black solar paint. The two colours are free of poisoning heat reactions and steams!
14. Use black painted pans and baking forms as described in point 13.



3. Recipes for snacks

3.1. Roasted peanuts

1. Leave peanuts for 1 hour in salted water
2. Dry peanuts under the sun
3. Put the peanut in a black painted pot or form and put it inside the solar cooker for at least 4-5 hours until they are ready. This depends on the weather conditions. But not one single peanut will get burned compared to the formal way of roasting them on the fire.

3.2. Cooked eggs

Put the eggs inside the carton tray in the solar cooker and cook them for at least 1 – 1½ h. With a piece of bread and a tomato slice on a fresh salad leaf you get a nice healthy sandwich!

3.3. Cooked mangos

Put the Mango inside the solar cooker and cook it at least 1 – 1½ h. Add spices after cooking as you desire and enjoy a healthy break snack.

3.4. Wonjo

Put the wonjo in a thin walled (aluminium) pan and add a little amount of water. Cover the pan with a black painted cover and boil the wonjo at least 1 – 1½ h. Then add a small amount of sugar and enjoy a healthy vitamin C drink.

3.5. Peanut bread (sunny days only)

1. Take 500g flour, 1 small spoon of Levin (yeast), 3 big spoons of sugar, 1 small spoon of salt, 100g peanuts with the red peel. Add 50g margarine and 0.25 l milk. If you don't have milk use the same amount of water.
2. Mix everything properly and knead it for about 15 minutes to smooth dough.
3. Put the dough in a bowl and cover it with a damped towel.
4. Leave the dough resting for about 2 hours.
5. While waiting, prepare a baking form by painting it with margarine.
6. After two hours take the dough knead it again and form small bread balls and spread them in your baking form.
7. Leave the balls to rise a little and then paint them with egg.
8. Now bake them at least 1 - 1½ h or longer.



3.6 Meat-/Fishpie and Sausage Roll

1. Mix the dough as follow:

- | | |
|-----------------------|---|
| 1 kg flour | |
| 1 big spoons of yeast | sift all together |
| 1 small spoon of salt | |
| 120 gr. margarine | mix it with flour etc. and add some water until you get a medium-hard dough |

2. Leave the dough covered in the sun for less then one hour, until it doubles the size. Then you roll it on a floured surface with a rolling stick. Then you can cut your dough and fill it with meat or fish.

3. Preparation FISH PIE:

- | | |
|----------------------------|-------------------------------|
| 2 fish (smoked bonga) | clean the fish, chop it small |
| 2 peppers | |
| 1/4 garlic | chop everything very small |
| 1 onion | |
| 1/2 Jumbo or Maggi | |
| 1 small spoon black pepper | add everything together |

Preparation MEAT PIE:

- | | |
|---|--------------------------------------|
| 1 onion | chop everything very |
| 1/4 garlic | small and cook it for |
| 3 peppers | some minutes with a |
| 1 bag of mixed vegetables (or 1 potato) | little bit of oil |
| 1/4 kg minced beef | add all to vegetables |
| 1/2 Jumbo or Maggi | and cook until the meat |
| 1 small spoon black pepper | is done and the liquid is evaporated |

4. For the pies to close them, you have to paint the edges with egg and press them together.

5. For the sausage rolls, you cut the corned beef in pieces and roll it in some dough. For that you also have to paint the dough with egg so it doesn't open during baking.

6. Paint the pies or rolls with a little bit of oil before putting them into the oven and bake them until they get lightly brown.



3.7 Sweet bread

1 kg flour
1 big spoon yeast sift all together
5 big spoons sugar
1 small spoon of salt
120 gr. margarine mix all together with flour etc. and in the end add
3-4 dl Water until you get quite a hard dough

Process the dough with your hands on a floured surface until it gets smooth. Add a little bit water when the dough is to dry or add a little bit flour when the dough is to sticky. You can add some lemon skin for lemon sweet bread. Or you can add some raisins, or vanilla sugar to give your sweet bread a different taste.

Then you form your breads, small ones or big plated bread and put them into the buttered form. Let them rise (covered!) under the sun, until they double the size. Then you paint them with an egg and bake them in the oven until they get brown.

→ for sunny days only / sufficient for 13 sweet bread (80 gram each) You

4. Recipes for meals

All menus can be served with rice, futo or bread.

4.1. Domoda

1. Take 200g of groundnut paste and mix it with water until it is liquid.
2. Add tomato paste and mix it again.
3. Cut 2 bitter tomatoes, 2 tomatoes, onion and garlic and add it.
4. Add beef or chicken as you like.
5. Finally add spices as black pepper, salt, Maggi / Jumbo, lemon.
6. Put everything in the same pot and cook it for at least 1½ h.

4.2. Plassas

1. Cut potato leaves into small pieces, wash it and squeeze it until all the green water stays clear. Put the washed leaves in a pot.
2. Add water and groundnut butter, mix everything together.
3. Add smoked bonga, salt fish and kong.
4. Finally grind red pepper and leaf onions, also add this mixture to the pot.
5. Put pot in the solar cooker and leave it to be cooked (cooking time 2 h).
6. After cooking take the pot out of the solar cooker, add palm oil and mix it properly.



4.3. Pepe soup

1. Cut meat or chicken, as you desire, into pieces and wash it.
2. Grind pepper, onions, garlic, tomatoes and black pepper together.
3. Add an estimate quantity of water to the grinded ingredients and mix it.
4. Add the mixture to the meat or chicken.
5. Add tomato paste and Jumbo.
6. Put everything in a pot and cook it for about 2 h.
7. After cooking when you want it to be spicier, add lemon or vinegar.

4.4. Rice

1. Wash 2 - 3 cups of rice
2. Put 1 l of water with 1 tea spoon of salt in a pot and add the rice at the same time in the cold saltwater. Put pot in the solar cooker.
3. Cooking time 1½ hour.

4.5 Pizza

1. Mix the dough as followed:
1 kg flour
1 half spoon of levin
1 Big spoon
4 Small spoons oil
Some water
Mix all in one container
Ready to spread it in your backing forms.
2. Mix the Sauce as followed:
20 Onions
3 Garlic
Vegetables
Tomato paste
Maggie
Black pepper
Cheese
chope all the vegetable in to small pieces, for them to get cooked early.
3. Spread the dough in the form you want to back your pizza. Make some holes on the dough with your eating fork, spread your tomato first, meat of tuna fish then you can add all the vegetable on the pizza and also the spice. Then spread the cheese on top, then you can put it in the solar cooker. Leave it there for one hour and check it then. On a strong sunny day the pizza takes one and half hour to be baked.



5. Recipes for sweets

5.1. Lemon cake

1. 250 g margarine, mix until it's soft.
2. Add 250 g sugar and 5 eggs bit by bit alternately, mix it properly.
3. 2 lemons, grate off the peel and mix it to the dough.
4. Add 250 g flour, 2 teaspoons baking powder and a little bit of salt, mix all together and fill it in the painted and floured baking form.
5. Bake the cake for about 2 h. The solar cooker should have a temperature of about 150° C.
6. Press 3-4 lemons to have approximately 1 dl of juice.
7. Mix the juice with 100 g of icing sugar.
8. After baking make little holes in the cake with a small stick.
9. Pour the juice all over the cake.

5.2. Orange cake

1. 80 g margarine, mix until it's soft.
2. Add 100 g sugar and 4 eggs yolks, mix it properly until the dough is turning white.
3. 1 orange, grate off the peel and mix it to the dough.
4. 4 egg-whites, a little bit of salt and baking powder, mix together until it's stiff.
5. Add two big spoons of sugar and mix again.
6. Add stiff egg-whites together with 150 g flour very softly to the rest and fill it in the painted and floured baking form.
7. Bake the cake for about 2 h. The solar cooker should have a temperature of about 150° C.
8. Press oranges to get 2 dl of juice and mix the juice with 3 big spoons of sugar. Heat up the juice until the sugar is melted.
9. After baking make little holes in the cake with a small stick.
10. Pour the juice all over the cake.



5.3. Coconut cookies

1. Mix 3 egg-whites and a little bit of salt until it is stiff.
2. Add 50 g of sugar and mix again until the egg-white is shiny.
3. Finally add 40 g desiccated coconut and 50 g of sugar to the mixture.
4. Make little portions with a big spoon and place it in a painted cake form.
5. Bake the cookies for about 30 Min. at a temperature of about 150° C.

5.4. Groundnut bar (perfect for cloudy days)

1. Ingredients:
25 D (or 600 gr.) groundnut paste
400 gr. sugar
400 gr. flour
100 gr. roasted groundnuts
a little bit of salt
a teacup of water (0.3 litre)

sift flour and mix it with all other ingredients, add a little bit more flour when the dough is too sticky
2. Mix everything together and spread it (about 2 cm thick) in a buttered and floured big form. Put it into the solar cooker. It takes about 90 Minutes to bake, depending on the strength of the sun. Groundnut bar is finished when the colour is darker. When it is finished baked, paint it with sugar water and cut it into pieces when it is cold.

6. Personal Notes