# APPENDIX A

## Chemical Reagents

Various chemical reagents were used in the present study.

**Lactophenol cotton blue** was used routinely in the preparation of semi-permanent slides. It was prepared as the following formula:

| | |
|---|---|
| Phenol | 10 g |
| Lactic acid | 10 g |
| Glycerine | 10 g |
| Aniline blue | 0.02 g |
| Water | 10 g |

**Potato dextrose agar (PDA)**

| | |
|---|---|
| Potato | 200 g |
| Glucose | 20 g |
| Agar | 15 g |

**Formalin Acetic acid-Alcohol (FAA)** was used for killing and fixing the specimen tissues.

| | |
|---|---|
| Ethyl alcohol | 90 ml |
| Glacial acetic acid | 5 ml |
| Formalin | 5 ml |

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## APPENDIX B

### A SIMPLIFIED KEY TO *PESTALOTIOPSIS* AND RELATED GENERA

1. Conidia with a single apical branched or unbranched appendage 2

1. Conidia with appendages arising at more than one point on the apical cell 10

2. (1) Basal appendages always lacking 3

2. Basal appendage present in some of the spores 6

3. (2) Apical appendage laterally branched, comb-like

*Labridella*

3. Apical appendage unbranched or with branches regularly produced on more than one side 4

4. (3) Apical cell with a single unbranched appendage produced at a nearly right angle to the axis of the spore

*Bleptosporium*

4. Apical cell with appendage(s) branched or arising at several points 5

5. (4) Branches of the apical cell arising at one point or nearly so

*Hyalotiella*

5. Branches of apical appendage arising at several points

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*Truncatella*

6. (2) Conidia without appendages commonly occuring among those with appendages

*Seimatosporium*

6. Conidia consistently appendaged 7

7. (6) Conidia disto-septate, with inner walls greatly thickened and often with conspicuous septal pores

*Seiridium*

7. Conidia euseptate,with normally thickened or thin septa 8

8. (7) Apical appendage always unbranched 9

8. Apical appendage lateral, branched

*Doliomyces*

9. (8) Basal appendage arising from the septum or the basal cell

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*Monochaetia*

9. Basal appendage arising from lateral wall of the basal cell

*Sarcostroma*

10. (1) Conidia disto-septate, with inner walls greatly thickened and often with conspicuous septal pores

*Pestalotia*

10. Conidia euseptate,with normally thickened or thin septa 11

11. (10) Median (coloured) cells of the conidia thin, smooth-walled and pale, occasionally nearly colourless; apical appendages consist of one obliquely bent terminal appendage giving the spore a hummingbird-like appearance and one or more lateral appendages borne on the convex side of the apical cell

*Zetiasplozna*

11. Median cells of the conidia thick-walled, dark and sometimes roughened; apical appendages less regular in configuration

*Pestalotiopsis*

Source:

http://www.botany.utoronto.ca/ResearchLabs/MallochLab/Malloch/Moulds/Pestalotiopsis.html

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# APPENDIX C

**Paraffin section method**

The preparation of permanent slides from microtome sections consists essentially of the following processes:

1. Selecting desired plants or parts of plants and, if necessary, subdividing into suitable pieces.
2. Killing and preservation of the contents of cells and the preservation of cellular structures in a condition approximating that in the living plant.
3. Dehydration for embedding. The process consists of treating the tissues with a series of solutions containing progressively increasing concentrations of the dehydrating agent and decreasing concentrations of water. In this research, ethyl tertiary butyl alcohol (TBA) was used.
4. Infiltration with paraffin wax and embedding in paraffin block, in order to support the tissues for sectioning.
5. Sectioning of the tissues into very thin slices by microtome.
6. Staining the slices and covering with a cemented cover glass to make a permanent slide.

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**Dehydration in solvents of paraffin**

**The Tertiary butyl alcohol method**

The following series is a simplification that has been found to give excellent results in histological and anatomical work.

| Grad number | 95% EtOH (ml) | Abs. Alcohol (ml.) | TBA(ml) | Dist $H_2O$ (ml) |
|---|---|---|---|---|
| 1 | 5 | - | - | 95 |
| 2 | 10 | - | - | 90 |
| L3 | 20 | - | - | 80 |
| 4 | 30 | - | - | 70 |
| 5 | 40 | - | - | 60 |
| 6 | 50 | - | - | 50 |
| 7 | 50 | - | 10 | 40 |
| 8 | 50 | - | 20 | 30 |
| 9 | 50 | - | 35 | 15 |
| 10 | 50 | - | 50 | - |
| 11 | - | 25 | 75 | - |
| 12 | - | - | 100 | - |
| 13 | - | - | 100 | - |
| 14 | - | - | 100 | - |

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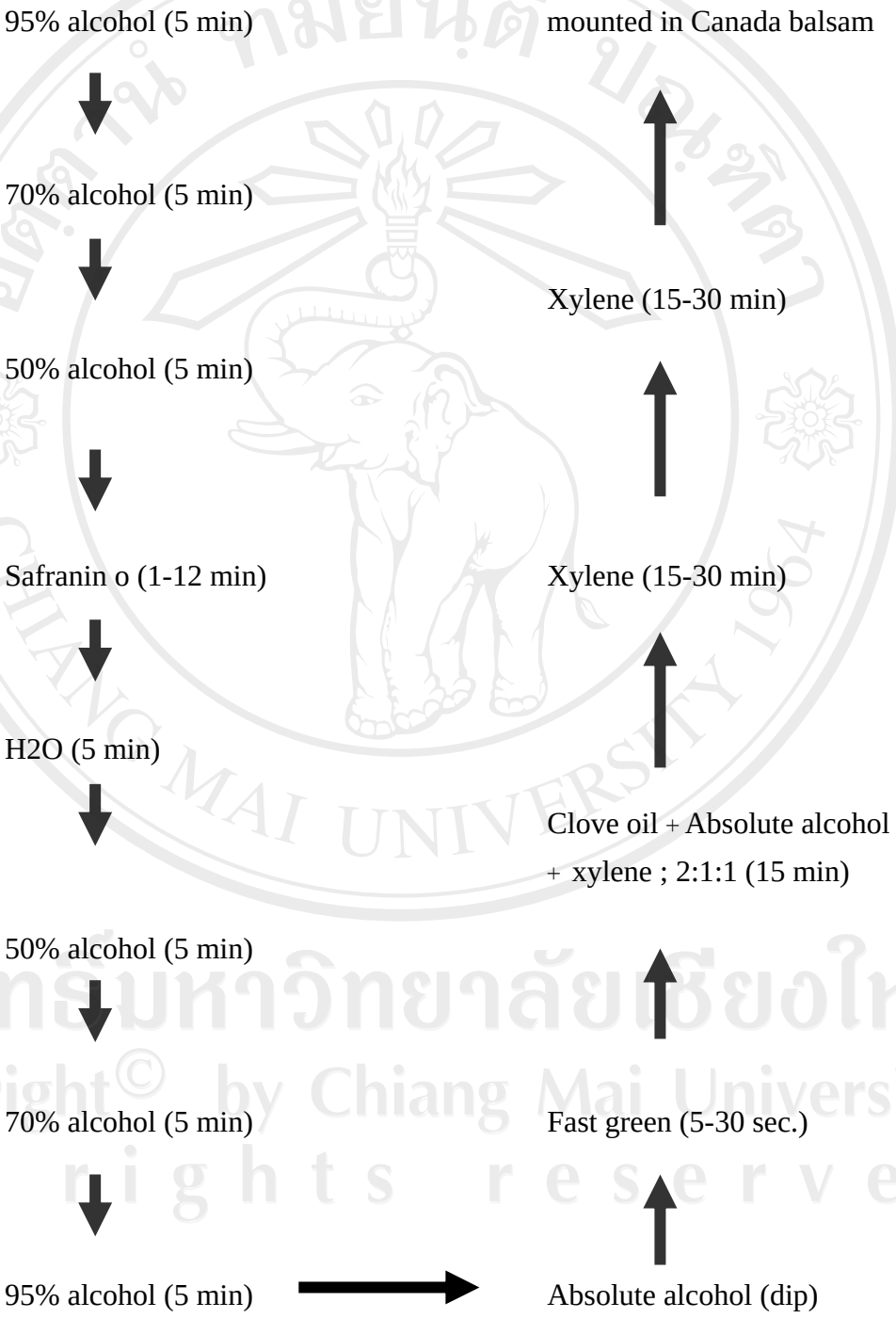
**Staining chart**

**Safranin-fast green**

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# CURRICULUM VITAE

| | |
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**Publication**

Suwanakood, P., Sardsud, V., Sangchote, S. and Sardsud, U. 2004. Isolation and pathogenicity test of *Pestalotiopsis* sp. on harvested longan fruit cv. Daw. *In:* Innovative Biotechnology: The Opportunity for Kitchen of the World. A Proceeding of Annual Scientific Meeting December 12-15, 2004 in Topland Hotel, Phitsanulok, Thailand, pp. 198-201.

Suwanakood, P., Sardsud, V., Sangchote, S. and Sardsud, U. Microscopic observation and pathogenicity determination of common molds on postharvest longan fruit cv. Daw. *Asian Journal of Biology Education.* (In press)

**Poster presentation**

**"**Microscopic observation on longan cv. Daw fruit peel" presented in the 4th National Horticultural Congress, May 4-7, 2004 at J B Hat Yai Hotel, Songkla, Thailand

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"Isolation of pathogenic fungi from postharvest longan fruit cv. Daw" presented in The IV Asia-Pacific Mycological Congress & The IX International Marine and Freshwater Mycology Symposium during November 14-19, 2004 at Kad Suan Kaew Hotel, Chiang Mai, Thailand

"Isolation and pathogenicity test of *Pestalotiopsis* sp. on harvested longan fruit cv. Daw" presented in the 16th Innovative Biotechnology: The Opportunity for Kitchen of the World during December 12-15, 2004 in Topland Hotel, Phitsanulok, Thailand

"Microscopic observation and pathogenicity determination of common molds on postharvest longan fruit cv. Daw." Presented in the 20th Biennial Conference of the Asian Association for Biology Education during December 27-30, 2004 in Chiang Mai, Thailand

**Oral presentation**

"Pericarp anatomy of "DAW" logan (*Dimocarpus longan* Lour.) during fruit development and associated microorganisms" presented in the 1st Research Path of Chiang Mai University during December 8-10, 2005 in Chiang Mai, Thailand

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