



APPENDICES

ลิขสิทธิ์มหาวิทยาลัยเชียงใหม่

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APPENDIX A CHEMICALS

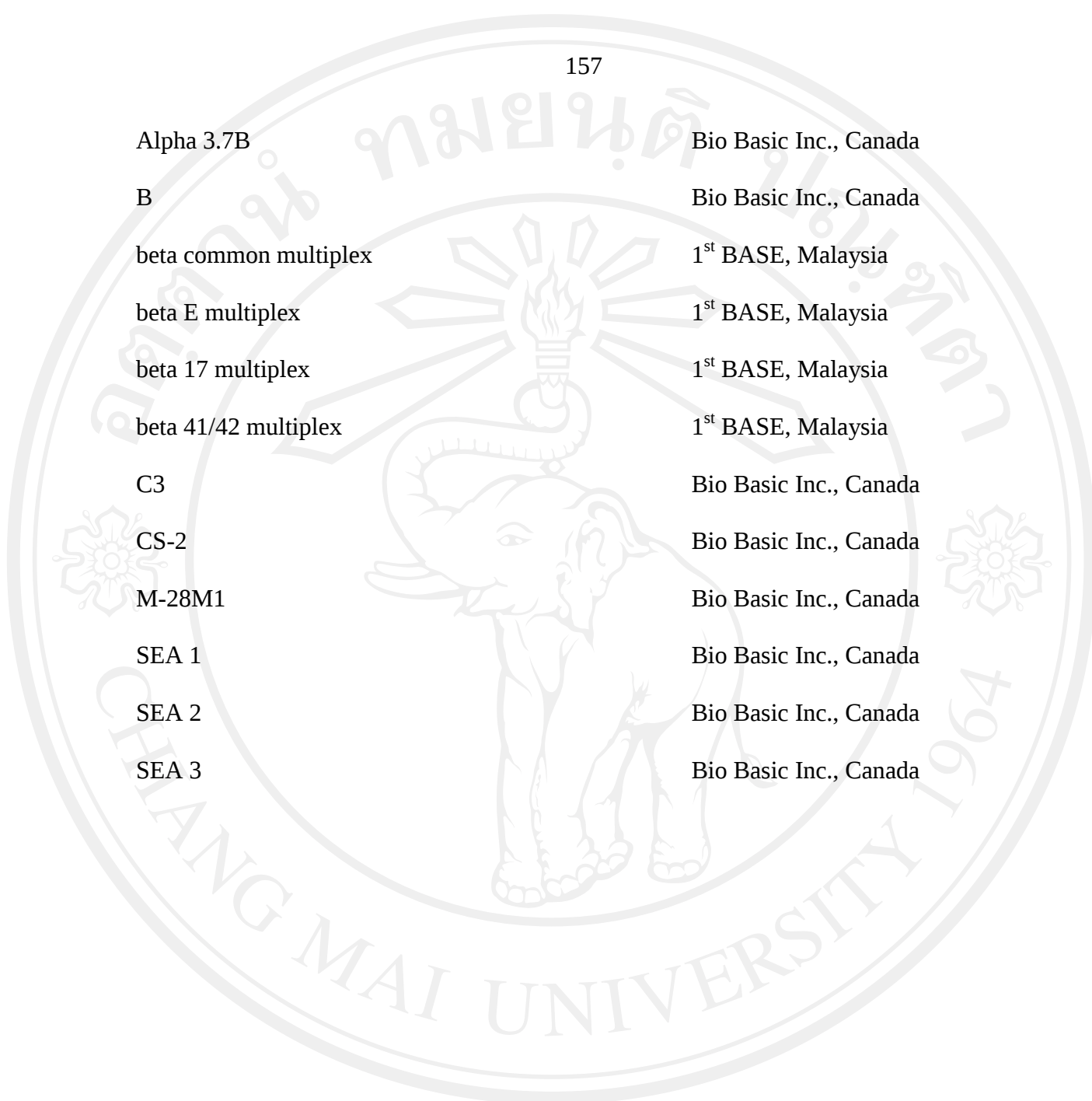
List of the chemicals used in this study

Chemicals	Source
Agarose	Research Organics Inc., USA
Betaine	Sigma-Aldrich Inc., Germany
Boric acid	Sigma-Aldrich Inc., Germany
Bovine serum albumin	Sigma-Aldrich Inc., Germany
Bromophenol blue	Amresco, USA
Chelex-100	Sigma-Aldrich Inc., Germany
Deoxynucleotide triphosphate (dNTPs)	iNtRON Biotechnology Inc., Korea
Dimethyl sulfoxide (DMSO)	Sigma-Aldrich Inc., Germany
Ethylenediaminetetraacetic (EDTA)	Bio Basic Inc., Canada
Ethidium bromide	Bio Basic Inc., Canada
Ficoll type 400	Amersham Biosciences, Sweden
i-Taq DNA polymerase	iNtRON Biotechnology Inc.,

	Korea
i-Proof™ High-fidelity DNA polymerase	Bio-Rad Laboratories, USA
1 kb DNA ladder	SibEnzyme Ltd, Russia
MgCl ₂	iNtRON Biotechnology Inc., Korea
NucleoSpin® Gel and PCR Clean-up	MACHEREY-NAGEL GmbH & Co. KG, Germany
Tris (anhydroxymethyl) aminomethane	Merck, Germany
Triton-X 100	Sigma-Aldrich Inc., Germany
10X buffer (100 mM Tris-HCl, 500 mM KCl)	iNtRON Biotechnology Inc., Korea
5X iProof GC buffer, 7.5 mM MgCl ₂	Bio-Rad Laboratories, USA
Xylene cyanol FF	Bio Basic Inc., Canada

Oligonucleotide primers**Source**

5'-GG-1'	Qiagen GmbH, Germany
3'-AG-1'	Qiagen GmbH, Germany
αG-17	Bio Basic Inc., Canada
A	Bio Basic Inc., Canada
Alpha 3.7A	Bio Basic Inc., Canada



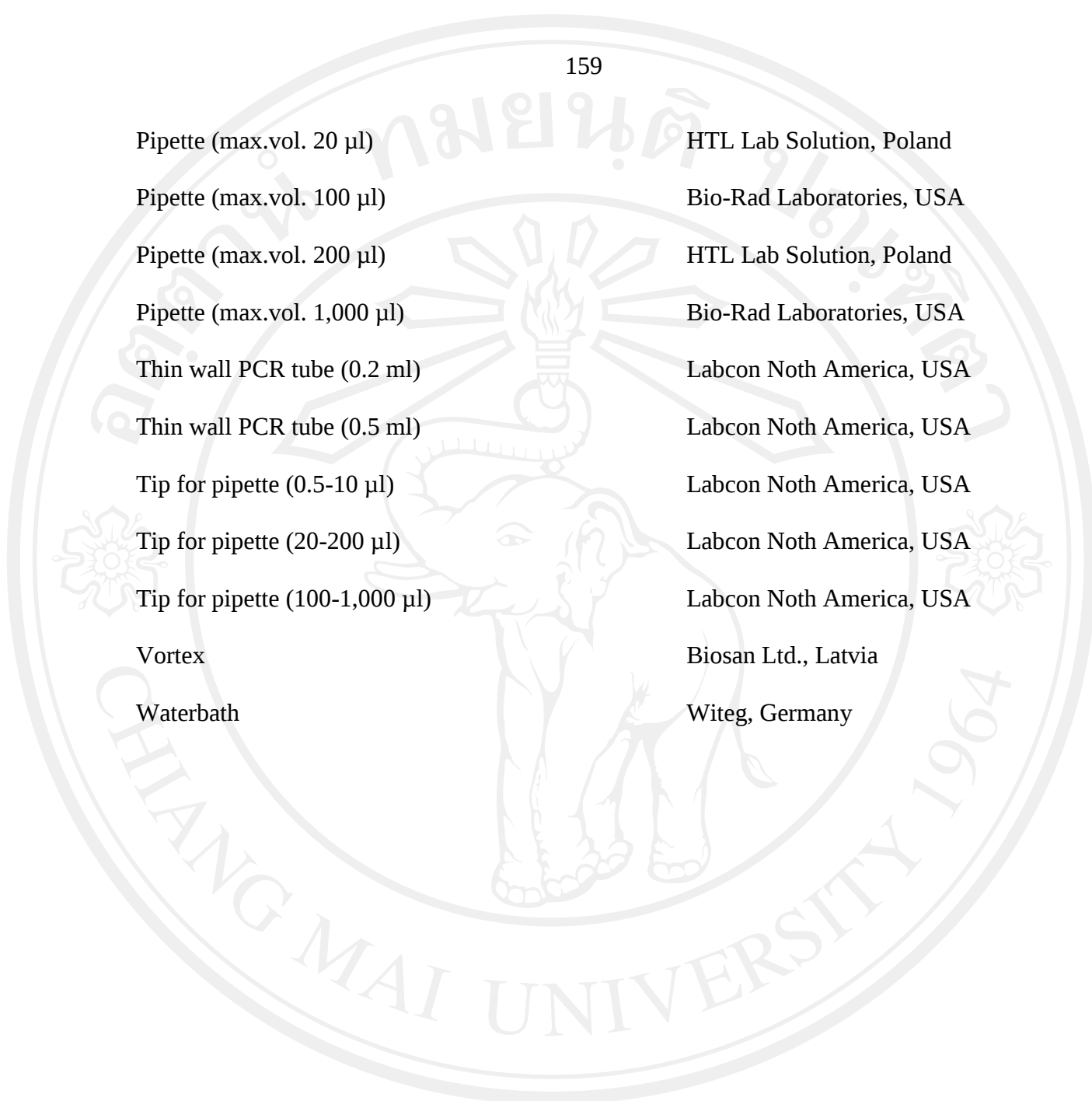
Alpha 3.7B	Bio Basic Inc., Canada
B	Bio Basic Inc., Canada
beta common multiplex	1 st BASE, Malaysia
beta E multiplex	1 st BASE, Malaysia
beta 17 multiplex	1 st BASE, Malaysia
beta 41/42 multiplex	1 st BASE, Malaysia
C3	Bio Basic Inc., Canada
CS-2	Bio Basic Inc., Canada
M-28M1	Bio Basic Inc., Canada
SEA 1	Bio Basic Inc., Canada
SEA 2	Bio Basic Inc., Canada
SEA 3	Bio Basic Inc., Canada

APPENDIX B

INSTRUMENTS

List of the instruments used in this study

Instruments	Source
Cubee™ mini centrifuge	GeneReach, USA
Electrophoresis apparatus	Bio 101, Inc., USA
Hotplate Stirrer	Daihan Lab Tech co., Ltd., Indonesia
Hybaid Touchdown thermal cycler	Laboratory Incubator, Thermocycling, California
Jouan A14 centrifuge	Thermo Electron Corporation, Italy
Microcentrifuge tube (1.5 ml)	Labcon Noth America, USA
MJ mini™ Personal Thermal cycler	Bio-Rad Laboratories, USA
Molecular image® Gel Doc™ XR+ system	Bio-Rad Laboratories, USA
Pipette (max.vol. 10 µl)	Bio-Rad Laboratories, USA

The background of the page features a large, faint watermark of the Chiang Mai University seal. The seal is circular, with an elephant in the center holding a parasol. Above the elephant is a flame. The text 'CHIANG MAI UNIVERSITY' is written around the bottom half of the circle, and '1964' is at the bottom right. Thai text is also present at the top of the seal.

Pipette (max.vol. 20 μ l)	HTL Lab Solution, Poland
Pipette (max.vol. 100 μ l)	Bio-Rad Laboratories, USA
Pipette (max.vol. 200 μ l)	HTL Lab Solution, Poland
Pipette (max.vol. 1,000 μ l)	Bio-Rad Laboratories, USA
Thin wall PCR tube (0.2 ml)	Labcon Noth America, USA
Thin wall PCR tube (0.5 ml)	Labcon Noth America, USA
Tip for pipette (0.5-10 μ l)	Labcon Noth America, USA
Tip for pipette (20-200 μ l)	Labcon Noth America, USA
Tip for pipette (100-1,000 μ l)	Labcon Noth America, USA
Vortex	Biosan Ltd., Latvia
Waterbath	Witeg, Germany

APPENDIX C

REAGENT PREPARATION

1. Agarose gel

Agarose gel were prepared in 0.5x TBE (%w/v)

2. Ethidium bromide solution

Containing:	10 mg/ml ethidium bromide	50 μ l
	1x TBE buffer	500 ml

3. Loading buffer

Containing:	Ficoll type 400	15 g
	Bromophenol Blue	0.25 g
	Xylene cyanol FF	0.25 g
	5x TBE buffer	100 ml

This chemical was mixed in 5x TBE buffer and stored in a glass bottle and stored at room temperature or -20°C for longer period.

4. 5x TBE buffer

Containing:	Tris (anhydroxymethyl) aminomethane	54.0 g
	Boric acid	27.5 g
	EDTA	4.75 g
	Distilled water	1,000 ml

This chemical was mixed in distilled water and stored in a glass bottle and stored at room temperature.

CURRICULUM VITAE**Name**

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July 10, 1984

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2003

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