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## APPENDIX

All media were dispensed and sterilized in autoclave for 15 min at 15 poud pressure (121°C) for except for media for carbon utilization test which was sterilized at 110 pond for 10 min. All media were prepared in 100 ml of distilled water.

### 1. Potato-carrot agar (PCA)

Potato	3.0	g
Carrot	0.25	g
Agar	1.5	g

### 2. Sodium-caseinate agar (SCA)

Sodium caseinate	0.2	g
Glucose	0.1	g
K <sub>2</sub> HPO <sub>4</sub>	0.02	g
MgSO <sub>4</sub>	0.02	g
FeSO <sub>4</sub>	trace	
Agar	1.5	g

### 3. Yeast extract-malt extract agar (YMA), ISP-2

Yeast extract	0.4	g
Malt extract	1.0	g
Glucose	0.4	g
Agar	1.5	g

pH 7.0

4. Tryptic soy agar (Difco)5. Mueller-Hinton agar (Difco)6. Tyrosine agar, ISP-7

Glycerol	1.5	g
L-tyrosine (Difco)	0.05	g
L-asparagine (Difco)	0.1	g
K <sub>2</sub> HPO <sub>4</sub>	0.05	g
MgSO <sub>4</sub> .7H <sub>2</sub> O	0.05	g
NaCl	0.05	g
FeSO <sub>4</sub> .7H <sub>2</sub> O	0.01	g
Trace salts solution (A)	0.1	g
Agar	2.0	g

pH 7.2-7.4

Trace salt solution(A)

FeSO <sub>4</sub> .7H <sub>2</sub> O	0.1	g
MnCl <sub>2</sub> .4H <sub>2</sub> O	0.1	g
ZnSO <sub>4</sub> .7H <sub>2</sub> O	0.1	g
Distilled water	100.0	ml

7. Oatmeal agar, ISP-38. Glycerol-asparagine agar, ISP-5

Glycerol	1.0	g
L-Asparagine	0.1	g
K <sub>2</sub> HPO <sub>4</sub>	0.1	g

Trace salts solution (A)	0.1	g
Agar	2.0	g

9. Carbon utilization medium, ISP-9

Carbohydrate	1.0	g
$(\text{NH}_4)_2\text{SO}_4$	0.264	g
$\text{K}_2\text{HPO}_4 \cdot 3\text{H}_2\text{O}$	0.565	g
$\text{KH}_2\text{PO}_4$ anhydrous	0.238	g
$\text{MgSO}_4 \cdot 7\text{H}_2\text{O}$	0.1	g
Pridham and Gottlieb trace salts (B)	0.1	g
Agar	1.5	g

pH 6.8-7.0

Trace salts solution (B)

$\text{CuSO}_4 \cdot 5\text{H}_2\text{O}$	0.64	g
$\text{FeSO}_4 \cdot 7\text{H}_2\text{O}$	0.11	g
$\text{MnCl}_2 \cdot 4\text{H}_2\text{O}$	0.79	g
$\text{ZnSO}_4 \cdot 7\text{H}_2\text{O}$	0.15	g

10. Peptone  $\text{KNO}_3$  broth

Peptone	1.0	g
$\text{KNO}_3$	0.1	g
$\text{NaCl}$	0.5	g

pH 7.0

11. Inorganic salts-starch agar

Soluble starch	1.0	g
K <sub>2</sub> HPO <sub>4</sub>	0.1	g
MgSO <sub>4</sub> .7H <sub>2</sub> O	0.1	g
NaCl	0.1	g
(NH <sub>4</sub> ) <sub>2</sub> .SO <sub>4</sub>	0.2	g
CaCO <sub>3</sub>	0.2	g
Trace salts solution (A)	0.1	g
Agar	2.0	g

pH 7.0-7.4

12. Bouillon gelatin broth

Peptone	1.0	g
Meat extract	0.5	g
NaCl	0.5	g
Gelatin	15.0	g

pH 7.0-7.2

13. Triple sugar iron agar (Difco)14. Lismus milk (Difco)

Bacto-skim milk	10	g
Bacto-lismus	0.075	g



15. GMP medium

Glucose	1.5	g
Peptone	0.6	g
Beef extract	0.3	g
Yeast extract	0.3	g
NaCl	0.5	g
MgSO <sub>4</sub> .7H <sub>2</sub> O	0.25	g

pH 7.0

16. Sucrose soybean medium (SS)

Sucrose	1.5	g
Soybean meal	1.5	g
Glycerol	0.5	g
Corn steep liquor	0.5	g
Mg SO <sub>4</sub> .7H <sub>2</sub> O	0.05	g
FeSO <sub>4</sub> .7H <sub>2</sub> O	0.05	g
CoCl <sub>2</sub> .6H <sub>2</sub> O	0.001	g
CaCO <sub>3</sub>	0.2	g

pH 6.5-7.0

17. Glucose soybean medium (GS)

Glucose	5.0	g
Soybean meal	1.0	g
Yeast extract	0.1	g
Peptone	0.4	g

Meat extract	0.4	g
NaCl	0.25	g
CaCO <sub>3</sub>	0.5	g

pH 7.2

18. Glucose molasses medium (GM)

Glucose	1.0	g
Molasses	1.0	g
Peptone	0.6	g
CaCO <sub>3</sub>	0.4	g

pH 7.0

19. Glycerol peptone medium (GP)

Glycerol	2.0	g
Molasses	1.0	g
Meat extract	1.0	g
Peptone	1.0	g
CaCO <sub>3</sub>	0.4	g

pH 7.2

20. Glucose NaCl medium (GN)

Glucose	2.4	g
Glycerol	0.6	g
Soybean	1.8	g
Corn steep liquor	0.6	g

NaCl	0.36	g
CaCO <sub>3</sub>	0.3	g

21. Sucrose yeast extract medium (SY)

Sucrose	2.0	g
Glycerol	0.5	g
Yeast extract	0.3	g
Soybean	1.0	g
Corn steep liquor	0.5	g
CoCl <sub>2</sub> .6H <sub>2</sub> O	0.01	g

pH 7.0

22. Dextrin soybean medium (DS)

Dextrin	3.0	g
Soybean	2.0	g
Corn steep liquor	0.25	g
K <sub>2</sub> HPO <sub>4</sub>	0.05	g
MgSO <sub>4</sub> .7H <sub>2</sub> O	0.05	g
KCl	0.03	g

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**VITA**

Miss Jiraphorn Chantongcome was born on February 13, 1974 in Ratchaburi, Thailand. She received her Bachelor's degree of Science in Biology in 1995 from Faculty of Sciences, Silpakorn University, Thailand.



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