



**APPENDICES**

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**APPENDIX A**

**Pictures of fresh papaya and equipment**

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## APPENDIX A-1

### Picture of fresh papaya

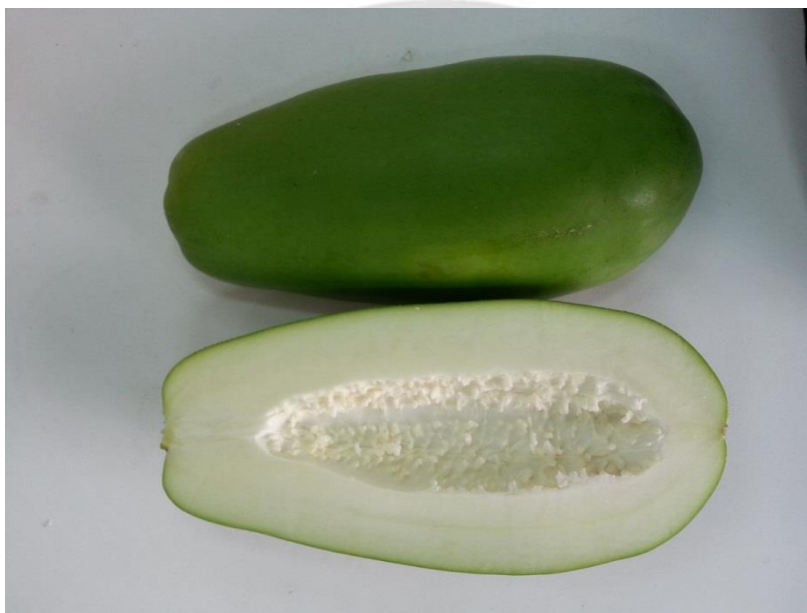


Figure 1 Fresh unripe papaya

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Figure 2 Fresh half ripe papaya

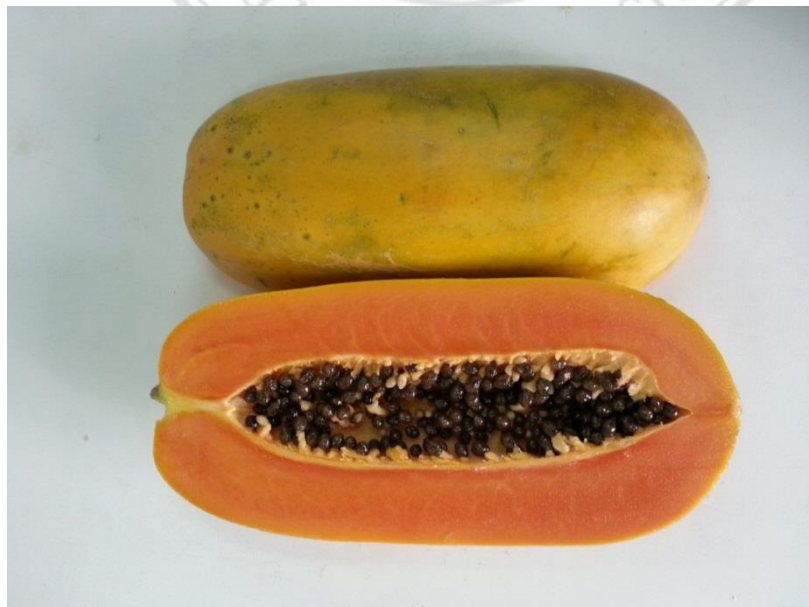


Figure 3 Fresh fully ripe papaya

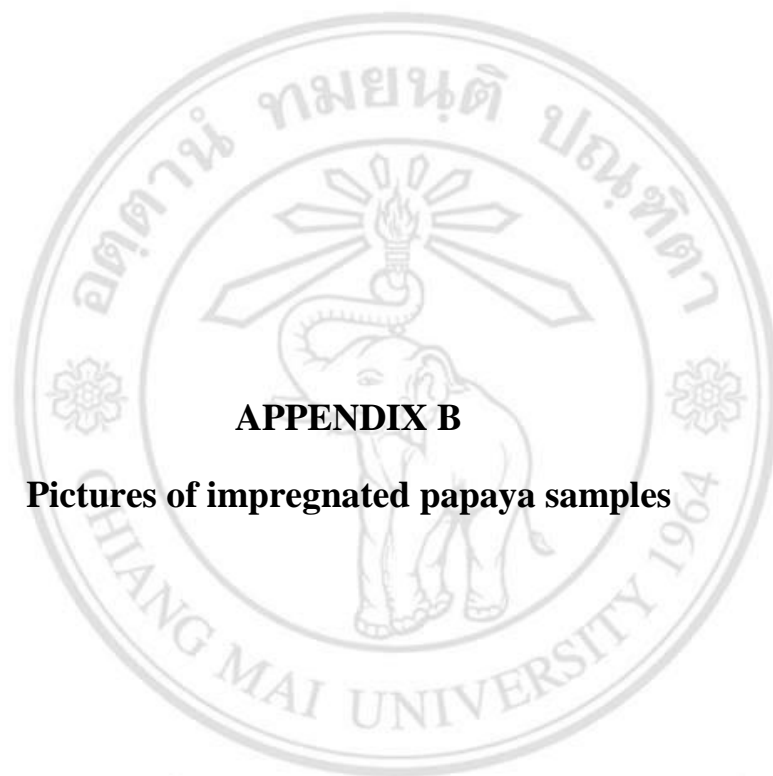
## APPENDIX A-2

### Vacuum dryer



Figure 4 Vacuum pump (left) and vacuum dryer (right)

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**APPENDIX B**

**Pictures of impregnated papaya samples**

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## APPENDIX B-1

### Impregnated papaya

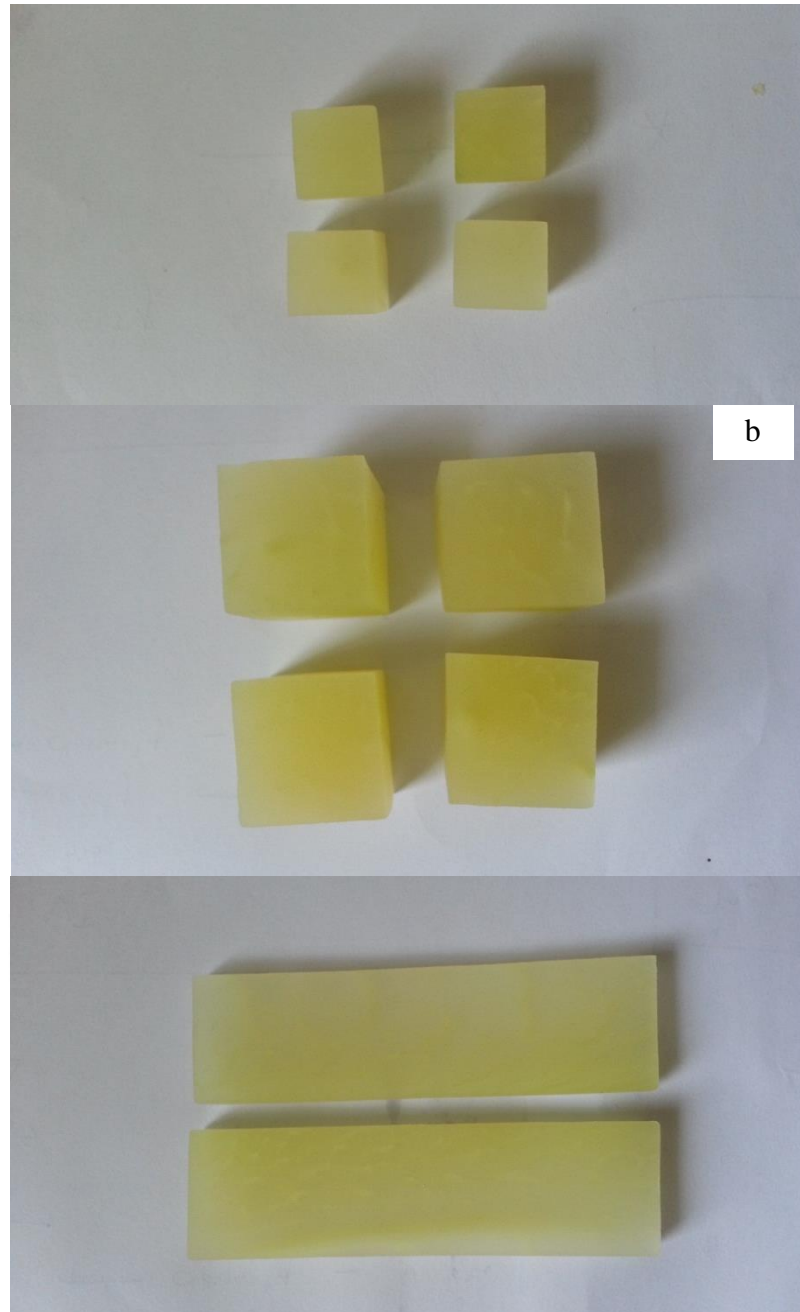


Figure 5 Impregnated unripe papaya at different sizes  $1 \times 1 \times 1 \text{ cm}^3$  (a),  $2 \times 2 \times 2 \text{ cm}^3$  (b) and  $0.5 \times 2 \times 7 \text{ cm}^3$  (c)

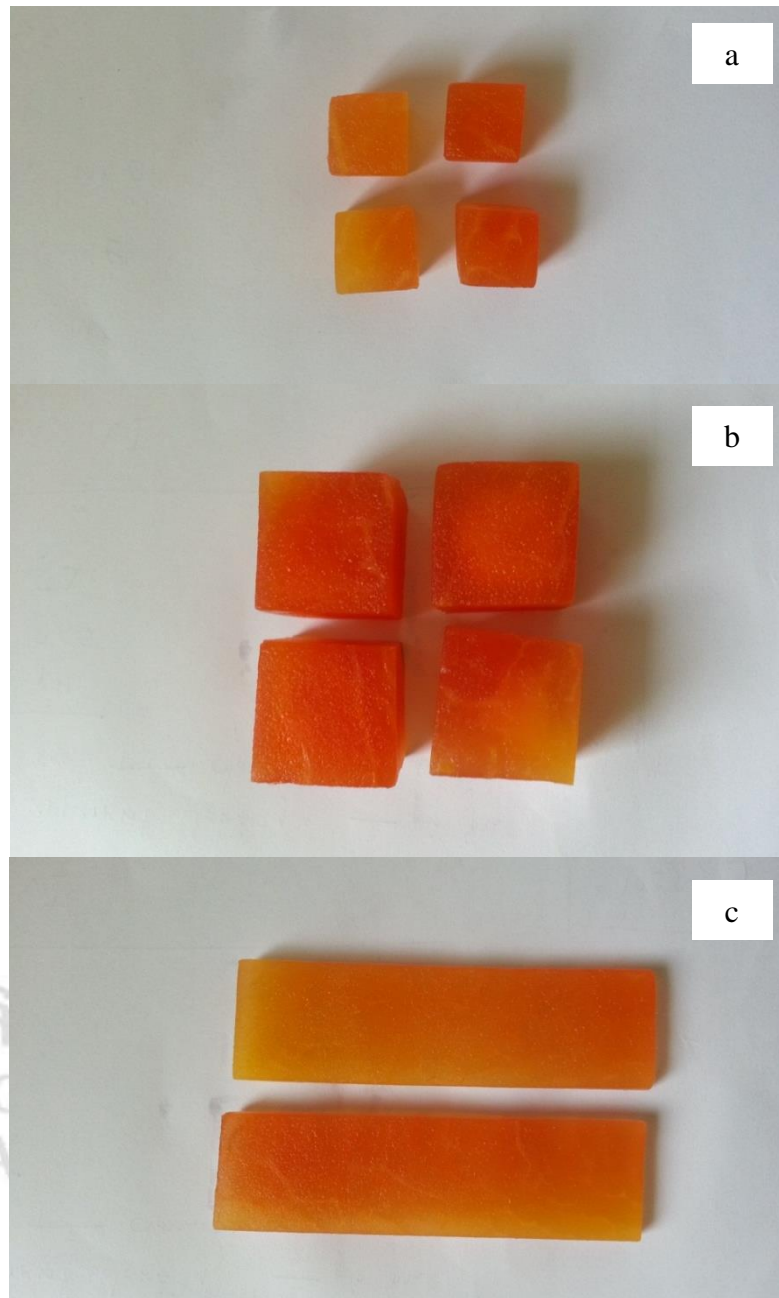


Figure 6 Impregnated half ripe papaya at different sizes  $1 \times 1 \times 1 \text{ cm}^3$  (a),  $2 \times 2 \times 2 \text{ cm}^3$  (b) and  $0.5 \times 2 \times 7 \text{ cm}^3$  (c)



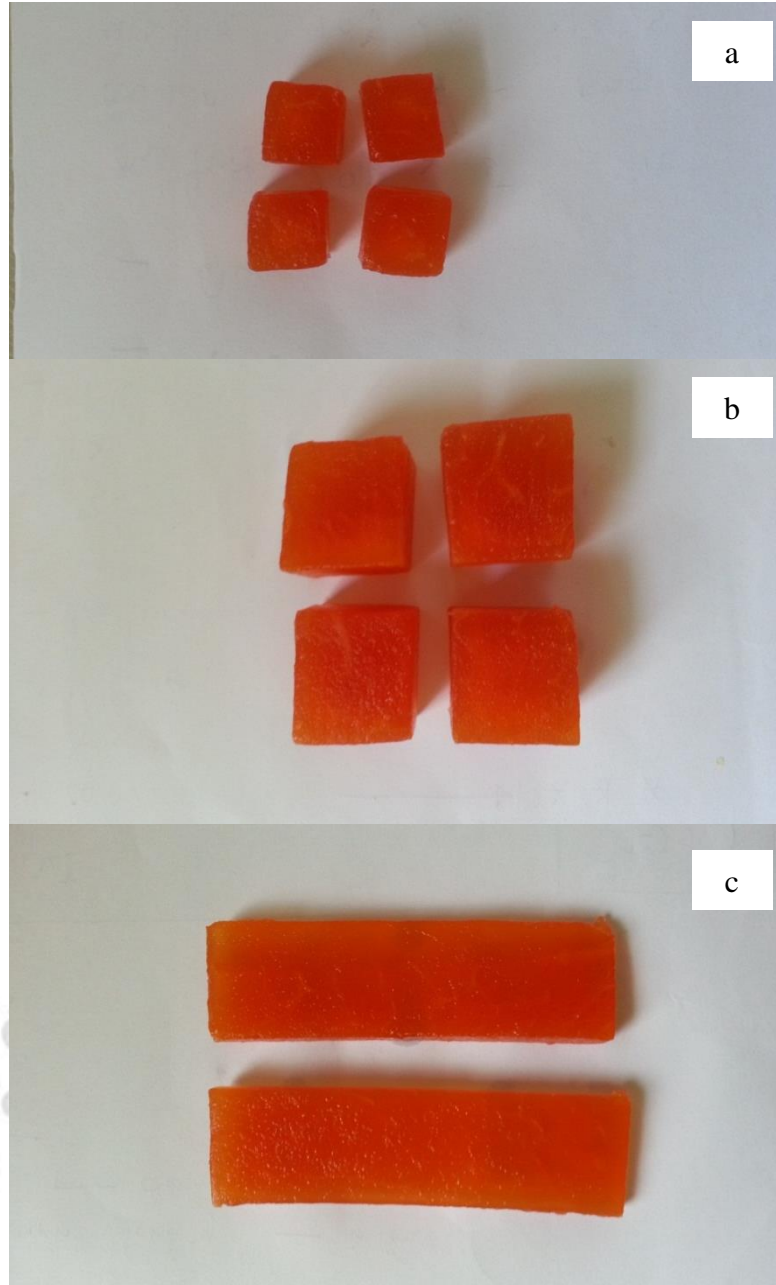
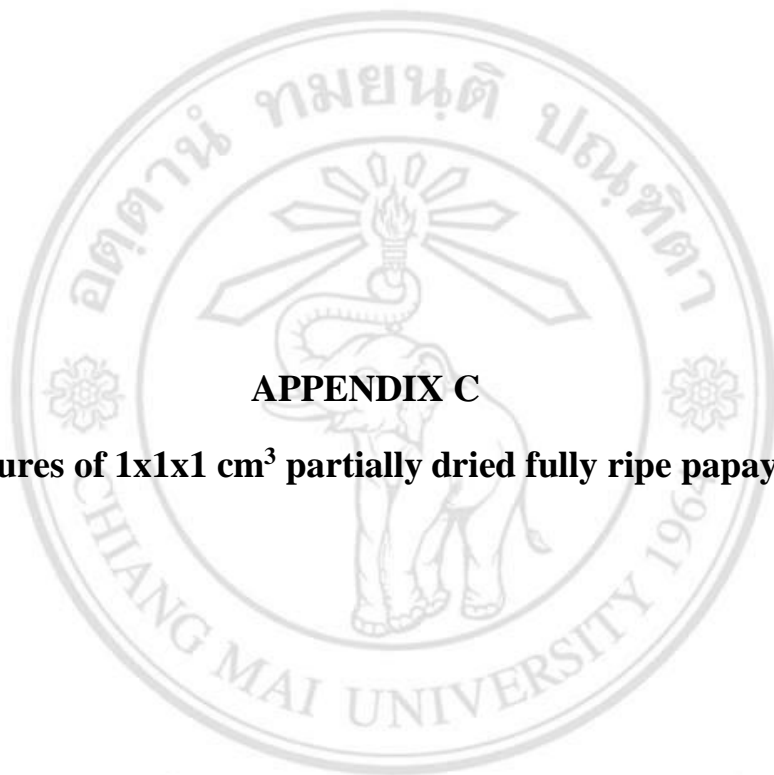


Figure 7 Impregnated fully ripe papaya at different sizes  $1 \times 1 \times 1 \text{ cm}^3$  (a),  $2 \times 2 \times 2 \text{ cm}^3$  (b) and  $0.5 \times 2 \times 7 \text{ cm}^3$  (c)



**APPENDIX C**

**Pictures of 1x1x1 cm<sup>3</sup> partially dried fully ripe papaya**

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## Appendix C-1

### Dried fully ripe papaya



Figure 8 Partially dried fully ripe papaya by vacuum drying method

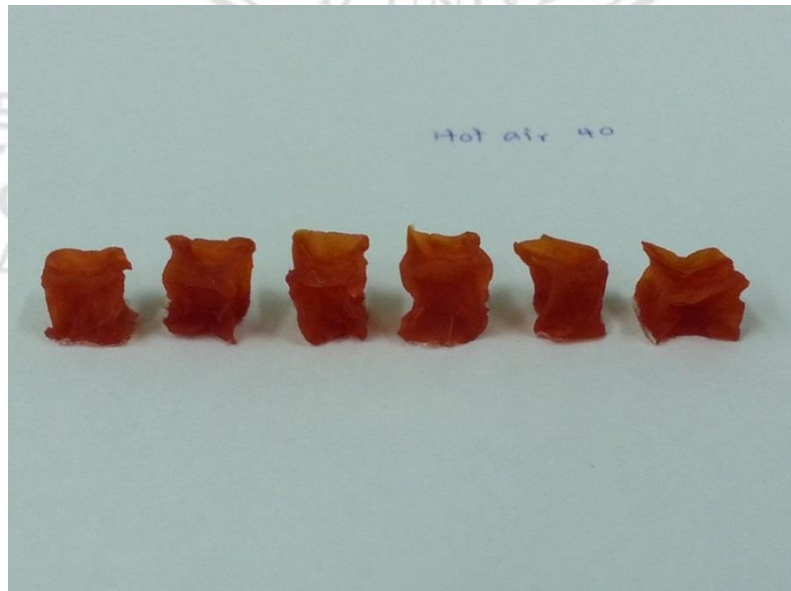


Figure 9 Partially dried fully ripe papaya by hot air drying method



**APPENDIX D**

**Pictures of freeze dried probiotic cultures and scanning electron microscope preparation sample**

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## APPENDIX D-1

### Freeze dried *Lactobacillus casei* culture



Figure 10 Freeze dried *Lactobacillus casei* TISTR 390

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## APPENDIX D-2

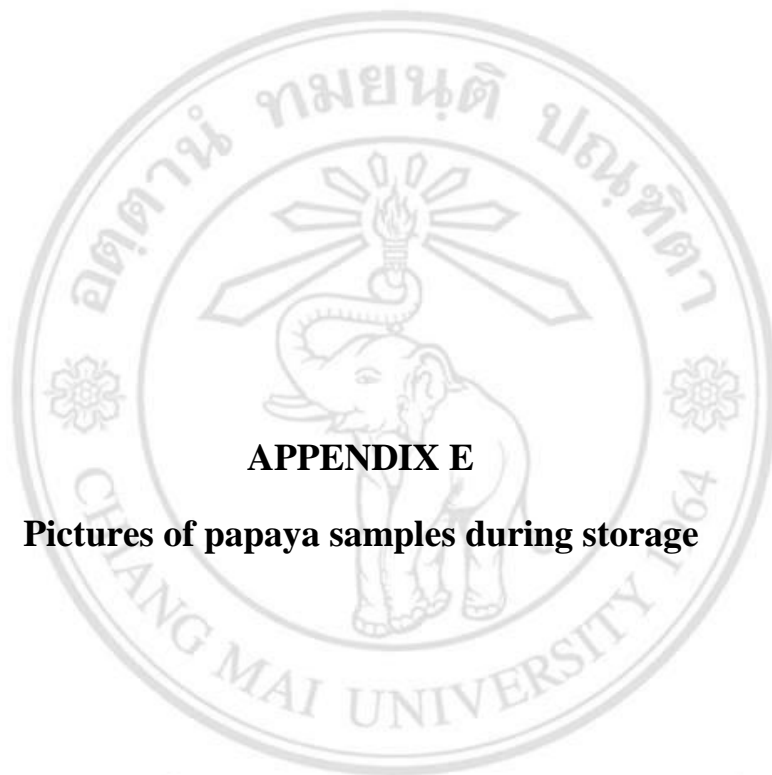
### Scanning Electron Microscope preparation samples



Figure 11 Impregnated fully ripe papaya containing *Lactobacillus casei*



Figure 12 Partially dried fully ripe papaya containing *Lactobacillus casei*



**APPENDIX E**

**Pictures of papaya samples during storage**

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## APPENDIX E-1

### Papaya samples during storage at room temperature

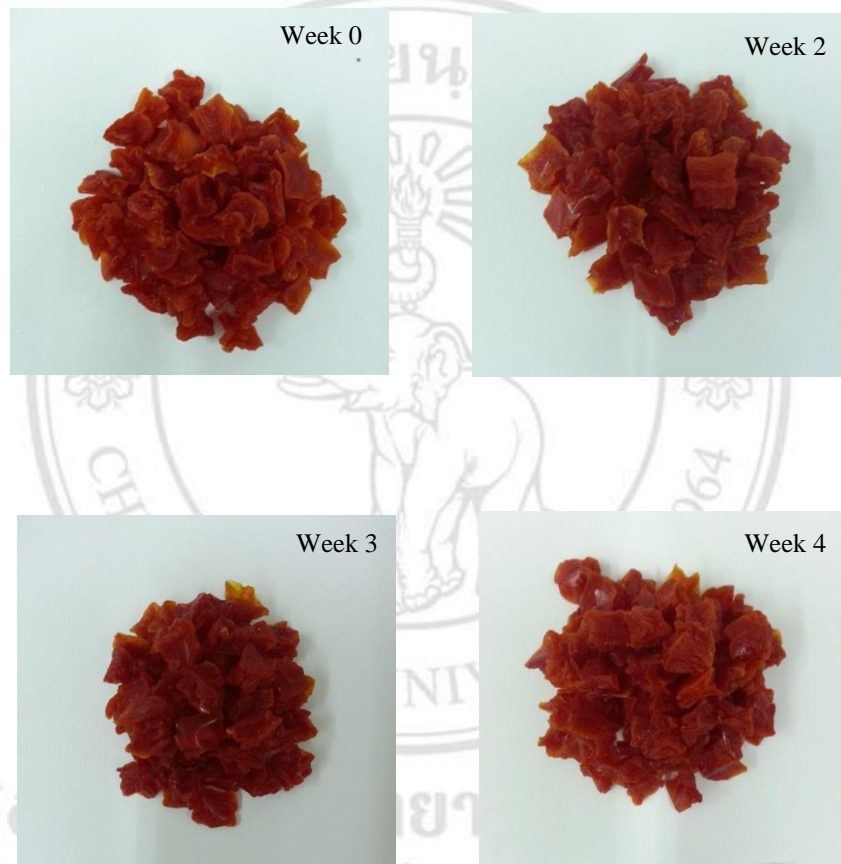


Figure 13 Partially dried papaya containing *Lactobacillus casei* during storage at room temperature for 4 weeks



## APPENDIX E-2

### Papaya samples during storage at 4°C

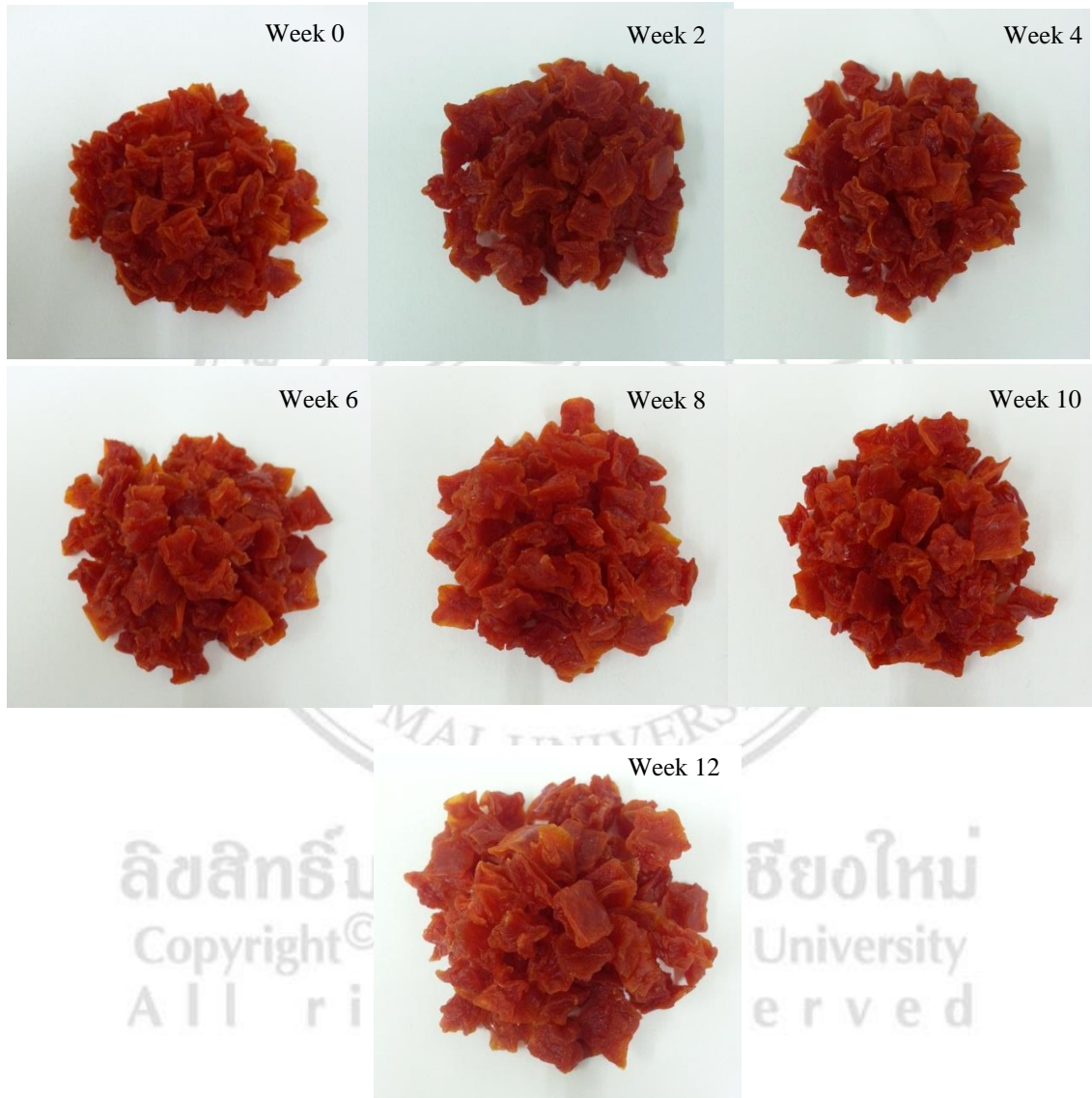


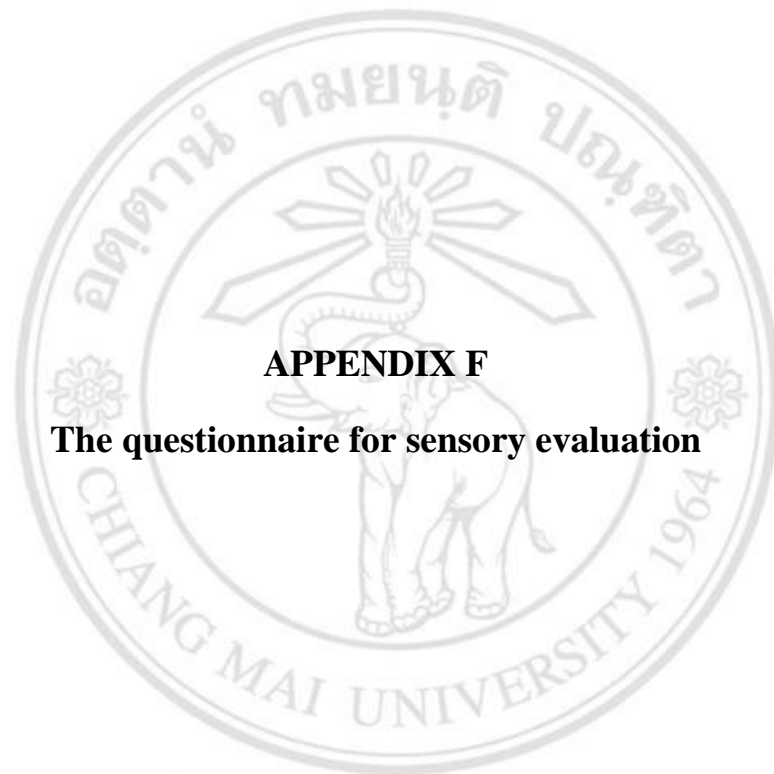
Figure 14 Partially dried papaya containing *Lactobacillus casei* during storage at 4°C for 12 weeks

## APPENDIX E-3

### Papaya samples during storage at -18°C



Figure 15 Partially dried papaya containing *Lactobacillus casei* during storage at -18°C for 12 weeks



## **APPENDIX F**

### **The questionnaire for sensory evaluation**

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## Appendix F-1

### Questionnaire for measuring the preference of intermediate moisture papaya

Name..... Date.....

**Product:** Partially dried papaya

**Instruction:** Please observe and taste the provided sample. For each of the sensory attributes, please give a score between 1– 9 to describe your opinion according to the following scores:

- |                          |   |                    |   |
|--------------------------|---|--------------------|---|
| Like extremely           | 9 | Dislike slightly   | 4 |
| Like very much           | 8 | Dislike moderately | 3 |
| Like moderately          | 7 | Dislike very much  | 2 |
| Like slightly            | 6 | Dislike extremely  | 1 |
| Neither like nor dislike | 5 |                    |   |

Characteristics	Code			
<b>Appearance</b>				
<b>Colour</b>				
<b>Odour</b>				
<b>Taste</b>				
<b>Firmness</b>				
<b>Overall liking</b>				

**Suggestion:**

.....  
 .....

Thank you

## Appendix F-2

### Questionnaire for measuring the preference of intermediate moisture papaya

Name..... Date.....

**Product:** Partially dried papaya

**Instruction:** Please observe and taste the provided sample. For each of the sensory attributes, please give a score between 1– 9 to describe your opinion according to the following scores:

- |                          |   |                    |   |
|--------------------------|---|--------------------|---|
| Like extremely           | 9 | Dislike slightly   | 4 |
| Like very much           | 8 | Dislike moderately | 3 |
| Like moderately          | 7 | Dislike very much  | 2 |
| Like slightly            | 6 | Dislike extremely  | 1 |
| Neither like nor dislike | 5 |                    |   |

Characteristics	Code			
<b>Appearance</b>				
<b>Colour</b>				
<b>Odour</b>				
<b>Taste</b>				
<b>Firmness</b>				
<b>Overall liking</b>				

**Suggestion:**

.....  
 .....

Thank you

## CURRICULUM VITAE

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