

APPENDIX

APPENDIX A

Pictures of Mafai Jeen



A



B

Appendix Figure A 1 The Mafai Jeen varieties in Thailand A: Sweet-sour flavor; round shape, B: Sweet flavor; conical-oblong shape.

APPENDIX B

Figure of Some Equipment Used in Experiments



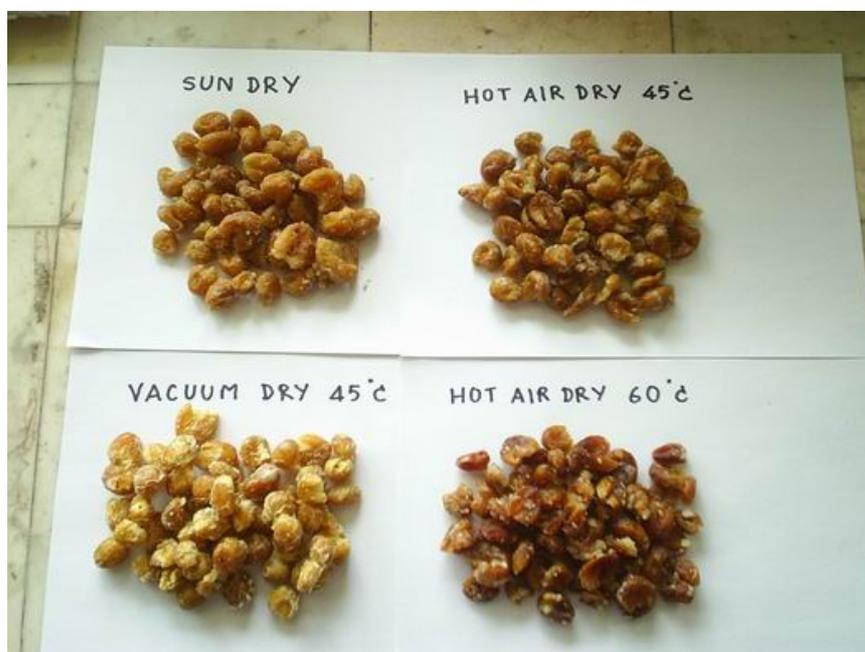
Appendix Figure B1 The Clevenger-type apparatus hydrodistillation extraction.



Appendix Figure B2 Gas chromatography-mass spectrometry (GC-MS) instrument.

APPENDIX C

Pictures of Some Experiments



Appendix Figure C 1 Visual appearance of dried Mafai Jeen with various drying methods.



A



B



C

Appendix Figure C 2 Apparatus for headspace extraction.

A: sample in sealed vial, B: magnetic stirring heater, C: gas chromatography.



Appendix Figure C 3 Focus group discussion in Nan Province.



Appendix Figure C 4 Focus group discussion in Bangkok.



Appendix Figure C 5 Training of panelists in sensory descriptive analysis of Mafai Jeen candy.



Appendix Figure C 6 Mafai Jeen fruit candy.



Appendix Figure C 7 A trained panelist performing sensory evaluation of Mafai Jeen fruit candy in partitioned booth.

APPENDIX D

Ranking for Preference

PRODUCT Mafai Jeen fruit candies

DATE.....**TIME**.....**ASSESSOR**.....

Please taste the samples in the order presented, moving from left to right and rank them in order of preference. You may retaste the samples to check the ranking. Give the sample that you most prefer the rank of 1 and the sample you prefer next a rank of 2 etc.

You must give each sample a different rank. Equal ranks are not allowed.

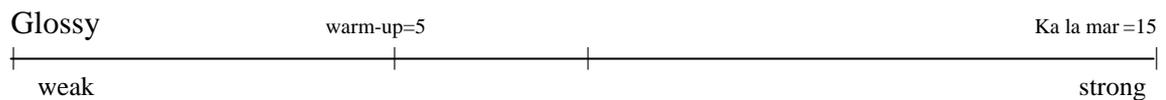
Samples					
Rank					

Appendix Figure D1 Ballot used in the ranking of preference for Mafai Jeen fruit candy products.

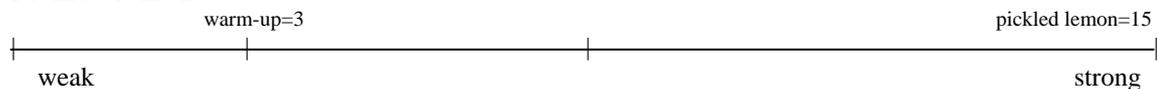
BALLOT FOR MAFAI JEEN FRUIT CANDY

Panelist Code #..... Date..... Sample No.....

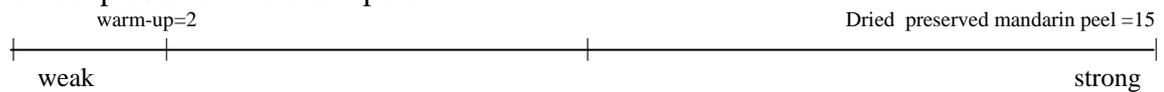
Please bite a piece of saltine cracker and sip some water to rinse your palate. Taste the Mafai Jeen candy samples with the sample number indicated on appearance, odor and texture. After you have tasted the product, please mark response for the attribute below.

Appearance**Odor/Aroma**

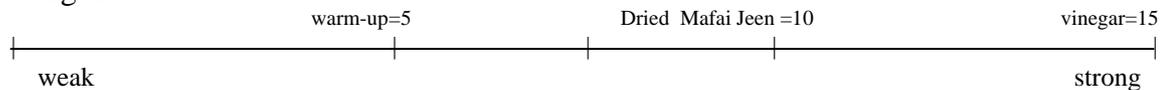
Pickled lemon



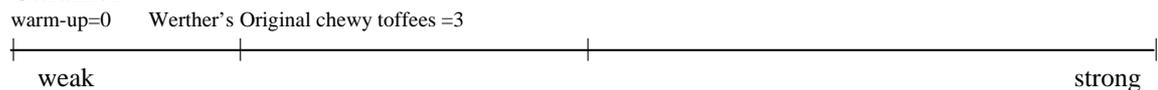
Dried preserved mandarin peel



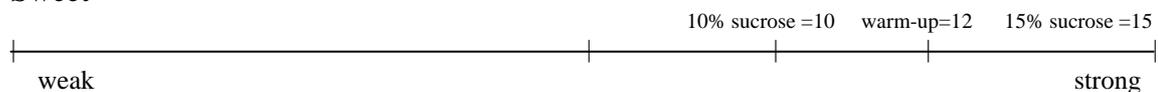
Pungent



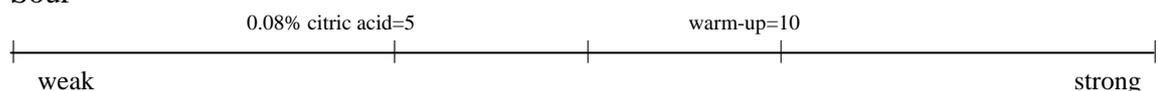
Caramel

**Tastes**

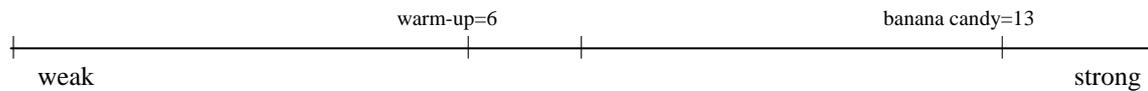
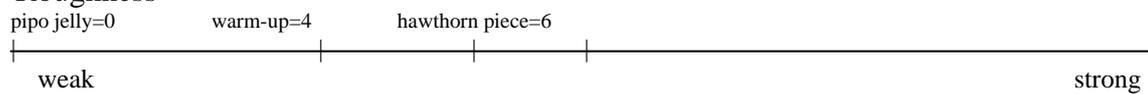
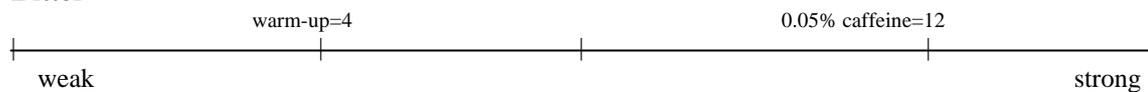
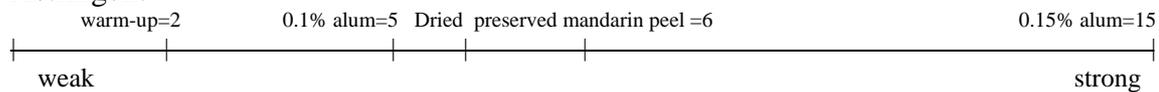
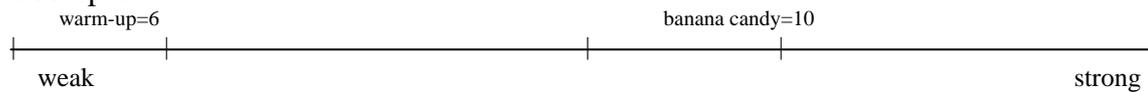
Sweet



Sour



Appendix Figure D2 Ballot used in the descriptive analysis for Mafai Jeen fruit candy products.

Chewiness**Roughness*****Residual*****Bitter****Astringent****Toothpack****Appendix Figure D2 (Continued)**

APPENDIX E1

CONSUMER STUDY QUESTIONNAIRE

I am a Ph.D. student studying in Product Development at Kasetsart University. I would like to evaluate Mafai Jeen fruit candy product. The reason for this research is to gather information on consumer attitude and their acceptance of the product.

DEMOGRAPHIC SURVEY: All information collected will not be identified with your name.

1. What is your age group? (Please check one)

<input type="checkbox"/> 18 – 24 years	<input type="checkbox"/> 25 – 34 years	<input type="checkbox"/> 35 – 44 years
<input type="checkbox"/> 45 – 54 years	<input type="checkbox"/> 55 – 64 years	<input type="checkbox"/> over 64 years

2. What is your gender? Male Female

3. Level of education? (Please check one)

<input type="checkbox"/> Less than high school	<input type="checkbox"/> High school
<input type="checkbox"/> Some college	<input type="checkbox"/> Bachelor's degree
<input type="checkbox"/> Graduate (M.S., M.A., Ph.D.)	

4. Which of the following best describes you?

<input type="checkbox"/> Employed full-time	<input type="checkbox"/> Unemployed
<input type="checkbox"/> Employed part-time	<input type="checkbox"/> Homemaker
<input type="checkbox"/> Re tired	<input type="checkbox"/> Student

5. Income (Please check one)

<input type="checkbox"/> Under ₱ 10,000	<input type="checkbox"/> ₱10,000–19,999	<input type="checkbox"/> ₱20,000–29,999
<input type="checkbox"/> ₱30,000–39,999	<input type="checkbox"/> ₱ 40,000–49,999	<input type="checkbox"/> over ₱50,000

WAMPEE CANDY PRODUCT INFORMATION

1. Do you eat fruit candy?

Yes [<input type="checkbox"/>]	No [<input type="checkbox"/>]
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2. How often do you eat fruit candy?

<input type="checkbox"/> More than once a week
<input type="checkbox"/> Once a week
<input type="checkbox"/> Twice a month
<input type="checkbox"/> Once a month
<input type="checkbox"/> Very rarely

3. What is the most important quality attribute that you want in fruit candy products?

(Please check one)

_____ Color / appearance

_____ Texture / mouthfeel

_____ Taste

_____ Nutrition

_____ Aroma / odor

_____ Other (please specify)_____

4. Which taste do you prefer most for fruit candy products?

_____ Sweeter and less sour

_____ More sour and less sweet

_____ Sweet / sour equally

_____ Other (please specify)_____

5. Are you aware of health benefits of fruit herbs?

Yes []

No []

6. Would you consider buying fruit herbs candy?

Yes []

No []

7. Have you heard or seen Mafai Jeen products in the market?

Yes []

No []

Sample No. _____

Please evaluate this product and check the space that best reflects your feeling about the product.

1. How would you rate the OVERALL APPEARANCE/COLOR of this product?

Dislike	Dislike	Dislike	Dislike	Neither	Like	Like	Like	Like	Like
Extremely	Very much	Moderately	Slightly	nor	Dislike	Slightly	Moderately	Very much	Extremely
[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	

2. How would you rate the OVERALL TASTE (flavor and odor) of this product?

Dislike	Dislike	Dislike	Dislike	Neither	Like	Like	Like	Like	Like
Extremely	Very much	Moderately	Slightly	nor	Dislike	Slightly	Moderately	Very much	Extremely
[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	

3. How would you rate the SWEETNESS of this product?

Dislike	Dislike	Dislike	Dislike	Neither	Like	Like	Like	Like	Like
Extremely	Very much	Moderately	Slightly	nor	Dislike	Slightly	Moderately	Very much	Extremely
[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	

4. Please rate the SWEETNESS of this product based on your preference.

[] Not sweet enough [] Just about right [] Too sweet

5. How would you rate the SOURNESS of this product?

Dislike	Dislike	Dislike	Dislike	Neither	Like	Like	Like	Like	Like
Extremely	Very much	Moderately	Slightly	nor	Dislike	Slightly	Moderately	Very much	Extremely
[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	

6. How would you rate the TEXTURE/MOUTHFEEL of this product?

Dislike	Dislike	Dislike	Dislike	Neither	Like	Like	Like	Like	Like
Extremely	Very much	Moderately	Slightly	nor	Dislike	Slightly	Moderately	Very much	Extremely
[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	

7. Do you detect BITTERNESS AFTERTASTE in this product? [] Yes [] No

8. Please rate your OVERALL LIKING of this product?

Dislike	Dislike	Dislike	Dislike	Neither	Like	Like	Like	Like	Like
Extremely	Very much	Moderately	Slightly	nor	Dislike	Slightly	Moderately	Very much	Extremely
[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	

9. Is this product ACCEPTABLE? [] Yes [] No

10. Would you BUY this product if it were commercially available? [] Yes [] No

11. Would you BUY this product after knowing it contains fruit herb used medicinally?
[] Yes [] No

Thank you!!

CURRICULUM VITAE

- NAME** : Acting Capt. Pratheung Chokeprasert
- BIRTH DATE** : May 22, 1962
- BIRTH PLACE** : Cha cheong sao, Thailand
- EDUCATION** : YEAR INSTITUTION DEGREE/DIPLOMA
- | | | |
|------|-----------------|--|
| 1986 | Maejo Univ. | B.Sc.(Food Technology) |
| 1998 | Kasetsart Univ. | M.Sc.(Agro-Industrial
Product Development) |
- POSITION/TITLE** : Lecturer
- WORK PLACE** : Maejo University-Phare Campus, Phare, 54140.
Thailand. Tel. 081-594-2158, 0-5387-3063 to 4
- SCHOLARSHIP** : The Ministry of University Affairs, Thailand
(2001-2003)
- PUBLICATION** : 1. Effect of Drying Conditions on Qualities of Dried
Wampee [*Clausena lansium* (Lour.) Skeels].
(Kasetsart J. (Nat. Sci.) 39 : 416 - 423 (2005))
2. Volatile components of the leaves, fruits and seeds
of wampee [*Clausena lansium* (Lour.) Skeels]
(J. of Food Composition and Analysis,
Received: May 2, 2005, Revised: June 22, 2006,
Accepted: July 14, 2006)
3. Volatile components of wampee fruits [*Clausena
lansium* (Lour.) Skeels] treated by different drying
conditions. (Thammasart Int. J. Sc. Tech., 2006.
11(1); p 66-71)