

OGOP Product Development 2020 Manual

Under

The One Gewog One Product (OGOP) Development Project (Model II) (2020-2022)

For

Training of Trainers

In

Eusu Gewog, Haa Dzongkhag
Patshaling Gewog, Tsirang Dzongkhag
Phobji and Gangtey Gewogs, Wangdue Phodrang Dzongkhag
Khoma Gewog, Lhuntse Dzongkhag
Yangtse and Boomdeling Gewogs, Trashiyangtse Dzongkhag
Drakten Gewog, Trongsa Dzongkhag

9 November – 14 December 2020

Prepared by:

Faculty of Agricultural Technology, Chiang Mai Ratchabhat University (CMRU), Thailand

Supported by:

Thailand International Cooperation Agency (TICA)

The Queen's Project Office, His Majesty's Secretariat, Bhutan



Preface

The One Gewog One Product (OGOP) Development Project (Model II)

The success of One Tambon One Product (OTOP) of Thailand on improving the quality of agricultural products for the local communities was addressed by His Majesty King Jigme Khesar Namgyel Wangchuck of Bhutan during an audience H.M. granted to the Thai Ministry of Foreign Affairs's delegates in 2014. As a result in 2016, the Thailand International Cooperation Agency (TICA) of the Ministry of Foreign Affairs and The Queen's Project Office (QPO), His Majesty's Secretariat, Bhutan launched The One Gewog One Product (OGOP) initiative, later referred to as "The OGOP Model I Project", in Bhutan as part of the two countries' development cooperation.

In 2016-2018, The OGOP Model I Project was implemented to improve the livelihoods and increase the incomes of Bhutanese rural communities by developing quality local agricultural products for the national and international markets. The OGOP model I project's achievements were remarkable and had led to the implementation of OGOP Model II project (2020-2022), with an aim to strengthen outputs and outcomes generated by the OGOP model I project and expand its benefits to wider beneficiaries in Bhutan. Its overall goal, however, is to develop "Sustainable Community Development Model based on the Application of Sufficiency Economy Philosophy (SEP)". The SEP is Thailand's homegrown approach to sustainable development which is in line with Bhutan's Gross National Happiness (GNH) concept. Under

the 3-year model II project's workplan, its Output 4 aims to expand OGOP producer groups based on their interests and potential. It is expected that 12 new OGOP products will be developed or improved yearly. As part of the OGOP Product Development Training for the year of 2020, Chiang Mai Rajabhat University (CMRU), Thailand has developed the Training of Trainers (TOT) course which took place in the participating communities in Bhutan including Eusu Gewog, Haa Dzongkhag; Patshaling Gewog, Tsirang Dzongkhag; Phobji and Gangtey Gewogs, Wangdue Phodrang Dzongkhag; Khoma Gewog, Lhuntse Dzongkhag; Yangtse and Boomdeling Gewogs, Trashiyangtse Dzongkhag; Drakten Gewog, Trongsa Dzongkhag between 9 November – 20 December 2020. Training in each community consisted of a virtual training session (Day 1) conducted by Thai experts from CMRU for Bhutanese TOT, and onsite training session (Day 2-3) conducted by Bhutanese TOT for community beneficiaries. This training was supported by TICA, QPO as well as the National Post-Harvest Centre of Bhutan as part of the lead TOT team. Thai volunteers under the project stationed in Haa Dzongkhag and Tsirang Dzongkhag during December 2019 – October 2019 also participated in this activity via virtual platform. This manual compiles product development instructions, recipes and demonstration videos of the 12 OGOP products developed during this training as listed below

- 1) Caciocavallo Cheese Packaging for Uesu Gewog, Haa
- 2) Kapche Packaging Design for Uesu Gewog, Haa
- 3) Pasteurized Yacon Juice for Patshaling Gewog, Tsirang
- 4) Honey Lip Balm for Patshaling Gewog, Tsirang
- 5) Buckwheat Noodle for Gangtey-Phobji, Wangdue Phodrang
- 6) Soft Potato Cookie for Gangtey-Phobji, Wangdue Phodrang

- 7) Handbag for Khoma Village, Lhuntse
- 8) Table Runner for Khoma Village, Lhuntse
- 9) Chilli Paste for Yangtse Gewog, Trashigang
- 10) Fried Chilli for Yangtse Gewog, Trashigang
- 11) Infused Organic Green tea packing and ECOTea bag for
Drakten Gewog, Trongsa
- 12) Herbal liquid detergent and Tea soap for
Drakten Gewog, Trongsa



CMRU Supervisor
Dean of Faculty of Agricultural Technology
Chiang Mai Rajabhat University

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Introduction to OGOP Product Development Training 2020 (9 November – 14 December 2020)

The OGOP Product Development Training 2020 was developed as part of the OGOP Model II Project Workplan's Output 4: to expand OGOP producer groups based on their interests and potential. Technology transfer was carried out to help the Bhutanese participating communities strengthen skills, enabling their abilities to add value to the existing local materials and products. The month-long training conducted virtually by CMRU trainers has resulted in development 2 new OGOP Products per each community or 12 new products in total as follows:

9 November 2020,

Uesu Gewong, Haa, received technology transfer of Caciocavallo cheese packaging in vacuum condition, packaging design, and filling and labelling design of Kapche-roasted local wheat flour.

14 November 2020,

Patshaling Gewong, Tsirang, received technology transfer of pasteurized yacon juice and lip balm production using the community bee wax.

23 November 2020,

Gantey-Phobji Gewong, Wandue Phodrang, received technology transfer of buckwheat noodle and soft potato cookie using buckwheat grown in in the community.

30 November 2020,

Khoma Gewong, Lhuntse, received technology transfer of sewing handbag and table runner from Kishuthara-hand woven fabric.

5 December 2020,

Yangtse Gewong, Trashy Yangtse, received technology transfer of chilli paste packed in a jar and fried chilli as a snack.

12 December 2020,

Drakten Gewong, Trongsa, received technology transfer of organic tea packing, herbal liquid detergent, and tea soap processing.

On behalf of CMRU trainers team, I would like to extend our appreciation to TICA and QPO for the opportunity to take part in this activity and the two countries' partnership, and our special thanks to Ms. Chatlada Sangakit, and Ms. Budsarakam Tiansiam, TICA volunteers under the project, for their assistance throughout.



Assistant Professor Dr. Naksit Panyoyai
Coordinator, CMRU trainers team
for the OGOP Product Development Training
2020
Faculty of Agricultural Technology
Chiang Mai Rajabhat University
E-mail : naksit_pan@cmru.ac.th

(Eusu) Caciocavallo Cheese Packaging

Objectives

1. To make packaging for Caciocavallo cheese product.
2. To keep/protect the product from damage.
3. To provide useful information about the product.
4. To add value to the product.

Preparation

There are 2 simple ways for preparing the cheese to be wrapped and ready for packaging. Caciocavallo cheese can also pack by *hygienic cling film* or *plastic wrap*. *Vacuum packing* is also another way to increase the shelf life of the cheese by removing air from the package prior to seal.

Materials (preparation)

1. Hygienic plastic wrap/cling film
2. Vacuum sealer machine
3. Clear sticky tape
4. Clear nylon vacuum bags



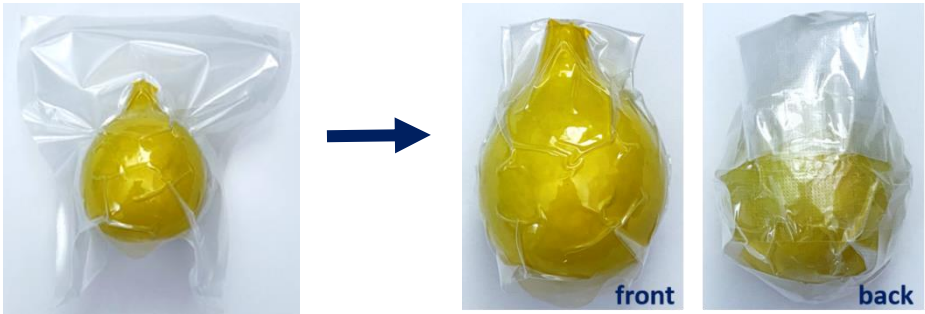
Instructions (preparation)

Non-vacuumed wrap

Cover the Caciocavallo cheese with hygienic plastic food wrap/cling film

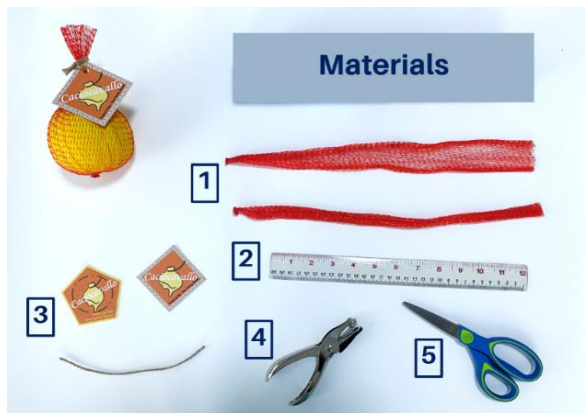
Vacuumed wrap

Placing cheese in a clear nylon vacuum bag, removing air from inside and sealing the package by vacuum sealer machine. Wrapping plastic bag to fit around the cheese with clear sticky tape.



Materials (1st packaging)

1. Nylon mesh net bags, length: 35 cm
2. Ruler
3. Tag label and hemp rope, thickness: 2-3 mm, length: 6 inches
4. Handheld 1-hole paper punch
5. Scissors



Instructions (1st packaging)

1. Preparing cheese, cover with hygienic plastic wrap or vacuum packing.
2. Put the Caciocavallo cheese into a nylon mesh net bag.
3. Make a hole in a paper tag label by the paper punch.
4. Insert the hemp rope into the hole and the paper tag label and then tie it with the Caciocavallo cheese wrapped in a mesh net bag (from No. 2).
5. Tie the nylon mesh net bags tightly and use scissors to cut off the rest of the nylon mesh net bag above the tied knot.



Materials (2nd packaging)

1. Nylon mesh net bags, length: 35 cm
2. Brown kraft paper, 4 x 15 inches
3. Brown kraft paper, 1 x 3 inches, 2 pieces
4. Hemp rope, thickness: 2-3 mm length: 9-12 inches
5. Ruler
6. Glue
7. Tag label and hemp rope: thickness 2-3 mm, length 6 inches

8. Handheld 1-hole paper punch
9. Scissors
10. Stapler



Instructions (2st packaging)

1. Preparing cheese, cover with hygienic plastic wrap or vacuum packing.
2. Put the Caciocavallo cheese into a nylon mesh net bag and tie it tightly with a hemp rope.
3. Cut the brown kraft paper sized 4 x 15 inches as shown below.



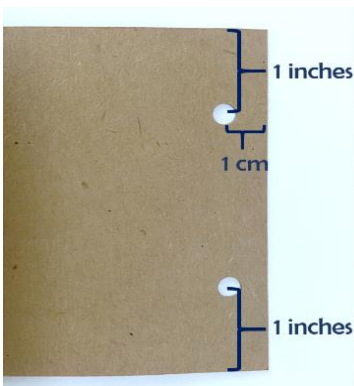
4. Fold paper from the left and right sides for 6 inches each towards the center as shown below.



5. Make the packaging handle from hemp rope.

Pattern 1

Make two holes in each side of the folded brown kraft paper (from No. 4) as shown in picture (A). Insert a 12-inch hemp rope into the holes on each side of the folded paper. Tie knots on both holes to make a handle for both sides of the folded paper as shown in picture (B) and (C).



Picture A



Picture B



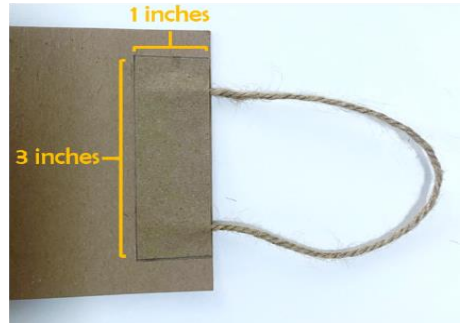
Picture

Pattern 2

Make 9-inch hemp rope as shown in picture A. Use the glue to make the handle as pictured below (B) and paste paper 1x3 inches on the handle as shown below. (C).



Picture A



Picture B

Put the Caciocavallo cheese into a nylon mesh net bag in the middle of the paper as shown below. Binding cheese and paper together with a stapler and use scissors to cut off the rest of the nylon mesh net bag above as the picture shown.

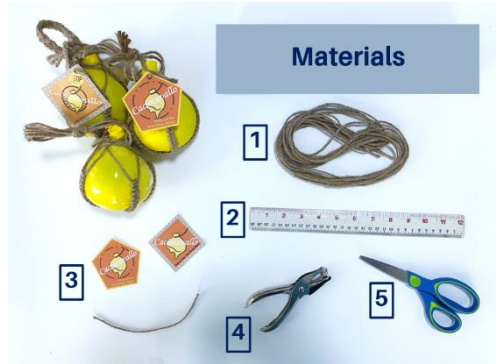
6. Make the hole of a tag label and hang it on the hemp rope.

Note

Size of the paper and hemp rope can be adjusted to match with the cheese.

Materials (3rd packaging)

1. Hemp rope, thickness: 2-3 mm length: 60 inches, 4 strands
2. Ruler
3. Tag label and Hemp rope, length: 6 inches
4. Handheld 1-hole paper punch
5. Scissor

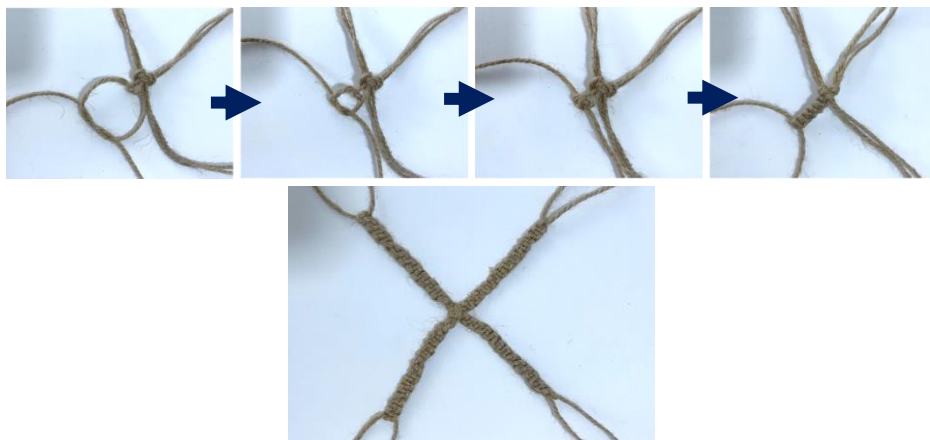


Instructions (3rd packaging)

1. Preparing cheese, cover with hygienic plastic wrap or vacuum packing.
2. Split strands of hemp rope into 2 pairs, fold into a half and tie them all together with a simple loop knot at the center of strands as shown below.



3. There are four sets of two strands, tie first half of square knot and pull tight. With same two strands tie second half of square knots, pull tight. Repeat this action to make square knots around 3 inches on each set of strands as the picture shown.



4. Place a Caciocavallo cheese in the center, tie each end of the rope tightly to the Caciocavallo cheese as pictured below.



5. Hold all rope and tie or braid them together to make a handle. Make a hole in the tag and tie it with the rope.



Note:

Length of hemp rope can be adjusted to match with the cheese and you can decide the general style of rope pattern you would like to make.



Kapche Packaging Design

Objectives

1. To make packaging for Kapche (semi processed wheat flour) product.
2. To protect the product from damage.
3. To add value to the product.

Materials

1. Grain grinder machine
2. Fine mesh flour sieve
3. Stainless steel trays
4. Flour scooper
5. Digital weight scale
6. Heat sealing machine
7. Plastic bag in the type of your choice
 - 20x30 cm clear nylon vacuum bag with opened top
 - 20x30 cm clear zip lock bag
 - 23x35 cm kraft paper with clear plastic window stand up pouch



Clear nylon vacuum



Clear zip lock bag



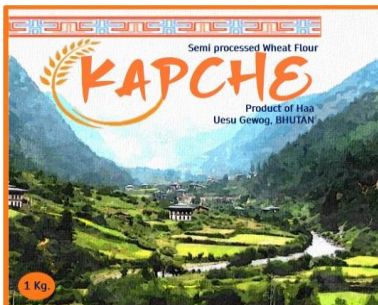
Kraft paper stand up

Instructions

1. Grind wheat flour by flour mill machine.
2. Sifting the wheat flour is a process that breaks up any lumps in the wheat flour by fine mesh flour sieve.
3. Roast the sieved wheat flour in a pan till good smell produced.
4. Choose the type of packaging bags you require. Use the Clear nylon vacuum bag top open / clear zip lock Bags for wheat flour packaging, it can protect the contents from germs and moisture.
5. Stick the labels on the packaging bags.
6. Wheat flour packaging for 1 kg per a clear zip lock bag and seal the bag tightly. Use the heat-sealing machine for the clear nylon vacuum bag with opened top.

Note

All the material should not be moisture to keep the product quality. Suppliers should use gloves and masks to keep the hygiene processing.



Prepared by



- Mr. Aiyarin Jencharoenpokai
- Contact| +66816819329| email imagineme@hotmail.com
- Trainer expertise
Food Microbiology and Dairy Product
- Food Science and Technology
Faculty of Agricultural Technology
Chiang Mai Rajabhat University



QR code
Caciocavallo cheese



QR code Kapche

Tsirang (Patshaling)

Pasteurized Yacon Juice

Objectives

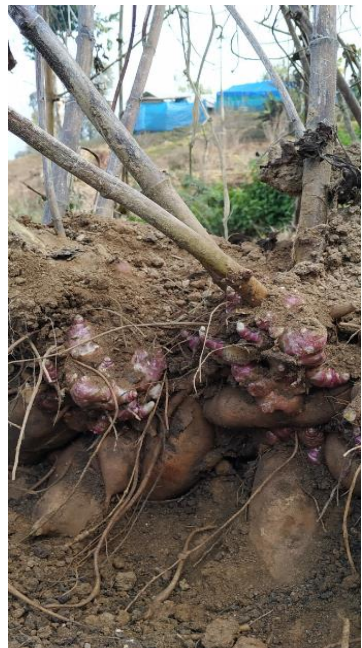
1. To offer the conveniences and alternative choice of consuming the yacon fruit.
2. To add value of the yacon (ground apple) which has the potential to be the economic crop in Tsiang.

Raw material

1. Fresh yacon 1 kg.
2. Honey
3. Lemon juice
4. Water 1 liter

Equipment

1. 250 ml glass bottle with metal cap
2. Double pots (big pot and smaller pot)
3. Momo steamer
4. Thermometer
5. Food blender (grinder)
6. Lemon squeezer
7. Stainless steel bowl
8. Measurement spoon
9. Ladle
10. Knife & chopping board
11. Stainless steel sieve
12. Funnel



13. Pitcher (jar)



Instructions

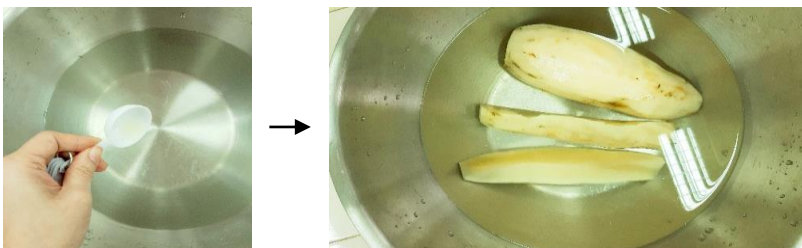
1. Clean and sterilize the bottles by put them in the momo steamer for 5-10 minutes then let all dry.



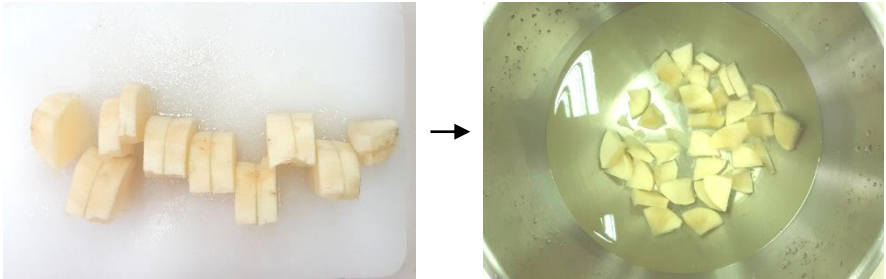
2. Clean and peel the yacon (don't cut at this stage).



3. Mix 1 liter of water with 1 tablespoon of lemon juice. Soak the peeled yacon in the water for 10 mins.

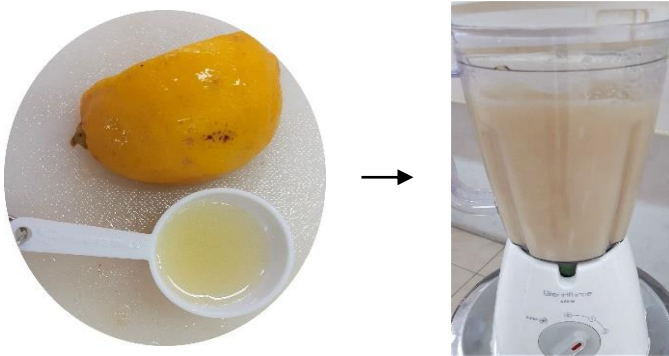


- Cut the soaked yacon in small pieces and soak in the water mix with lemon again for another 10 mins.

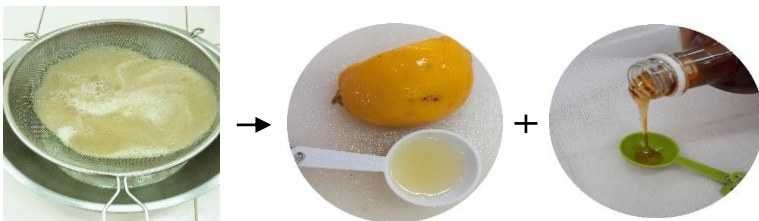


- Mix the cut yacon in the food blender together with water and lemon until all turn in the watery smoothie form.

Ratio: yacon 1 kg., water 1 liter, lemon juice 1 tbsp.



- Use the sieve to filter the yacon juice, 1 kg. of yacon and 1 liter of water will give 1.7 liter of the yacon juice.
- Mix the yacon juice with 6 tbsp. of honey and 1 tbsp. of lemon juice.



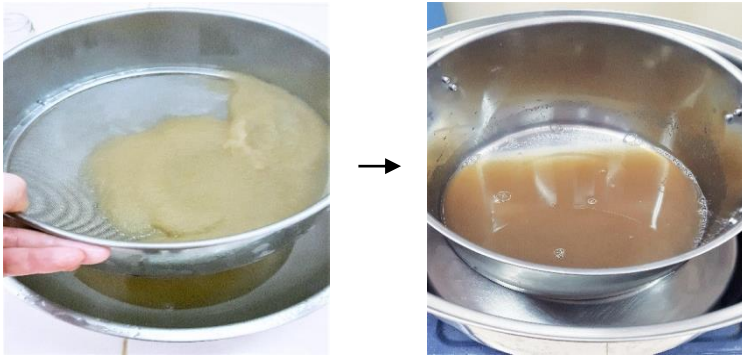
Filterin

1 tbsp. of lemon

6 tbsp. of

8. 1st pasteurizing process

- 1) Put water in the bigger pot and put the smaller pot in the water.
- 2) Boil the flavoured yacon juice in the smaller pot until the temperature of the juice reach 70-75°C for 5 minutes. Filtering the boiled yacon juice again by sieving.



9. 2nd pasteurizing process

- 1) Fill the pasteurized yacon juice in the pasteurized glass bottle 230 ml per bottle.
- 2) Close the cap as fast as possible (while the juice is very hot) but not so tight.
- 3) Boil the filled up bottle in the double pots or momo steamer with 90-100°C for 10 minutes.



1



2



3

10. After the 10 minute boiling, tightening the bottle cap and put the whole bottle in the cool and clean water for the cooling process for 15 minutes (when the water get hotter place replace with the cool water).
11. Keep under 4-10°C for the maximum shelf life 14 days.

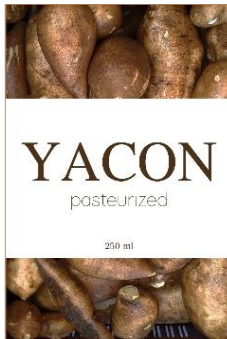
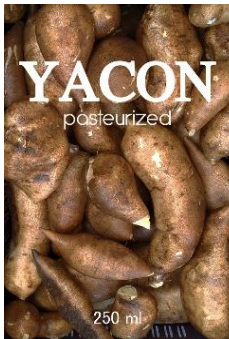


Precipitation Prevention Process (optional)

1. Follow the instruction until number 8 but *don't bottling* yet. Leave the pasteurized juice at 5-10°C for 2-4 hours for the separation between the upper clear part and the precipitate.

Note

1. Lemon is used for the better taste of the juice also reduce the browning reaction of the fresh yacon.
2. The expert uses the food blender instead of juice extractor as it gives better result as experimental.



Honey Lip Balm

Objectives

To use the maximum capacity of the beekeeping raw material (beeswax).

Raw material

1. Beeswax 80 grams
2. Honey 80 grams
3. 1st oil: coconut oil 120 grams
4. 2nd oil: olive oil, almond oil or shea butter 40 grams
(please see the note)
5. Essential oil (vix) of your choice 15 grams *(please see the note)*

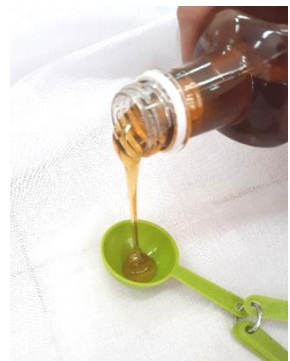
Equipment

1. 10 ml aluminum lip balm container
2. 10 ml syringe
3. Small digital weight scale
4. Double pots (big pot and smaller pot)
5. Wooden small stirrer / spoon
6. Wooden or metal spoon



Beeswax

Coconut oil



Honey

Instructions

1. Weight 80 grams of beeswax, 120 grams of coconut oil and 80 grams of honey.
2. Prepare the double pots by putting water in the bigger pot and put the smaller pot in the water for the undirected heat.
3. Melt the beeswax and coconut oil together in the smaller pot.
4. Add the 2nd oil of your choice (if any).
5. Add the honey, mix well.
6. Leave the stove and let the product temperature drop to 70c then add the essential oil for 15 grams.
7. Fill the lip balm liquid in the aluminum container by using the syringe to control the quantity and avoid the bubble on the product surface. *There is a time limit in this process as we have to make sure the lip balm won't get solid on the way but if it happens we can heat up the solid balm again and refill.*
8. Leave the product to get fully solid for 1 hour in the room temperature.
9. From the recipe, we will get 20-25 pieces of the 10ml lip balm.



Melt the beeswax and coconut oil together in the smaller pot.



Fill the lip balm into the container by using the syringe



Let all dry for 1 hour



Note

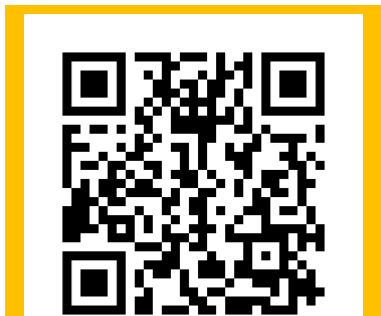
1. The choices of 2nd oils can be any type of *unsaturated fat* such as sunflower oil, almond oil or grape seed oil.
2. The choices of the essential oil should be food grade type.



Prepared by



- Mrs. Apirada Phonpannawit
- Contact | +66815959110 | aear2002@hotmail.com
- Trainer expertise
 - Product development
 - Sensory evaluation and Nutrition
- Food Science and Technology
 - Faculty of Agricultural Technology
 - Chiang Mai Rajabhat University



QR code
Pasteurized yacon juice



QR code
Honey lip balm

Wangdi Phodrang

(Ganyey-Phobjikha)

Buckwheat Noodle

Objectives

1. To process the buckwheat noodles from buckwheat flour.
2. To add the value to raw materials from Phobjikha.
3. To extend shelf life of buckwheat noodle by drying.

Utility of the product

Buckwheat is a cereal crop. It is used in the dietary nutrition of food products. Buckwheat grain contains many valuable nutrients such as proteins, fats, vitamins, minerals, fiber, and polyphenols. Therefore, it is suitable to process buckwheat noodles and dried buckwheat noodles for extending shelf life and convenient consumption.

Ingredients

1. Buckwheat flour 1 cup
2. All-purpose wheat flour $\frac{1}{4}$ - $\frac{1}{2}$ cup
3. Water 15 tablespoons
4. Tapioca flour



Materials

1. Mixing bowl
2. Measuring spoon and cup set
3. Rolling pin
4. Basic kitchen tools (knife, chopping board, etc.)

Instructions

1. Mix buckwheat flour 1 cup with all-purpose wheat flour 1/4 cup together in mixing bowl until combined.



2. Add 90 ml of water (15 tbsp)
3. Use your fingers, toss and rub the flours with the water until crumbly, then kneading them to get a smooth round dough.



4. Divide the dough into four parts. Dust with tapioca starch, then rolling out each part until it's thin.

You can also use a pasta machine for this task by feeding each through the machine.



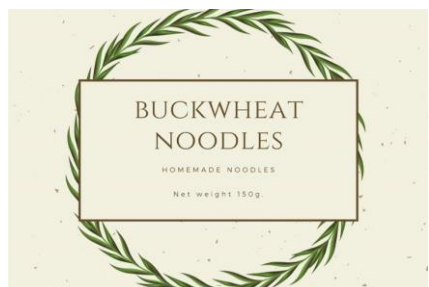
5. Cutting flat dough into the individual noodles and toss the noodles with more tapioca starch to ensure they don't stick together.



6. Boiling the noodles in water for 3-5 minutes, cooling in cold water, and drain with colander.



7. If want to make dried noodles, dry it with the oven at 90 degree C until it's dried (about 1-1.5 hrs.) or in the sunlight for 1-2 days.



Soft Potato Cookie

Objectives

1. To process the food product from potato.
2. To add the value to raw materials from Phobjikha.

Utility of the product

The Phobjikha valley is known for its seed potato crop as the soil and atmospheric conditions in the valley are free from insects and diseases. Potato is a starchy and tuberous crop with a short duration crop. It produces more quantity of dry matters, edible energy and protein in lesser duration of time than cereals like rice and wheat. Moreover, potato is a highly nutritive food. The proteins of potato has high biological value than proteins of cereals. Therefore, it could be used for ingredient in snacks like cookies which consume with hot tea or coffee.

Ingredients

- | | | |
|-------------------------------------|----|-------------|
| 1. Boiled mash potato | 1 | cup |
| 2. All-purpose wheat flour | 1¼ | cup |
| 3. Egg | 1 | egg |
| 4. Sugar | 3 | tablespoons |
| 5. Vegetable oil | ¼ | cup |
| 6. Unsweetened milk | ¼ | cup |
| 7. Salt | ¼ | teaspoon |
| 8. Baking powder | ½ | teaspoon |
| 9. Baking soda | ½ | teaspoon |
| 10. Vanilla flavor | 1 | teaspoon |
| 11. Butter for greasing baking tray | | |

Materials

1. Mixing bowl
2. Measuring spoon and cup set
3. Baking tools (whisk, baking tray, cooling rack, spatula, and baking brush)

Instructions

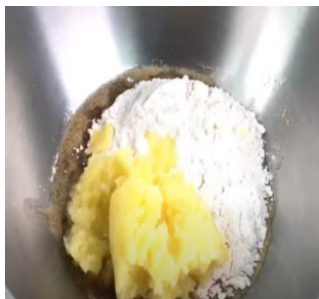
1. Boil unpeeled potato until soft. Let cool slightly then peel and mash.
2. Preheat oven to 180°C (356 °F).



3. Grease baking tray with butter or top with proof paper (baking paper).



4. Crack an egg in mixing bowl, beating with sugar until sugar melted.
5. Add all-purpose flour and vegetable oil.
6. Add boiled mashed potato, and unsweetened milk.



7. Add salt, baking powder, baking powder, and vanilla flavor, then mixing the dough by spatula until it is stiff.
8. Drop the dough into ball with about 2 inches apart on greased baking tray



9. Bake for 20 minutes or until cookies spring back when touched lightly with a finger.
10. Remove cookies from oven and wait 2 mins before removing to a rack to cool before keep cookies in the packaging.



Prepared by



- Dr.Kanjapach Boontranurak
- Contact | +66840407758 | kasineeu@hotmail.com
- Trainer expertise
Food Processing and Food Chemistry
- Food Science and Technology
Faculty of Agricultural Technology
Chiang Mai Rajabhat University



QR code
Buckwheat noodle



QR code
soft Potato cookie

Lhuntse (Khoma)

Handbag

Objective

To produce a value-added small handbag using hand-woven fabric (Kishuthara) from Lhuntse.

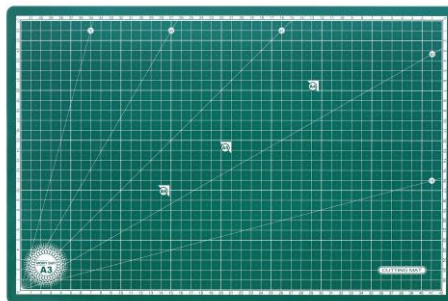
Materials

1. Hand-woven fabric (plain fabric)
2. Hand-woven fabric (pattern or striped fabric)
3. Embroidery thread
4. Sewing thread
5. 10 inch zip
6. Adhesive Jersey or lining fabric



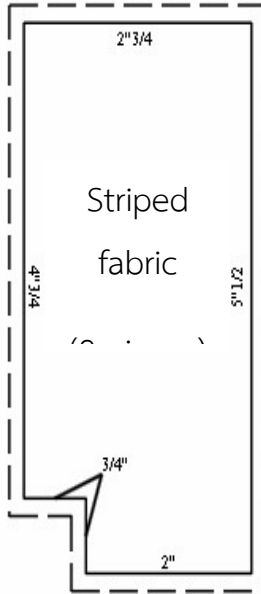
Equipment

1. A sewing machine (if there is no the machine, do hand sewing)
2. Rotary cutter or scissors
3. Scissors
4. Tape measure
5. Pencil
6. Construction paper
7. Cutting mat
8. Iron
9. Pins

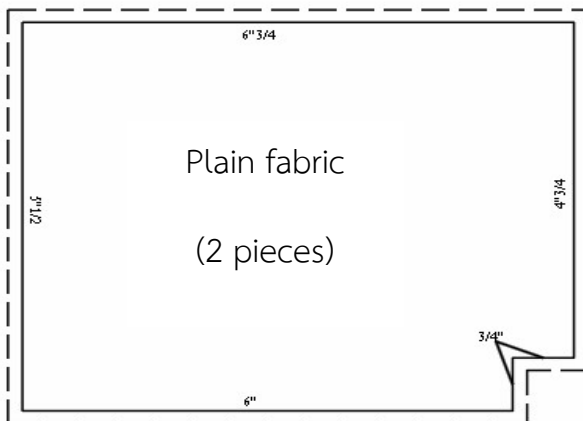


Pattern design

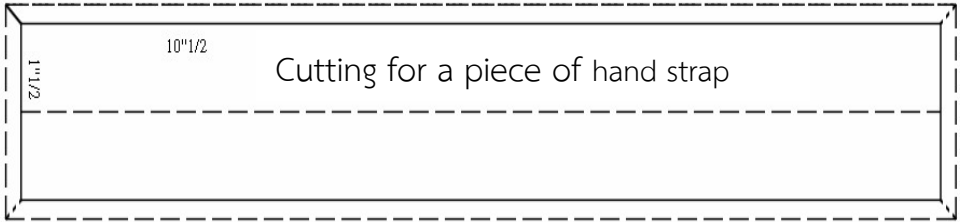
1. The first piece of striped fabric, measures $2\frac{3}{4}$ inches wide x $5\frac{1}{2}$ inches height, covering the seam allowance around $\frac{1}{4}$ inches.



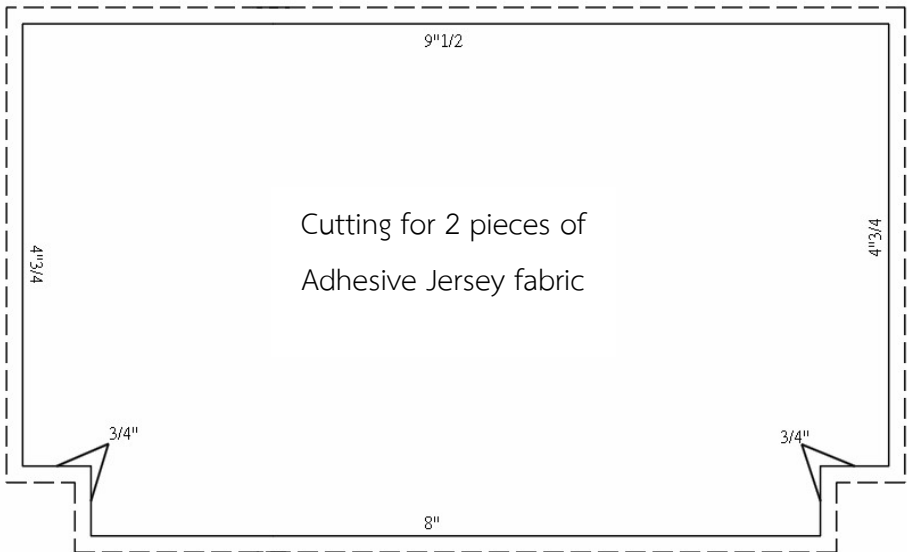
2. The second piece of plain fabric, measures $6\frac{3}{4}$ inches in wide x $5\frac{1}{2}$ inches in height, covering the seam allowance around $\frac{1}{4}$ inches.



3. Make a hand strap by measuring width 2 inches x 11 inches, allow $\frac{1}{4}$ inch for round stitch.

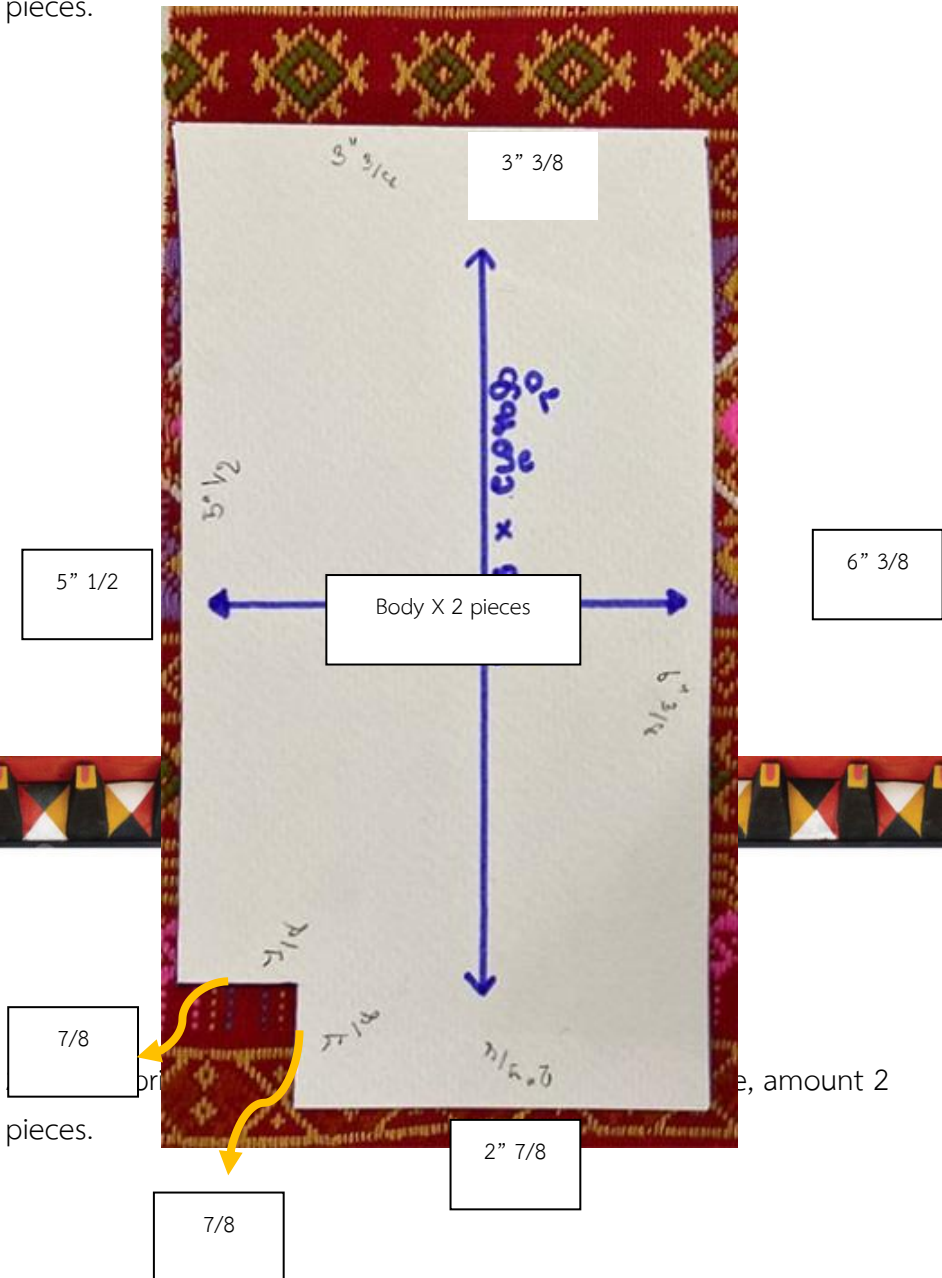


5 $\frac{1}{2}$ inches, $\frac{1}{4}$ inch for seam allowance.



Fabric cutting process

1. Striped fabric, cut the fabric according to the pattern size, amount 2 pieces.



7" 3/8

6" 3/8

5" 1/2

Body two pieces

7/8

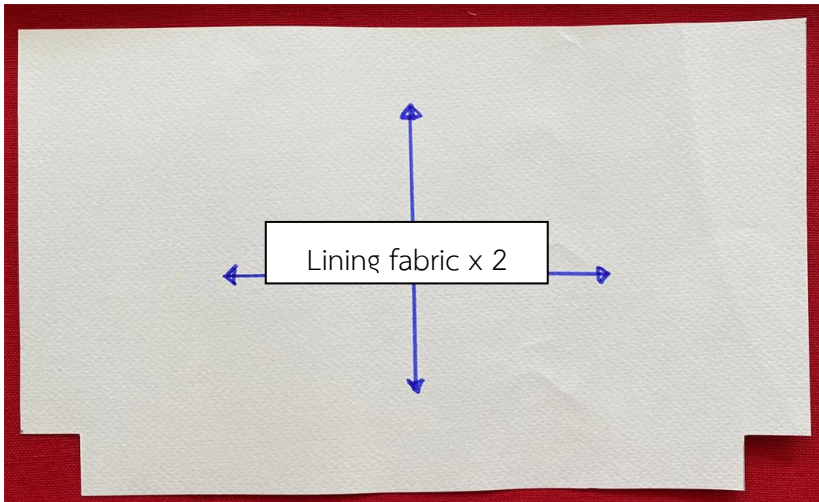
3. A hand strap, measure 2 inches width x 11 inches length amount 2 pieces

6" 1/2

7/8

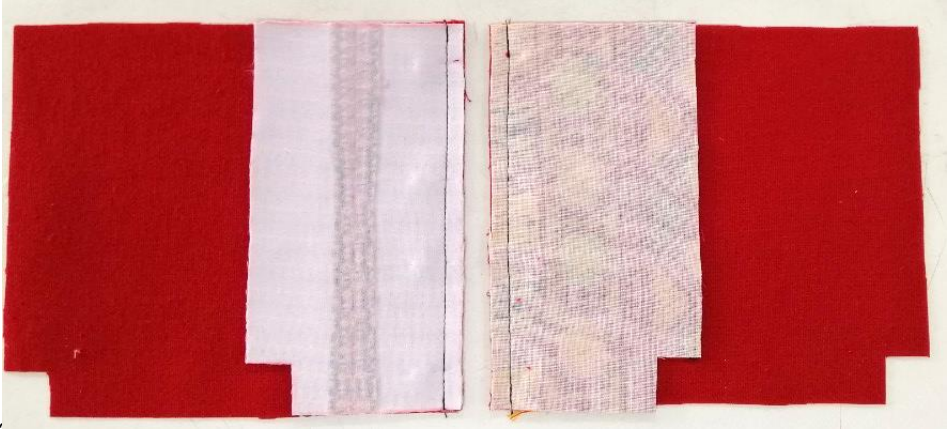
Hand strap X 1 piece

4. The lining fabric of the bag, measures 10 inches width x 5 ½ inches height, amount 2 pieces.

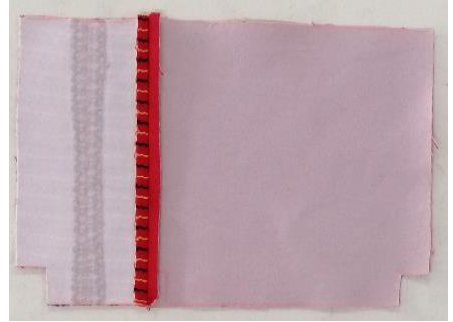


Sewing process

1. Take the striped fabric and the plain fabric, sew them together with sides of the fabric facing each other. Sew the same process on both pieces.

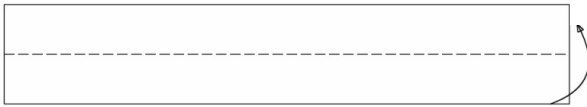


2. Iron and stitch both pieces as shown in the picture.



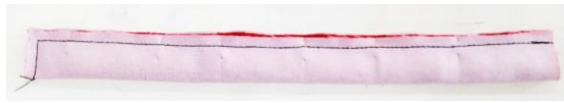
3. Sew the hand strap by folding the length in half and sew a foot (1/4 inch) following the red line example. Then turn the seam inward and iron the seam in the middle.

1



Flip the fabric up in half

2



3



4



4. Place the zipper against the mouth of the bag. Facing the fabric on the right side, hitting the zipper. The hem and the zipper are even, then sew a foot (approximately $\frac{1}{4}$ inch), working one side at a time, completing both sides.



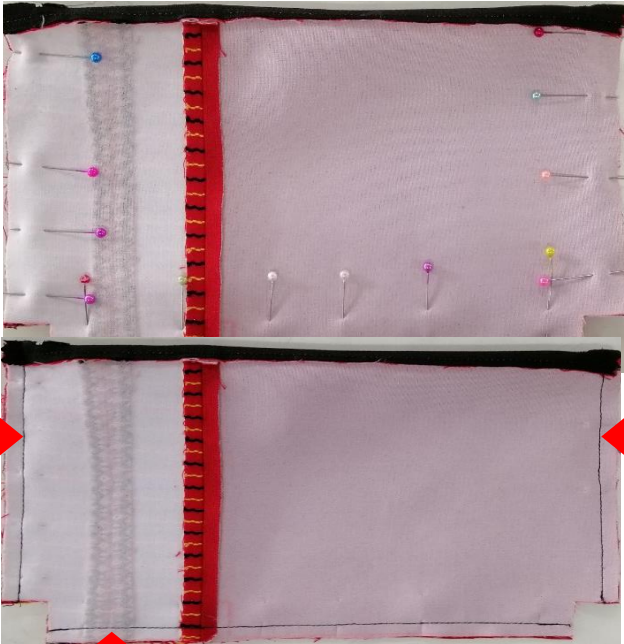
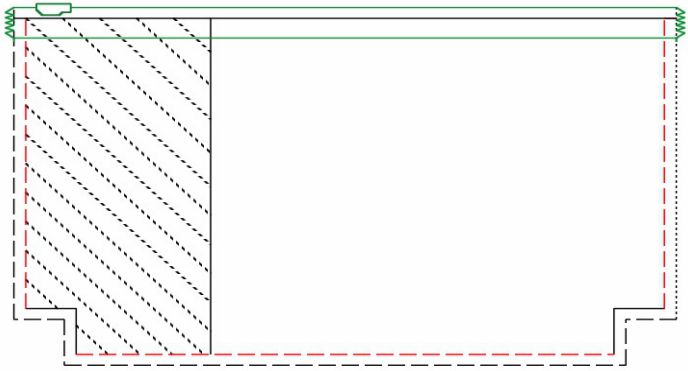


Example of the workpiece that has already been zipped.

5. Take the hand strap and sew it to the bag by sticking down $\frac{3}{4}$ - 1 inch below the zipper. (see the yellow sewing line)



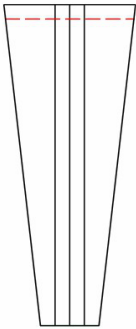
6. Fold the fabric sides together. Where both the bottom and the sides of the bag are equal, sew on both sides and bottom of the bag along the red patch.



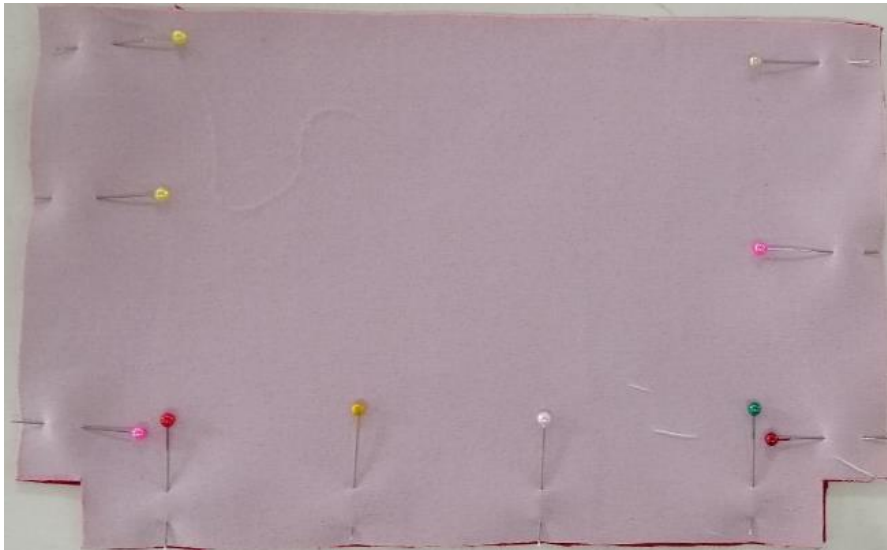
Example of sewing along the black line



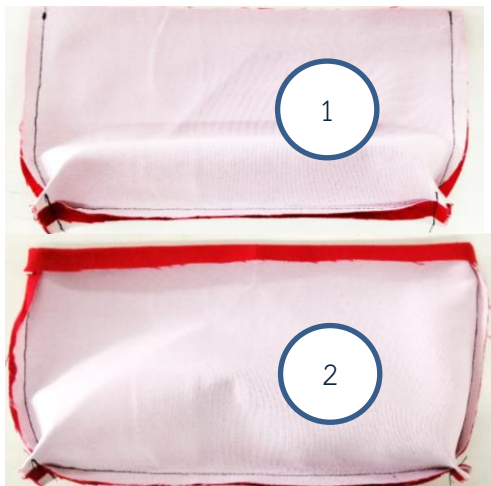
7. Sew both ends of the bottom of the bag along the seams for a sewing machine foot (approximately ¼ inch). Turn back the bag and neatly arrange.



8. Sew both lining piece together by facing the fabric on the right sides together and holding the edges evenly. Then, sew both sides of the fabric and both the bottom of the bag. Sew along the indicated stitch, a sewing machine foot (about ½ inch) as if step 6.



8. Sew both sides of the bottom of the lining, do the same as in step 7 (number 1), then iron the fold of the bag $\frac{1}{4}$ inch down (number 2).



10. The lining fabric is then sewn to the bag by facing the wrong side each other. Use a pin to pin all around. Then use a needle roll around the mouth of the bag.





The bas has been successfully tailored.

Table runner

Objective

To design a table runner using handwoven fabric (Kishuthara) from Lhuntse.

Materials

1. Hand-woven fabric (plain fabric)
2. Hand-woven fabric (pattern or striped fabric)
3. Sewing thread
4. Adhesive Jersey or lining fabric

Equipment

1. A sewing machine (if there is no the machine, do hand sewing)
2. Rotary cutter or scissors
3. Scissors
4. Pencil
5. Construction paper
6. Cutting mat
7. Iron



Pattern design

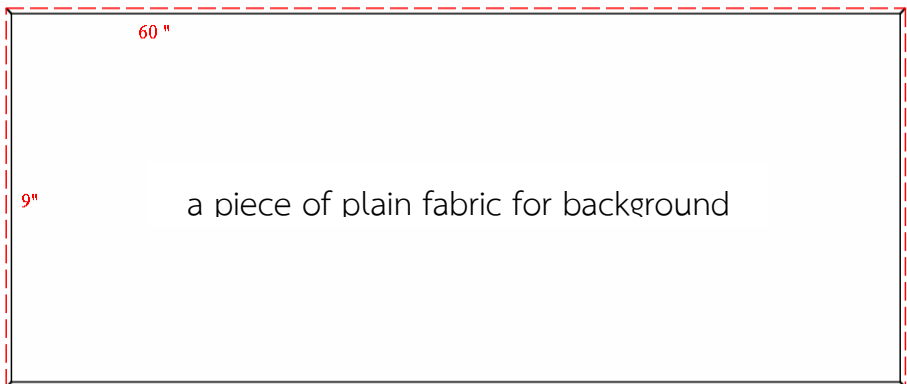
1. The first piece of striped fabric, measures 60 inches wide x 6 inches height, covering the seam allowance around $\frac{1}{4}$ inches.



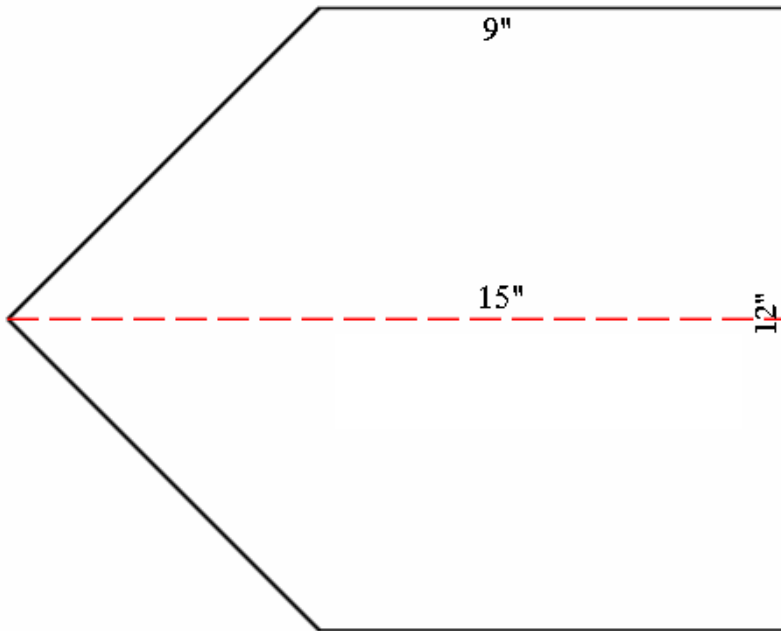
2. The second piece of plain fabric, measures 60 inches wide x 3 inches height, covering the seam allowance around $\frac{1}{4}$ inches.



3. The third piece of plain fabric, measures 60 inches wide x 12 inches height, covering the seam allowance around $\frac{1}{4}$ inches.

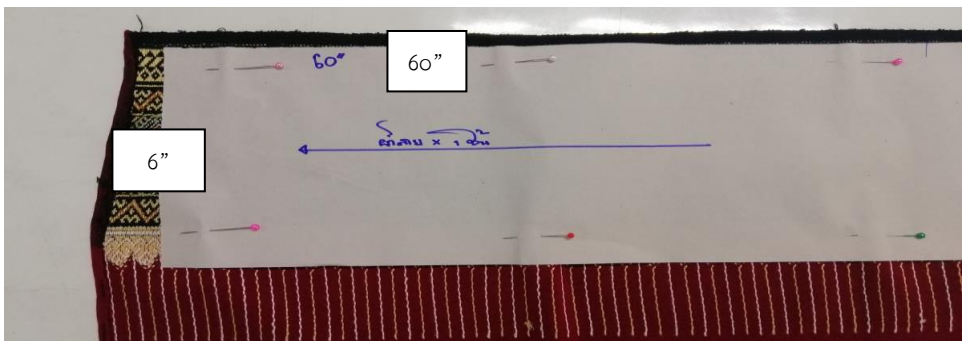


4. Header-end pattern of the runner according to the design below



Fabric cutting process

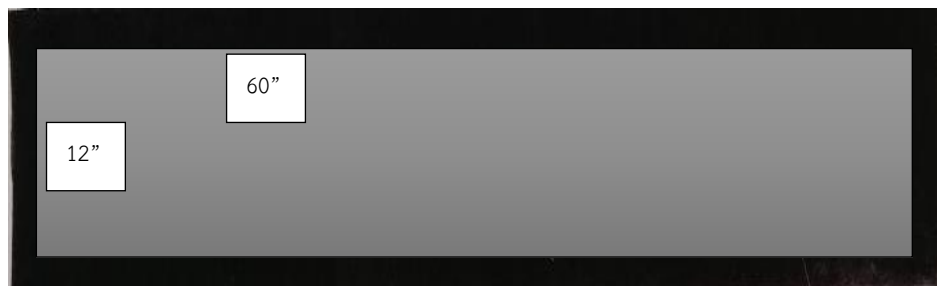
1. The striped fabric, cut the fabric according to the pattern size below, amount a piece.



2. The plain fabric, cut the fabric according to the pattern size below, amount 2 pieces.

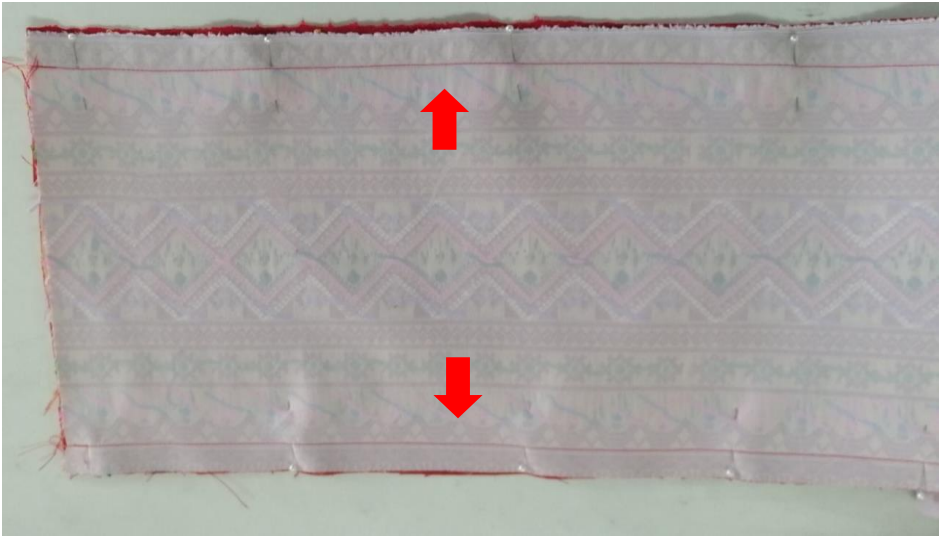


3. The plain fabric, cut the fabric according to the pattern size below, amount a piece.



Fabric sewing process

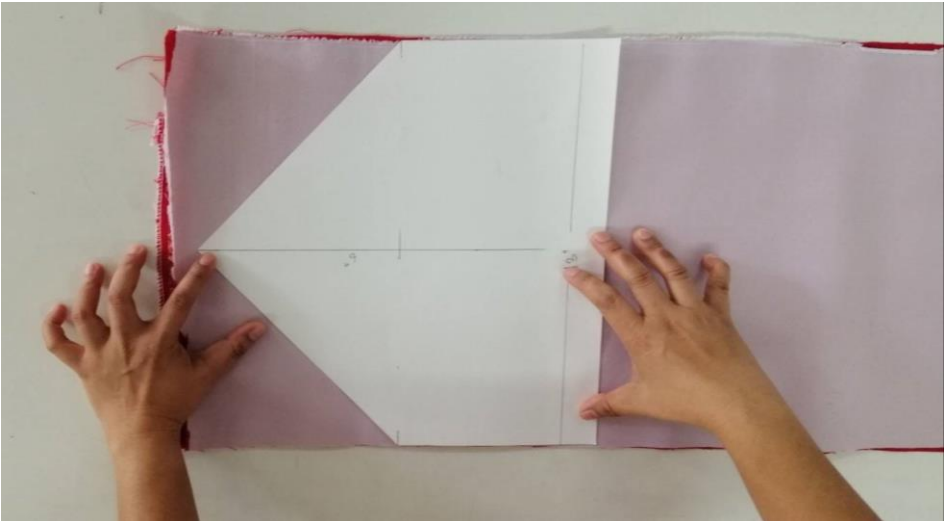
1. The striped fabric piece and the plain fabric piece are sewn together with the sides of the fabric facing each other. Same stitches on both sides.



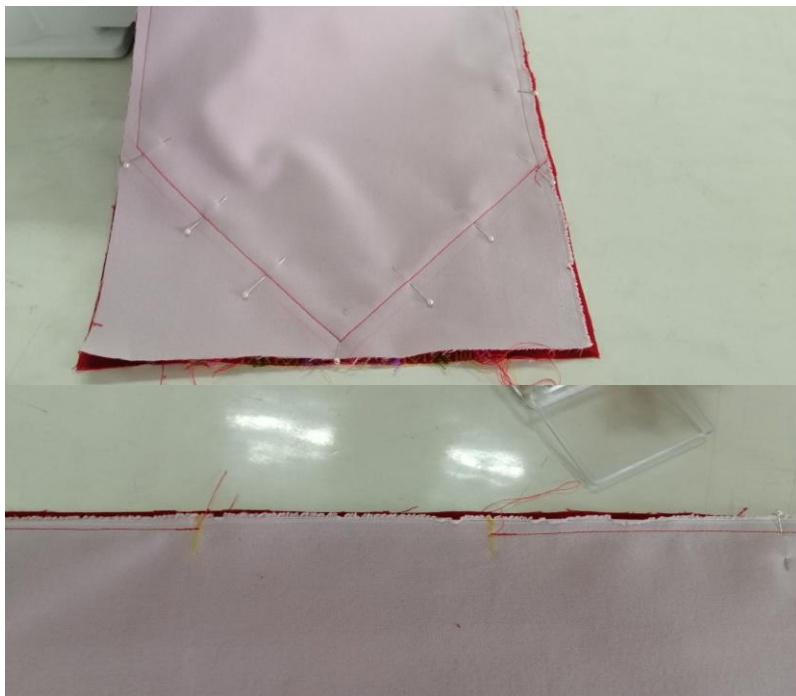
3. Take a large piece of cloth and place it next to the finished piece. Let the sides be sandwiched together.



4. Place the cutting pattern of the runner head on the fabric to set the sewing line.



5. Sew about 5 inches around the opening in case of turning the fabric to the right side.



6. Turn the fabric inside out and iron it.



6. stitch on top of the fabric to make beautiful stitch line.



8. Decorated to enhance beauty

Prepared by

- Assistant Professor Chintana Inpakdee
- Contact I +6687-7878861 | ID Line: Chinny_jang
- Trainer expertise
Fashion Design and Textile
- Home Economics,
Faculty of Science and Technology,
Chiang Mai Rajabhat University



- Ms. Jiraporn Choomchit
- Contact I +6687-5154751 |
- ID Line: oomjung2530
- Trainer expertise
Fashion Design and Textile
- Home Economics,
Faculty of Science and Technology,
Chiang Mai Rajabhat University





QR code
Handbag



QR code
Table runner

Tashi Yangse (Yangse)

Chilli paste

Objective

To preserves the Dried UrkaEzay chilli including processing the chilli paste by using raw materials from Trashi Yangtse.

Ingredients

1. 200 g. Dried UrkaEzay chilli
2. 100 g. cloves garlics (peeled)
3. 100 g. red onion (peeled)
4. 200 g. perilla seed
5. 200 g. palm sugar
6. 1 cup of tamarind juice
7. 3 cup of vegetables oil or sunflower oil
8. 1 table spoon of salt



Equipment

1. Blender/ Food Processor/ mortar and Pestle
2. Frying pan/ wok
3. Cutting board
4. Knives
5. Measuring spoon
6. Strainer
7. Glass bottle with lid (100 ml/ 150 ml)
8. Measuring cup
9. Kitchen scale
10. Stainless Frying spatula/ Wooden Frying spatu



Instructions

1. If dried chillies feel dusty, dunk them for just a few seconds in water and dry them off on paper towel.
2. If the chillies too spiciness, remove the seeds and pith to reduce spiciness. However, if you want a spicier chilli paste, you can leave some of seed in.
3. Toast the dried chillies in a dry sauce pan or wok over medium heat, stirring constantly, until they are charred in some spots and smell smoky. Remove from pan or wok and set aside.



clove garlic and red sesame on the pan and toast it, stirring constantly, until they are transplant not too charred. Remove from pan and set aside.

5. Toast the perilla seed in a dry sauce pan or wok over low heat, stirring constantly, until they are charred in some spots. Remove from pan or wok and set aside.
6. In the blender/ food processor/ mortar and pestle, grind roasted chillies into a powder.
7. In the blender/ food processor /mortar and pestle, grind roasted red onion until it become fine paste.

8. In the blender/ food processor /mortar and pestle, grind roasted clove garlic until it become fine paste.



9. Heat the wok and add vegetable oil after that transfer the chilli powder, red onion paste, clove garlic paste, and perilla seed paste, cook over low heat, stirring constantly, for about 10 - 15 minutes to cook the ingredients mixed together then add salt and tamarind juice, stirring constantly until it become thicken the paste to desired consistency. If you are making a large batch, it will take more time to cook.



Tamarind



Palm sugar



Salt

10. Store in a glass jar, and it will keep in the fridge for a few months or in the freezer indefinitely. Use as a spread on the bread mix with rice or use in any of many recipes such as spicy soup, stir fired vegetable etc.



Fried Chilli

Objective

To preserve the Dried Thingye Ezay chilli including processing the Fried chilli by using raw materials from Trashi Yangtse.

Ingredients for 1-2 serves

1. Dried chilli 100-200 g.
2. Salt $\frac{1}{2}$ tea spoon
3. White sesame 2 table spoon
4. Fried flour
5. Vegetable oil 5 cups
6. Spicy powder (roasted Schezwan pepper powder)



Equipment

1. Blender/ Food Processor/ mortar and Pestle
2. Frying pan/ wok
3. Cutting board



4. Knives
5. Measuring spoon
6. Strainer
7. Glass bottle with lid (100 ml/ 150 ml)
8. Measuring cup
9. Kitchen scale
10. Stainless Frying spatula/ Wooden Frying spatula



Instructions

1. If the chillies too spiciness, remove the seeds and pith to reduce spiciness. However, if you want a spicier fried chilli, you can leave some of seed in.



2. If you do not want spicy boil it in hot water to reduce the spiciness.

3. Add salt, white sesame and fried flour, mix it



4. Heat oil in deep wok and deep-fry the chilli with low heat until they turn in orange colour or red not brown or black, cook it until they are crispy.

5. Remove from pan or wok using strainer, drain on paper towels and set aside.



Prepared by



- Dr. Thita Soonthornvipat
- Contact | +66993825544 |
thita_cmru@hotmail.com
- Trainer expertise
Postharvest Technology and Plant Physiology
- Faculty of Agricultural Technology,
Chiang Mai Rajabhat University



QR code
chilli paste



QR code
Fried chilli

Trongza (Drakten)

Infused Organic Green Tea packing

Bhutan is rich in plant biodiversity especially medicinal plants which each plant contains phytochemicals with bioactive activity found only in plants. They may be substances that give plants their unique color, smell or taste and have preventive and therapeutic properties. It is important to bring highly effective herbal resources to develop and create healthy products that benefit the body and promote careers in the community. The creations from this project are the development of four healthy organic green tea formula.

Objective

To development of herbal tea products is another convenient and safe option for the general public.

Mint Green Tea

Ingredients: Green Tea 3.2 g Mint 0.8 g

Lemongrass Green Tea

Ingredients: Green Tea 3.2 g Lemongrass 0.4 g Pandan 0.4 g

Lemon Green Tea

Ingredients: Green Tea 3 g Lemon 1 g

Chamomile (or Safflower) Green Tea

Ingredients: Green Tea 3 g Chamomile 1 g (or Safflower 1g)



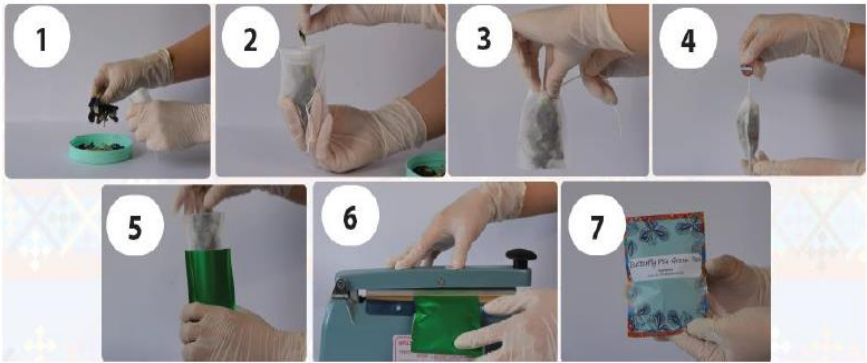
Equipment

1. Impulse heat sealer/ manual bags sealer
2. Digital scales mini electronic grams weight balance
3. Tea bag size 5.5x7.0 cm
4. Aluminum foil bag size 7x9 cm
5. Packaging (can, aluminum foil stand up pouches. clear nylon vacuum bag, Kraft paper stand up pouches)
6. Scissors
7. Tag label
8. Tea bag label
9. Packaging label



Instructions

1. Weigh green tea and herbs according to the ingredients mentioned above.
2. Put all ingredients in tea bags
3. Put the tag label on the string of the tea bag
4. Stick the tea bag label on the aluminum foil bag
5. Pack tea bag in the aluminum foil bag
6. Seal the bag tightly with impulse heat sealer/manual bags sealer
7. Put in the packaging (You can choose any types of packaging your required)
8. Stick the label on the packaging.



Lemon Green Tea

Ingredient
Green Tea 75% • Lemon 25%

Mint Green Tea

Ingredient
Green Tea 75% • Mint 25%

- Mulberry Lavender Green Tea
- Lingzhi Green Tea
- Lemon Green Tea
- Safflower Green Tea
- Roselle Green Tea
- Chamomile Green Tea

Ingredient

BHUTAN

TEA

ECOTea Bag

Materials

1. Gauze or general patterned fabric
2. Needle
3. Thread
4. Bead
5. Tassel
6. Dried flowers
7. Borneo camphor
8. Camphor
9. Green tea

Instructions

Style 1

1. Cut the Gauze or general patterned fabric to a width of 3.5 cm x Length 9 cm.



2. Fold the Gauze or general patterned fabric in half.



3. Sew the left and right edges.



4. Flip the bag inside to put the outside inside.



5. Mix camphor and borneol camphor at a rate of 1: 1 1 gram: 1 gram.



6. Put 0.5 g of dried flowers, 1 g of green tea.



7. Sewing on the top of the bag.



8. Attach a rope to the bag for hanging and decorated for beauty.

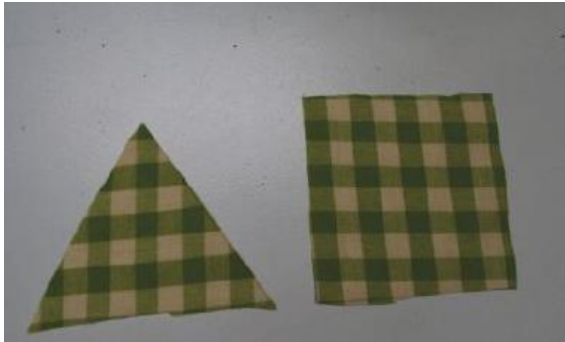


Style 2

1. Cut the fabric to make 4 pieces of 4x4 cm of triangles.



2. Cut the fabric to 4x4 cm of square to use as the base of the pyramid.



2. Sew the left and right edges and sew the base, leaving a 2 cm space to insert dried flowers, tea leaves, borneol camphor and camphor.



4. Flip the bag inside to put the outside inside.

5. Mix camphor and borneol camphor at a rate of 1:1 (2 grams: 2 grams).



6. Put 1 g of dried flowers, 3 g of green tea.

ii.



7. Sewing on the top of the bag.



Herbal Liquid Detergent

Materials

1. Ash
2. Green tea leaves
3. Lemon
4. Pan
5. Spatula
6. Knife
7. Cutting board
8. Colander
9. Cheesecloth
10. Pot
11. Water
12. Plastic bottle with pump

Instruction

1. Prepare the lye from the ashes by mix the ash and water at a ratio of 1:4.



2. Boil for about 30 minutes.

3. Pour it into the jar, set aside overnight.



4. Filtered through some cheesecloth or filter paper.

5. Slice 1 kg of lime or lemon then boil with 2 liters of water.



6. Add green tea leaves 10 table spoon the boil for 10-15 minutes.

7. Filtered for liquid mixing extract green tea and lemon.



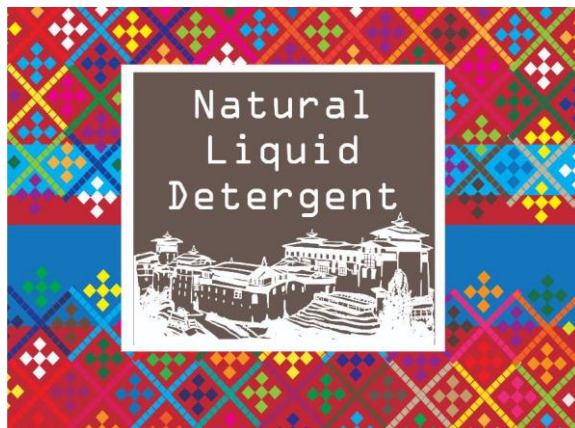
8. Mix the lye with water extracted from tea leaves and lemon in a ratio of 1: 1.

9. Add about 10 tablespoons of salt and mix well.



10. Pour into a plastic bottle with pump or plastic bottle or any containers.

11. Stick the label on packaging.





Tea Soap

Eighty million tons per year is an estimate of the global production of vegetable oils, and more than 90 percent of them are used in the food industry. This includes the food industry, the vegetable oil industry as an essential ingredient in many products, and the household food industry that uses vegetable oil as a main ingredient in many menus which resulted in many frightening problems. Since we often face the problem, there is a lot of waste oil left, smelly all over the house or being dropped into the ecosystem without knowing how to get rid of used oil. Therefore, those used vegetable oils are developed into detergent products to create value and the use of waste products in the household under the theme “Recycle used oil for handmade green tea soap”

Materials

1. Sodium hydroxide 80 g
2. Water 70 g
3. Used oil 500 g
4. Lemon juice 100 g
5. Silicone mold soap
5. Pan
6. Spatula
7. Colander
8. Onion
9. Green tea leaves
10. Green tea powder
11. Digital Scales Mini Electronic Grams
12. Mixing plastic bowl



- 13. Whisk
- 14. Long Spout Measuring cup/plastic cup
- 15. Plastic jar/Glass jar

Instruction

- 1. Strain used oil through a colander.
- 2. Cut the onion into small pieces.
- 3. Heat the pan, pour the strained oil into the pan then put the onion into the pan.



- 4. Add 4 tablespoons of green tea leaves and fry evenly, onion and green tea will help deodorize the oil.
- 5. Fry the onion and tea leaves for about 5 minutes and turn off the gas stove.



- 6. Strain out the onions and green tea leaves for oil. Let the oil cool slightly.

7. Weigh 80 grams of sodium hydroxide and pour in 170 g of water in a mixing plastic bowl, stirring until the sodium hydroxide dissolves completely. At this stage, try to do it in an open space and don't forget to wear gloves and masks as well.



8. Pour the filtered used oil into a mixing bowl.

9. When the sodium hydroxide has cooled then poured into the mixing bowl.



10. Use the spatula to slowly stir until the ingredients are combined and the texture is sticky and creamy (Takes about 15-20 minutes).
11. Add 200 g of lemon juice to help remove stains better.
12. Add 2 teaspoons of green tea powder to deodorize them mix well.



14. Leave it for one night, the soap will freeze into lumps.
15. Leave the handmade washing soap in a ventilated place for about a month before using it to evaporate the effect of sodium hydroxide completely. Therefore, it can be used for washing, cleaning clothes, shoes or using mixed with water to wipe the household.

Prepared by



- Dr. Phatthanawan Chanrattanayotin
- Contact I +66822921133
E-mail Chanrattanayothin@gmail.com
promnim@yahoo.co.th
- Trainer expertise
Food and Agriculture Microbiology
Organic Product Development
Organic Agriculture System
- Faculty of Agricultural Technology,
Chiang Mai Rajabhat University



QR code
Organic green tea



QR code
Herbal liquid
detergent &
Tea soap



CMRU Supervisors

Associate Professor Dr. Prapan Thammachai
Associate Professor Dr. Watcharapong Wattanakul

CMRU Trainers Team Coordinator

Assistant Professor Dr. Naksit Panyoyai

CMRU Trainers Team

Mrs. Aiyarin Jencharoenpokai

Mrs. Apirada Phonpannawit

Dr. Kanjapach Boontranurak

Assistant Professor Chintana Inpakdee

Ms. Jiraporn Choomchit

Dr. Thita Soonthornvipat

Dr. Phatthanawan Chanrattanayothin

CMRU Media and Technical Team

Ms. Piluntasul Suwanalert

Mr. Samart Maneemongkol

Office Team

Mrs. Tanyawan Sridechakul

Mrs. Orapin Nakam

Mrs. Niparat Tananja

Mrs. Jintapa Ator

