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APPENDICES

APPENDICES

APPENDIX A**A1. LB broth****a) Typical composition (per 1 liter)**

Tryptone	10	g
Sodium chloride	10	g
Yeast extract	5	g

b) Preparation

Suspended tryptone, yeast extract and NaCl (in ratio as described above) in 1 l

D.I. water, mixed thoroughly. Autoclaved at 121 °C for 15 minutes.

A2. LB agar**a) Typical composition (per 1 liter)**

Tryptone	10	g
Sodium chloride	10	g
Yeast extract	5	g
Agar	12	g

b) Preparation

Suspended tryptone, yeast extract and NaCl (in ratio as described above) in 1 l D.I. water, mixed thoroughly. Added agar powder and heated until all agar were dissolved. Autoclaved at 121 °C for 15 minutes.

APPENDIX B

B1. AHL standard stock solution (0.005 M) in D.I. water

0.005 M AHL standard solution was prepared by dissolving 0.0011 g of N-(β -ketocaproyl)-L-homoserine lactone crystal (3-oxo-C6-HSL, Sigma-Aldrich, USA) into 1 ml of D.I. water and mixed thoroughly. This AHL solution should be stored at - 35°C until used.

B2. AHL standard solutions (10 to 1600 nmol/ 800 μ l) in D.I. water

For the solution in concentration ranges of 10 to 90 nmol/800 μ l, another AHL stock solution (0.001 M) was used. This AHL stock solution was prepared by dissolving 0.0002 g of 3-oxo-C6-HSL crystal in 1 ml D.I. water. The volume of both 0.001 M AHL stock solution and D.I. water used for preparation of 10 to 90 nmol/800 μ l AHL solutions were shown in Table B1. AHL solution concentration ranged from 100 to 1600 nmol/800 μ l were prepared from 0.005 M AHL stock solution as described in Table B2.

B3. Reagent I and reagent II for colorimetry AHL determination (Yang et al, 2006)

B3.1 chemical reagent

- a) 3.5 M sodium hydroxide
- b) 2 M hydroxylamine hydrochloride
- c) 10%(w/v) ferric chloride in 4 M hydrochloric acid
- d) 95% ethanol
- e) 50% methanol

A3.2 preparation of chemical reagent

- a) 3.5 M sodium hydroxide : dissolving 14 g of NaOH crystal in 100 ml of 50%MeOH (prepare as described following in B3.2e).
- b) 2 M hydroxylamine hydrochloride : dissolving 7 g of $\text{NH}_2\text{OH}\cdot\text{HCL}$ crystal in 100 ml of 50%MeOH (B3.2e).
- c) 10% (w/v) ferric chloride in 4 M hydrochloric acid : prepare 4 M HCl by adding 34 ml of 36% HCl (11.64 M) into 66 ml of 50%MeOH (B3.2e). Then the preparation of 10% FeCl_3 was perform by adding 10 g of FeCl_3 crystal in 100 ml of 4 M HCL.
- d) 95% ethanal: adding 4 ml of D.I. water in 96 ml of 99% EtOH and mixed thoroughly.
- e) 50% methanal: adding 49 ml of D.I. water in 51 ml of 99% MeOH and mixed thoroughly.

B3.3 preparation of Reagent I and Reagent II

- a) Reagent I : mix 50 ml of 2 M $\text{NH}_2\text{OH}\cdot\text{HCL}$ with 50 ml of 3.5 M NaOH
- b) Reagent II : mix 50 ml either of 10% FeCl_3 in 4M HCl, and 95% EtOH

Table B1 volume of AHL stock solution (0.001 M) and D.I. water used for preparation of AHL standard solution concentration in range of 10 to 90 nmol/800 μ

concentrations (nmol/800 μ)	volume of D.I. water (μ)	volume of AHL stock solution (μ)
10	98.75	1.25
20	97.50	2.50
30	96.25	3.75
40	95.00	5.00
50	93.75	6.25
60	92.50	7.50
70	91.25	8.75
80	90.00	10.00
90	88.75	11.25

Table B2 volume of AHL stock solution (0.005 M) and D.I. water used for preparation of AHL standard solution concentration in range of 100 to 1600 nmol/800 μ l

concentrations (nmol/800 μ l)	volume of D.I. water (μ l)	volume of AHL stock solution (μ l)
100	97.5	2.5
200	95.0	5.0
300	92.5	7.5
400	90.0	10.0
500	87.5	12.5
600	85.0	15.0
700	82.5	17.5
800	80.0	20.0
900	77.5	22.5
1000	75.0	25.0
1100	72.5	27.5
1200	70.0	30.0
1300	67.5	32.5
1400	65.0	35.0
1500	62.5	37.5
1600	60.0	40.0

APPENDIX C

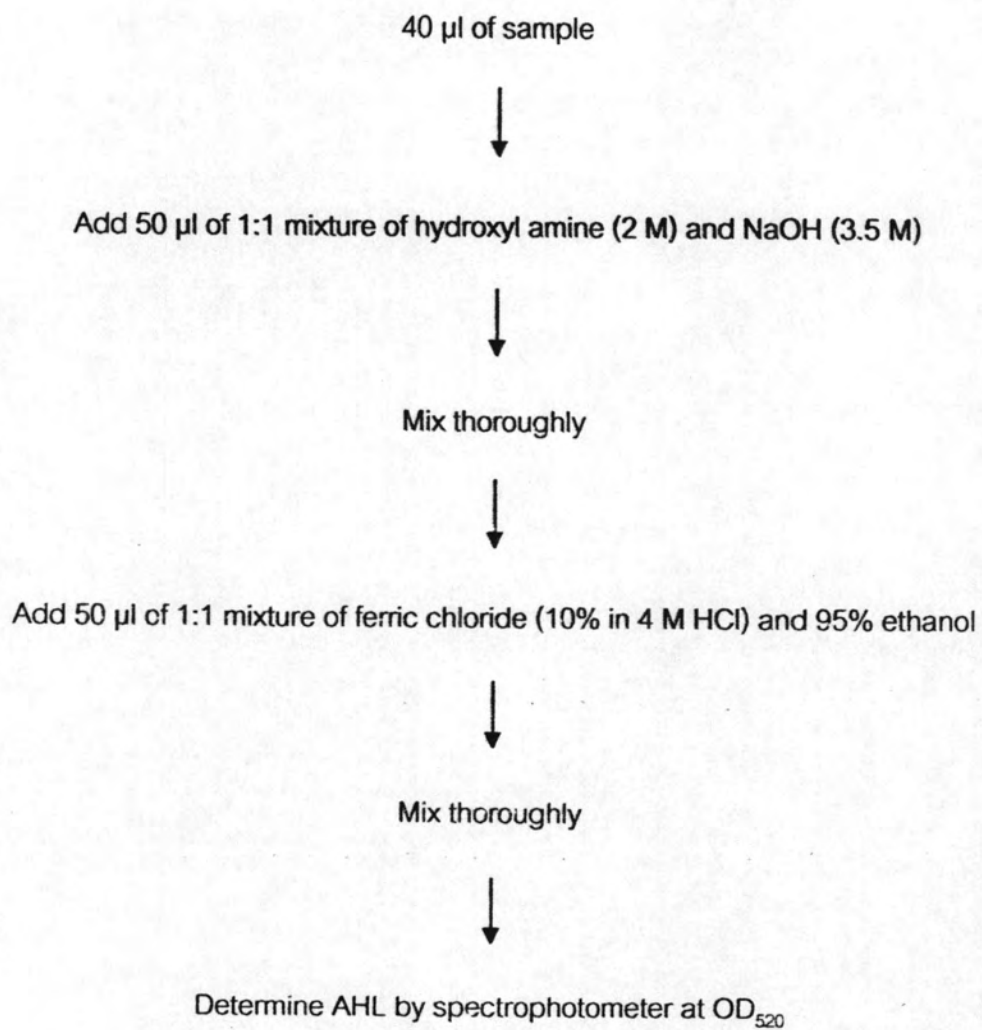


Figure C1 The procedure of AHL colorimetry determination proposed by Yang et al

(2006)

C1 HPLC condition (Sigma-Aldrich Co.)

In this study, HPLC condition for AHL determination was performed following the instruction of AHL standard manufacturer. The column was Supelcosil ABZ+Plus, 25 cm x 4.6 mm, 5 micron particles. An injection volume of sample was 10 μ l of 0.5 mg/ml of AHL standard in D.I. water. Separation was performed with water (MilliQ) and acetonitrile in gradient mode as shown in Table B1, with flow rate of 1.5 ml/minutes. The separated analytes were detected at 210 nm.

Table C1 The gradient profile of AHL standard purification (Sigma-Aldrich Co.)

gradient profile (acetonitrile:water)	gradient time (minute)
5 : 95	0
35 : 65	30

APPENDIX D

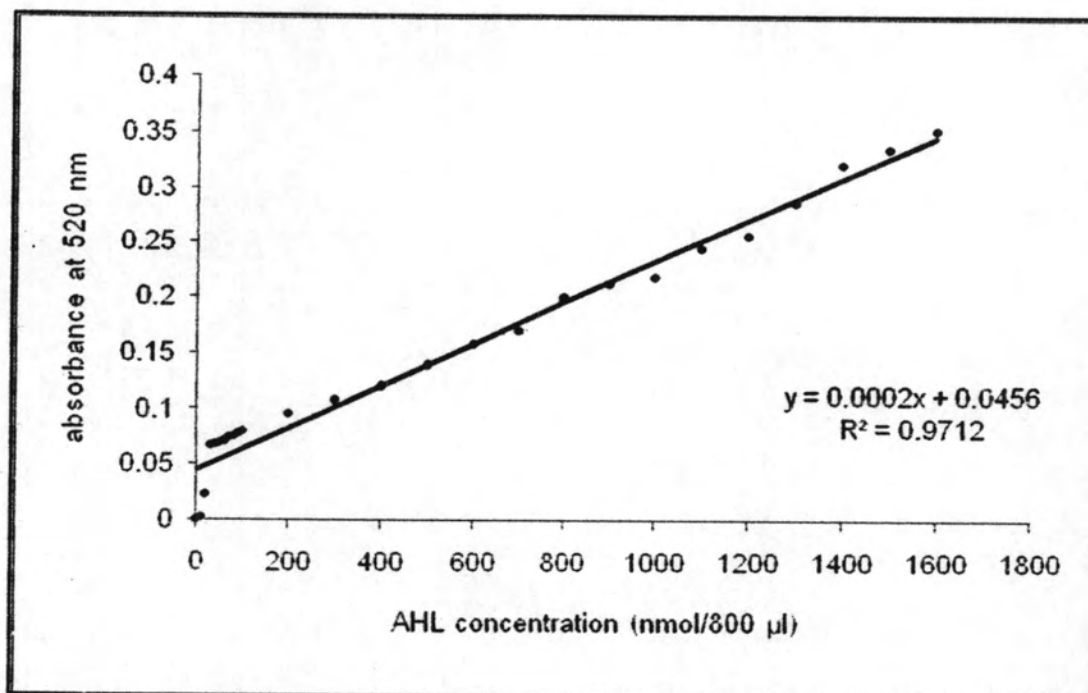


Figure D1 The relationship of AHL concentrations (10 – 1600 nmol/800 µl) in deionized water and their absorbance values ($\lambda_{\text{max}} = 520 \text{ nm}$)

Table D1 OD₅₂₀ of AHL standard solutions in D.I. water determined by colorimetry method

AHL (nmol/800 µl)	OD ₅₂₀		AHL (nmol/800 µl)	OD ₅₂₀	
	mean ^A	%SD		mean ^A	%SD
0	0	0	400	0.1204 ± 0.0011	0.88
10	0.0019 ± 0.0026	141.42	500	0.1395 ± 0.0011	0.81
20	0.0223 ± 0.0278	124.30	600	0.1579 ± 0.0093	5.87
30	0.0667 ± 0.0023	3.39	700	0.1704 ± 0.0010	0.58
40	0.0678 ± 0.0023	3.44	800	0.1995 ± 0.0022	1.10
50	0.0693 ± 0.0006	0.82	900	0.2119 ± 0.0053	2.50
60	0.0711 ± 0.0012	1.69	1000	0.2181 ± 0.0080	3.66
70	0.0739 ± 0.0009	1.25	1100	0.2445 ± 0.0060	2.46
80	0.0758 ± 0.0005	0.65	1200	0.2562 ± 0.0030	1.16
90	0.0779 ± 0.0002	0.27	1300	0.2859 ± 0.0047	1.63
100	0.0800 ± 0.0010	1.24	1400	0.3206 ± 0.0082	2.56
200	0.0962 ± 0.0008	0.81	1500	0.3350 ± 0.0044	1.31
300	0.1076 ± 0.0045	4.21	1600	0.3521 ± 0.0033	0.94

^AMean ± SD of 2 replication

Table D2 OD₅₂₀ of AHL standard solutions in NB determined by colorimetry method

AHL (nmol/ 800 µl)	OD ₅₂₀		AHL (nmol/ 800 µl)	OD ₅₂₀	
	mean ^A	%SD		mean ^A	%SD
0	0	0	400	0.1208 ± 0.0025	2.11
10	0.0028 ± 0.0037	131.32	500	0.1439 ± 0.0043	3.00
20	0.0374 ± 0.0095	25.56	600	0.1600 ± 0.0023	1.46
30	0.0653 ± 0.0016	2.49	700	0.1751 ± 0.0024	1.37
40	0.0661 ± 0.0009	1.39	800	0.2006 ± 0.0012	0.60
50	0.0681 ± 0.0011	1.66	900	0.2164 ± 0.0052	2.42
60	0.0693 ± 0.0006	0.82	1000	0.2257 ± 0.0008	0.35
70	0.0728 ± 0.0012	1.65	1100	0.2471 ± 0.0008	0.31
80	0.0731 ± 0.0011	1.55	1200	0.2574 ± 0.0072	2.8
90	0.0758 ± 0.0010	1.31	1300	0.2829 ± 0.0061	2.15
100	0.0792 ± 0.0004	0.54	1400	0.3128 ± 0.0016	0.50
200	0.0957 ± 0.0010	1.03	1500	0.3368 ± 0.0047	1.41
300	0.1046 ± 0.0042	3.99	1600	0.3507 ± 0.0074	2.12

^AMean ± SD of 2 replication

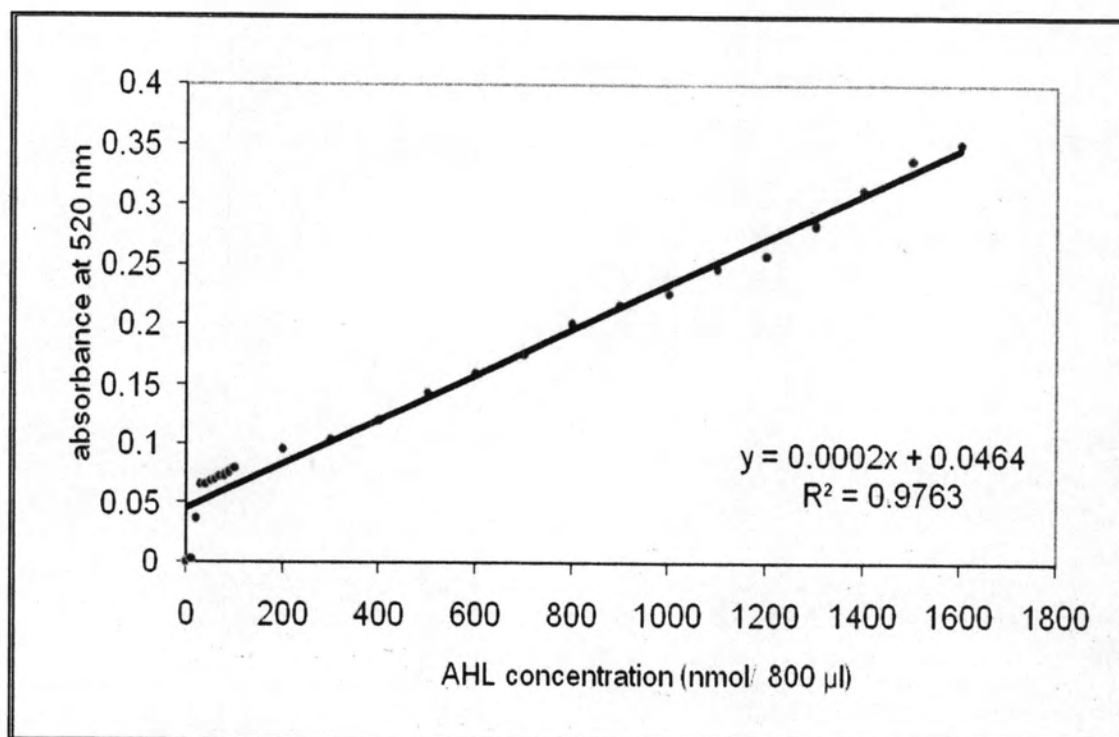


Figure D2 The relationship of AHL concentrations (10 – 1600 nmol/800 μl) in deionized water and their absorbance values ($\lambda_{\max} = 520 \text{ nm}$)

Table D3 TPC and OD₅₂₀ of *V.parahaemolyticus* DMST 22092 during growth phase

time (hour)	TPC (logCFU/ml)		OD ₅₂₀		time (hour)	TPC (logCFU/ml)		OD ₅₂₀	
	mean ^A	%SD	mean ^A	%SD		mean ^A	%SD	mean ^A	%SD
0	4.18 ± 0.03	0.60	0.0004 ± 0.0004	90.14	10	10.52 ± 0.05	0.44	0.0743 ± 0.0012	1.65
1	4.17 ± 0.02	0.37	0.0016 ± 0.0010	59.46	11	10.60 ± 0.03	0.29	0.0747 ± 0.0010	1.29
2	5.18 ± 0.03	0.49	0.0246 ± 0.019	77.73	12	10.79 ± 0.025	0.23	0.0767 ± 0.0004	0.52
3	5.21 ± 0.02	0.29	0.0296 ± 0.0092	31.08	13	10.90 ± 0.01	0.05	0.0785 ± 0.0008	0.96
4	6.21 ± 0.03	0.43	0.0699 ± 0.0013	1.92	14	11.10 ± 0.03	0.23	0.0795 ± 0.0004	0.45
5	7.13 ± 0.02	0.28	0.0706 ± 0.0009	1.24	15	11.10 ± 0.04	0.34	0.0803 ± 0.0007	0.88
6	8.31 ± 0.03	0.30	0.0721 ± 0.0008	1.15	16	11.01 ± 0.03	0.23	0.0813 ± 0.0004	0.44
7	9.44 ± 0.02	0.22	0.0725 ± 0.0014	1.86	17	11.4 ± 0.026	0.23	0.0834 ± 0.0005	0.59
8	10.44 ± 0.05	0.44	0.0731 ± 0.0011	1.52	18	11.41 ± 0.045	0.40	0.0844 ± 0.0008	0.99
9	10.43 ± 0.04	0.36	0.0736 ± 0.0015	2.00	19	11.50 ± 0.02	0.18	0.0849 ± 0.0004	0.47

Table D3 TPC and OD₅₂₀ of *V.parahaemolyticus* DMST 22092 during growth phase (continue)

time (hour)	TPC (logCFU/ml)		OD ₅₂₀		time (hour)	TPC (logCFU/ml)		OD ₅₂₀	
	mean ^A	%SD	mean ^A	%SD		mean ^A	%SD	mean ^A	%SD
20	11.60 ± 0.01	0.09	0.0863 ± 0.0005	0.61	25	11.55 ± 0.03	0.22	0.0908 ± 0.0007	0.78
21	11.60 ± 0.02	0.18	0.0871 ± 0.0004	0.43	26	11.6 ± 0.03	0.23	0.1001 ± 0.0003	0.30
22	11.70 ± 0.03	0.27	0.0882 ± 0.0004	0.47	27	11.41 ± 0.02	0.13	0.1181 ± 0.0019	1.58
23	11.82 ± 0.05	0.39	0.0892 ± 0.0007	0.74	28	11.13 ± 0.04	0.34	0.1121 ± 0.0011	0.95
24	11.41 ± 0.05	0.40	0.0901 ± 0.0007	0.74	29	9.80 ± 0.02	0.21	0.1015 ± 0.0012	1.18

^AMean ± SD of 3 replication

Table D4 TPC and OD₅₂₀ of *V.parahaemolyticus* DMST 22093 during growth phase

time (hour)	TPC (logCFU/ml)		OD ₅₂₀		time (hour)	TPC (logCFU/ml)		OD ₅₂₀	
	mean ^A	%SD	mean ^A	%SD		mean ^A	%SD	mean ^A	%SD
0	4.18 ± 0.03	0.73	0.0065 ± 0.0000	0	10	11.08 ± 0.035	0.32	0.073 ± 0.0008	1.03
1	4.47 ± 0.05	1.01	0.0091 ± 0.0113	124.32	11	11.11 ± 0.02	0.18	0.0745 ± 0.0009	1.25
2	5.11 ± 0.07	1.37	0.0305 ± 0.0072	23.54	12	11.15 ± 0.026	0.24	0.0752 ± 0.0007	0.87
3	5.96 ± 0.04	0.59	0.0463 ± 0.0015	3.14	13	11.17 ± 0.02	0.18	0.0775 ± 0.0008	1.04
4	6.82 ± 0.04	0.52	0.0651 ± 0.0009	1.31	14	11.18 ± 0.021	0.19	0.0778 ± 0.0013	1.64
5	7.94 ± 0.03	0.40	0.0664 ± 0.0011	1.65	15	11.21 ± 0.02	0.14	0.0794 ± 0.0008	0.95
6	9.097 ± 0.06	0.66	0.0678 ± 0.0007	0.97	16	11.25 ± 0.03	0.24	0.0795 ± 0.0015	1.83
7	9.68 ± 0.03	0.31	0.0697 ± 0.0005	0.68	17	11.31 ± 0.02	0.18	0.0796 ± 0.0008	0.98
8	10.03 ± 0.05	0.50	0.0706 ± 0.0005	0.70	18	11.37 ± 0.03	0.28	0.0812 ± 0.0005	0.56
9	11.05 ± 0.05	0.46	0.0715 ± 0.0006	0.84	19	11.43 ± 0.06	0.49	0.0816 ± 0.0013	1.59

Table D4 TPC and OD₅₂₀ of *V.parahaemolyticus* DMST 22093 during growth phase (continue)

time (hour)	TPC (logCFU/ml)		OD ₅₂₀		time (hour)	TPC (logCFU/ml)		OD ₅₂₀	
	mean ^A	%SD	mean ^A	%SD		mean ^A	%SD	mean ^A	%SD
20	11.51 ± 0.03	0.27	0.08267 ± 0.0006	0.73	25	11.90 ± 0.04	0.34	0.0897 ± 0.0014	1.57
21	11.59 ± 0.02	0.15	0.0827 ± 0.0013	1.52	26	11.14 ± 0.05	0.40	0.0971 ± 0.0011	1.15
22	11.61 ± 0.03	0.22	0.0831 ± 0.0004	0.42	27	11.11 ± 0.03	0.27	0.1196 ± 0.0014	1.13
23	11.72 ± 0.04	0.34	0.0859 ± 0.0013	1.52	28	9.61 ± 0.02	0.22	0.1107 ± 0.0010	0.93
24	11.82 ± 0.04	0.30	0.0879 ± 0.0005	0.51	29	8.48 ± 0.05	0.53	0.0998 ± 0.0003	0.32

^AMean ± SD of 2 replication

Table D5 TPC and OD₅₂₀ of *E.coli* ATCC 29522 during growth phase

time (hour)	TPC (logCFU/ml)		OD ₅₂₀		time (hour)	TPC (logCFU/ml)		OD ₅₂₀	
	mean ^A	%SD	mean ^A	%SD		mean ^A	%SD	mean ^A	%SD
0	4.74 ± 0.13	2.74	0	0	10	12.14 ± 0.03	0.25	0	0
1	5.11 ± 0.04	0.69	0	0	11	12.19 ± 0.01	0.05	0	0
2	5.60 ± 0.04	0.63	0	0	12	12.13 ± 0.05	0.38	0	0
3	6.17 ± 0.08	1.29	0	0	13	12.14 ± 0.04	0.34	0	0
4	6.65 ± 0.04	0.53	0	0	14	12.14 ± 0.05	0.37	0	0
5	7.43 ± 0.05	0.64	0	0	15	12.13 ± 0.04	0.36	0	0
6	7.43 ± 0.03	0.36	0	0	16	12.12 ± 0.02	0.13	0	0
7	9.13 ± 0.05	0.49	0	0	17	12.13 ± 0.03	0.21	0	0
8	10.27 ± 0.04	0.35	0	0	18	12.14 ± 0.04	0.36	0	0
9	12.09 ± 0.07	0.54	0	0	19	12.15 ± 0.03	0.22	0	0

Table D5 TPC and OD₅₂₀ of *E.coli* ATCC 29522 during growth phase (continue)

time (hour)	TPC (logCFU/ml)		OD ₅₂₀		time (hour)	TPC (logCFU/ml)		OD ₅₂₀	
	mean ^A	%SD	mean ^A	%SD		mean ^A	%SD	mean ^A	%SD
20	12.16 ± 0.02	0.13	0	0	25	12.15 ± 0.03	0.21	0.0016 ± 0.0011	67.60
21	12.18 ± 0.01	0.082102	0	0	26	10.72 ± 0.06	0.55	0.0019 ± 0.0008	39.16
22	12.16 ± 0.02	0.17	0	0	27	11.16 ± 0.09	0.85	0.0043 ± 0.0047	107.76
23	12.13 ± 0.05	0.42	0	0	28	10.83 ± 0.08	0.73	0.0031 ± 0.0029	93.74
24	12.14 ± 0.01	0.08	0	0	29	10.91 ± 0.12	1.06	0.0057 ± 0.0045	79.34

^AMean ± SD of 2 replication

Table D6 TPC and OD₅₂₀ of *Salmonella* sp. ATCC 13811 during growth phase

time (hour)	TPC (logCFU/ml)		OD ₅₂₀		time (hour)	TPC (logCFU/ml)		OD ₅₂₀	
	mean ^A	%SD	mean ^A	%SD		mean ^A	%SD	mean ^A	%SD
0	4.42 ± 0.04	0.82	0	0	10	8.57 ± 0.06	0.64	0	0
1	5.15 ± 0.05	0.96	0	0	11	10.03 ± 0.07	0.66	0	0
2	5.27 ± 0.04	0.76	0	0	12	10.86 ± 0.08	0.70	0	0
3	5.44 ± 0.03	0.56	0	0	13	11.03 ± 0.06	0.50	0	0
4	6.13 ± 0.04	0.59	0	0	14	11.24 ± 0.05	0.45	0	0
5	6.13 ± 0.02	0.34	0	0	15	11.30 ± 0.04	0.34	0	0
6	6.24 ± 0.03	0.48	0	0	16	11.34 ± 0.04	0.31	0	0
7	6.28 ± 0.02	0.24	0	0	17	11.38 ± 0.04	0.27	0	0
8	6.37 ± 0.04	0.63	0	0	18	11.50 ± 0.04	0.27	0	0
9	7.13 ± 0.04	0.53	0	0	19	11.61 ± 0.03	0.26	0	0

Table D6 TPC and OD₅₂₀ of *Salmonella* sp. ATCC 13811 during growth phase (continue)

time (hour)	TPC (logCFU/ml)		OD ₅₂₀		time (hour)	TPC (logCFU/ml)		OD ₅₂₀	
	mean ^A	%SD	mean ^A	%SD		mean ^A	%SD	mean ^A	%SD
20	11.79 ± 0.04	0.34	0	0	25	12.20 ± 0.07	0.54	0	0
21	11.91 ± 0.07	0.59	0	0	26	11.41 ± 0.05	0.43	0	0
22	11.99 ± 0.04	0.35	0	0	27	10.60 ± 0.04	0.34	0	0
23	12.02 ± 0.05	0.39	0	0	28	10.57 ± 0.09	0.80	0	0
24	12.09 ± 0.04	0.31	0	0	29	10.09 ± 0.07	0.73	0	0

^AMean ± SD of 2 replication

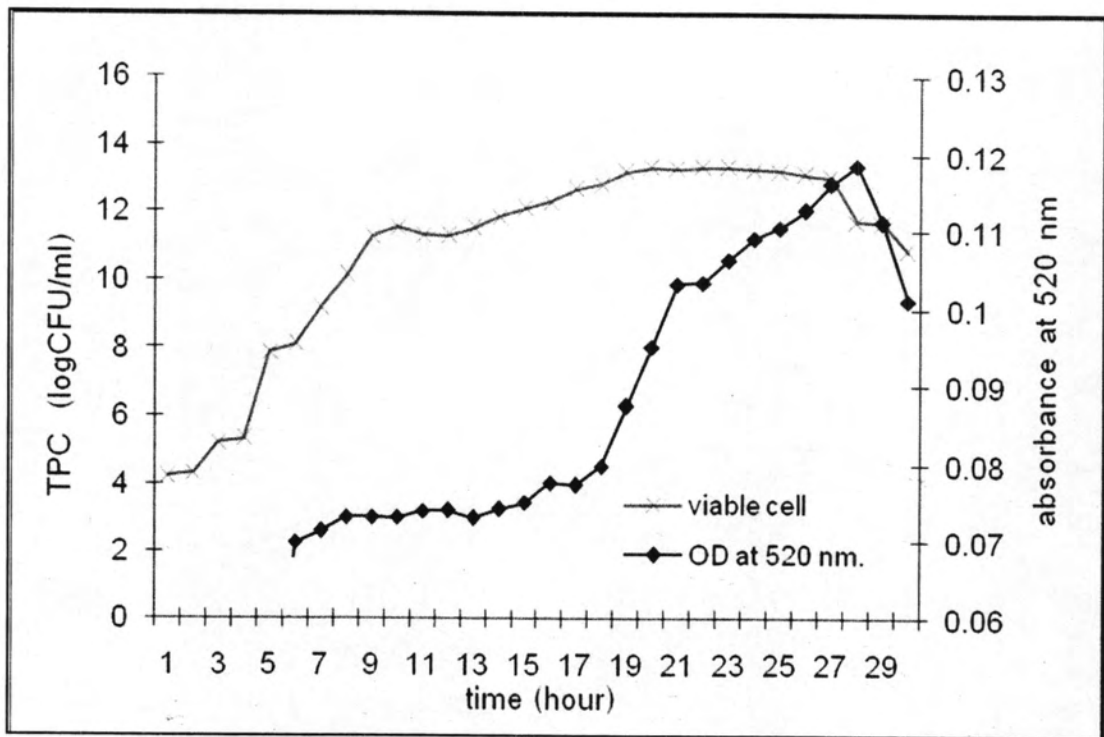


Figure D3 AHL production of *P.aeruginosa* ATCC 27853 during growth phase

Table D7 TPC and OD₅₂₀ of *P.aeruginosa* ATCC 27853 during growth phase

time (hour)	TPC (logCFU/ml)		OD ₅₂₀		time (hour)	TPC (logCFU/ml)		OD ₅₂₀	
	mean	%SD	mean	%SD		mean	%SD	mean	%SD
0	4.23 ± 0.025	0.60	0.0107 ± 0.0104	97.21	10	11.33 ± 0.03	0.22	0.0740 ± 0.0008	1.10
1	4.32 ± 0.045	1.04	0.0106 ± 0.0175	164.33	11	11.29 ± 0.03	0.22	0.0741 ± 0.0012	1.56
2	5.20 ± 0.06	1.13	0.0167 ± 0.0095	56.66	12	11.52 ± 0.05	0.40	0.0731 ± 0.0011	1.54
3	5.31 ± 0.08	1.43	0.0237 ± 0.0175	73.77	13	11.86 ± 0.09	0.73	0.0743 ± 0.0011	1.45
4	7.85 ± 0.05	0.67	0.0257 ± 0.0070	27.34	14	12.087 ± 0.02	0.17	0.0751 ± 0.0006	0.78
5	8.10 ± 0.08	0.93	0.0699 ± 0.0012	1.72	15	12.29 ± 0.02	0.16	0.0777 ± 0.0011	1.36
6	9.2 ± 0.04	0.39	0.0714 ± 0.0009	1.27	16	12.66 ± 0.07	0.54	0.0774 ± 0.0013	1.69
7	10.14 ± 0.09	0.89	0.0732 ± 0.0004	0.57	17	12.83 ± 0.16	1.22	0.0799 ± 0.0002	0.26
8	11.26 ± 0.09	0.86	0.0733 ± 0.0011	1.51	18	13.2 ± 0.03	0.20	0.0875 ± 0.0007	0.81
9	11.55 ± 0.07	0.582	0.0732 ± 0.0006	0.83	19	13.34 ± 0.03	0.19	0.0951 ± 0.0011	1.18

Table D7 TPC and OD₅₂₀ of *P.aeruginosa* ATCC 27853 during growth phase (continue)

time (hour)	TPC (logCFU/ml)		OD ₅₂₀		time (hour)	TPC (logCFU/ml)		OD ₅₂₀	
	mean ^A	%SD	mean ^A	%SD		mean ^A	%SD	mean ^A	%SD
20	13.28 ± 0.02	0.15	0.1034 ± 0.0050	4.82	25	13.11 ± 0.06	0.46	0.1127 ± 0.0009	0.75
21	13.33 ± 0.04	0.26	0.1035 ± 0.0009	0.83	26	13.02 ± 0.06	0.43	0.1162 ± 0.0014	1.183
22	13.33 ± 0.05	0.35	0.1064 ± 0.0012	1.08	27	11.73 ± 0.04	0.34	0.1186 ± 0.0013	1.12
23	13.27 ± 0.03	0.19	0.1092 ± 0.0006	0.59	28	11.68 ± 0.04	0.31	0.1112 ± 0.0006	0.50
24	13.23 ± 0.04	0.30	0.1105 ± 0.0009	0.77	29	10.85 ± 0.02	0.18	0.1011 ± 0.0009	0.85

^AMean ± SD of 2 replication

APPENDIX E

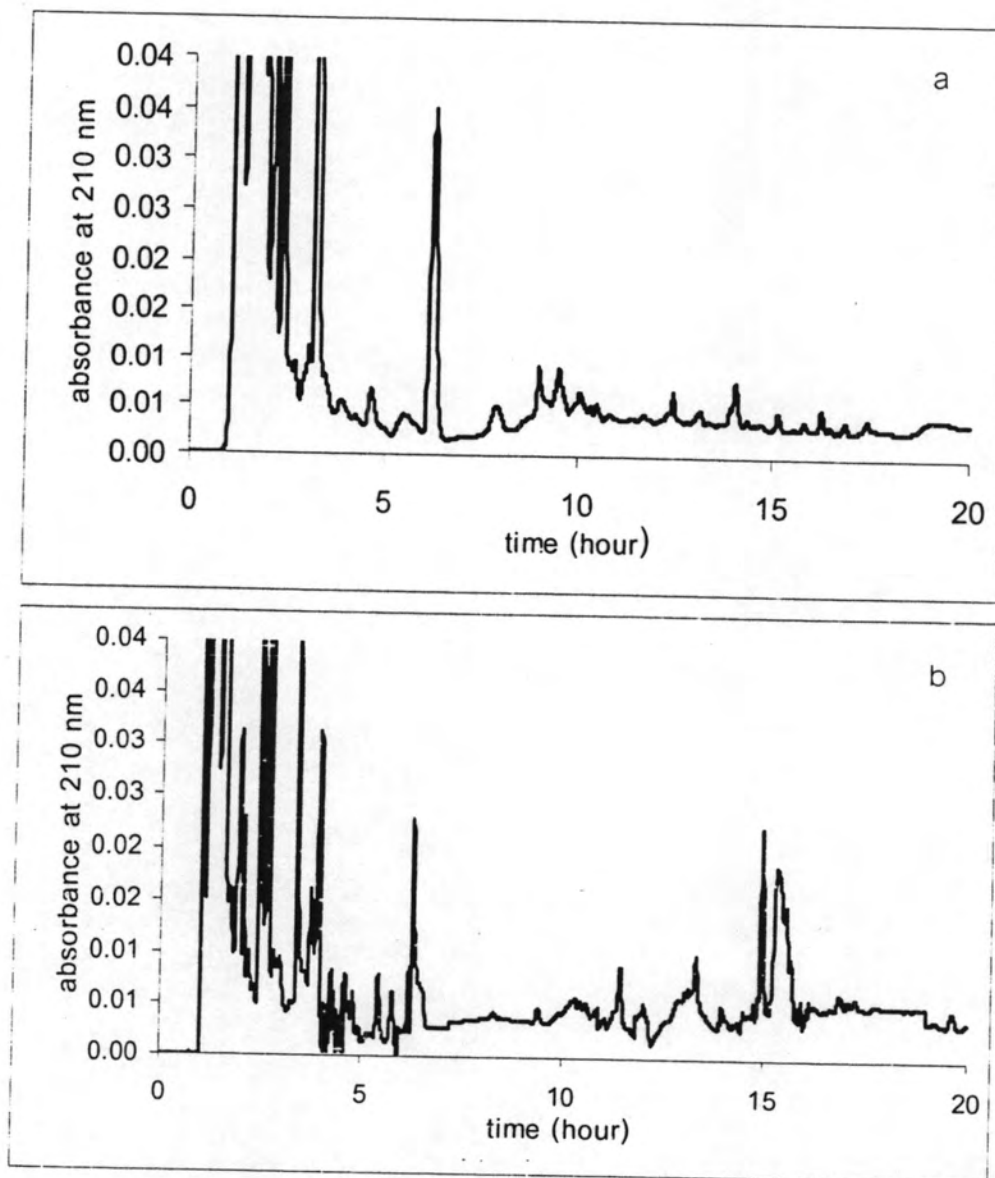


Figure E1 Chromatograms of *V. parahaemolyticus* DMST 22093 colonies cultured on NA for 24 (a), 48 (b) and 72 hours (c)

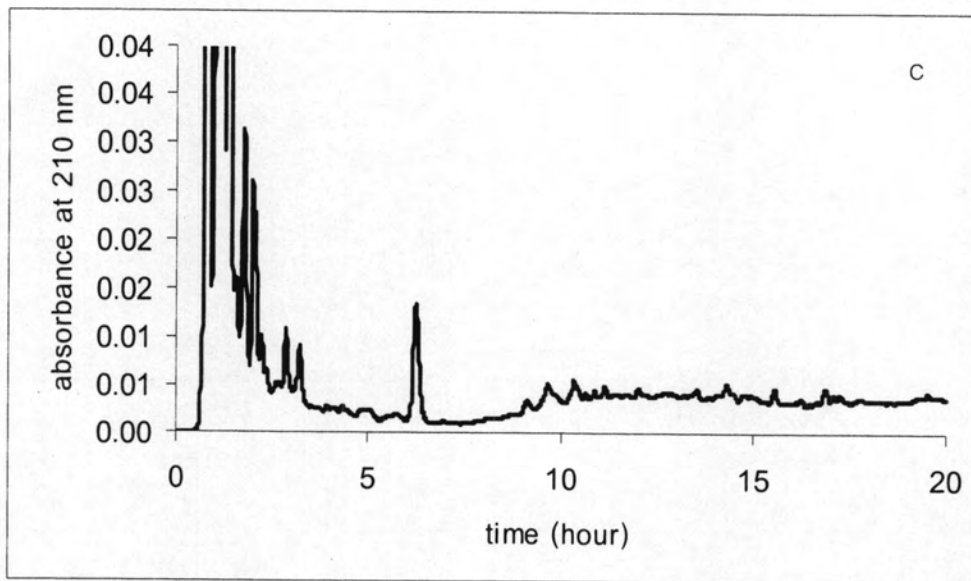


Figure E1 Chromatograms of *V. parahaemolyticus* DMST 22093 colonies cultured on NA for 24 (a), 48 (b) and 72 hours (c) (continued)

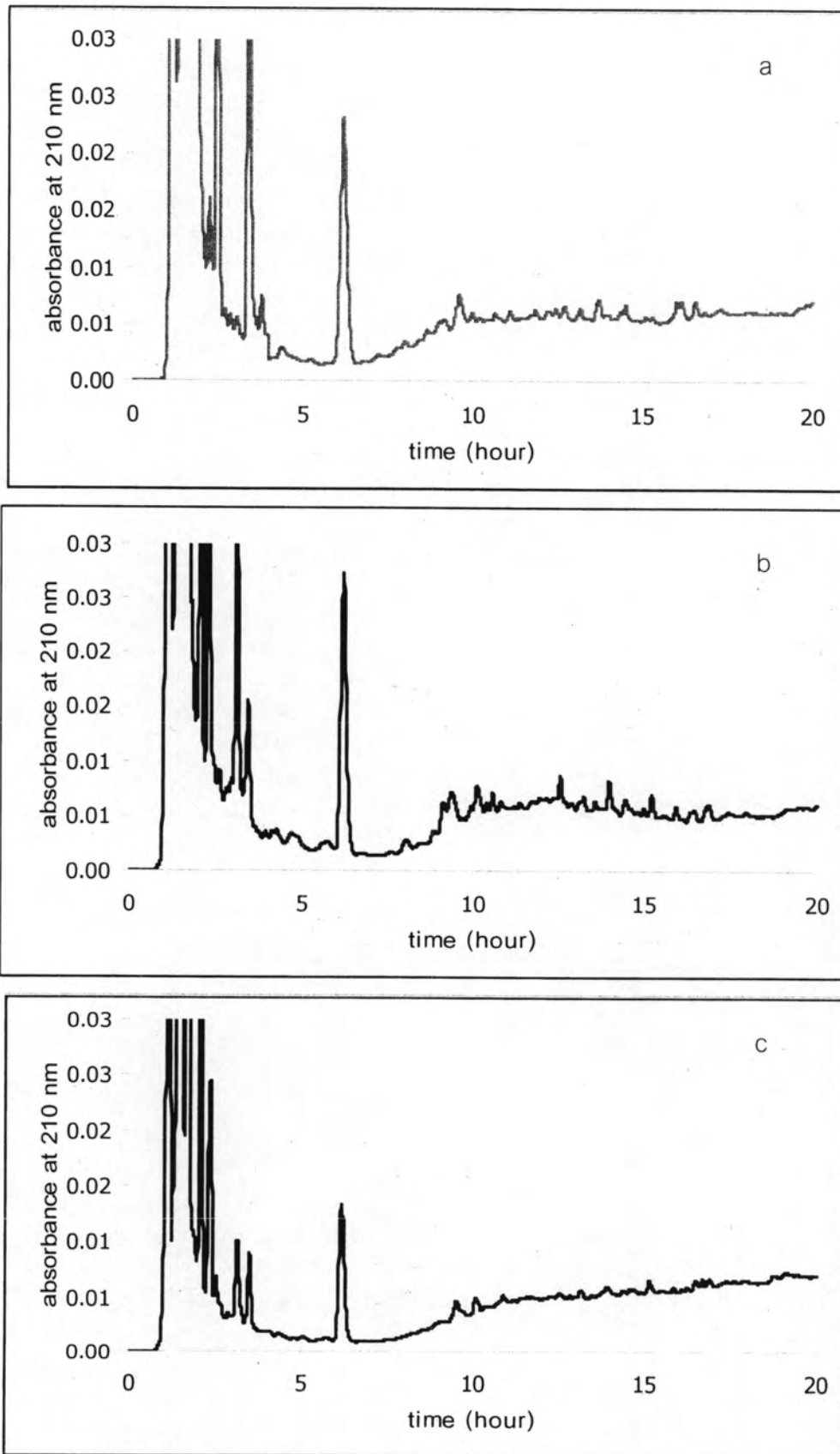


Figure E2 Chromatograms of *V. parahaemolyticus* ATCC 17802 colonies cultured on NA for 24 (a), 48 (b) and 72 hours (c)

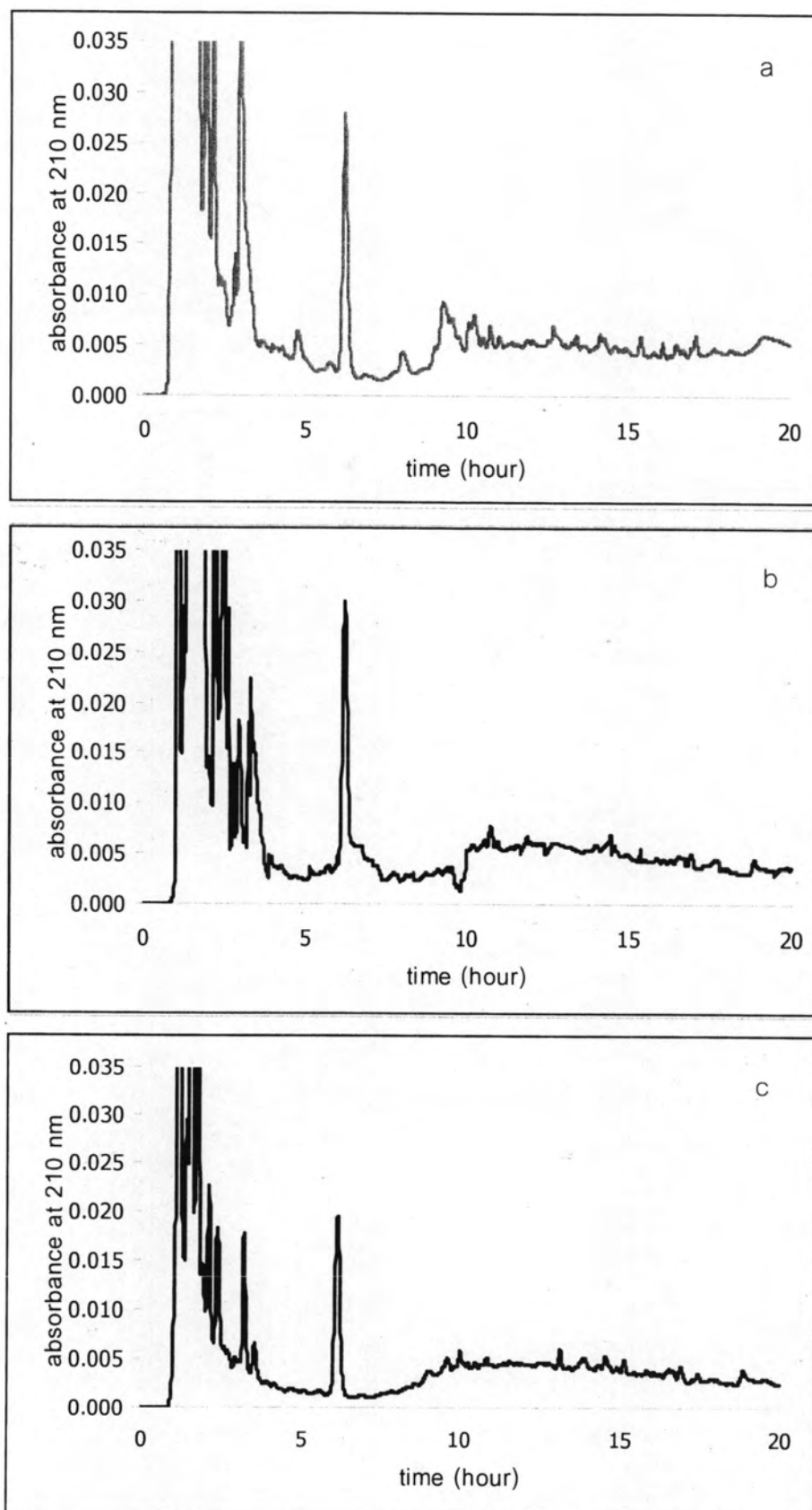


Figure E3 Chromatograms of *V. parahaemolyticus* DMST 23797 colonies cultured on NA for 24 (a), 48 (b) and 72 hours (c)

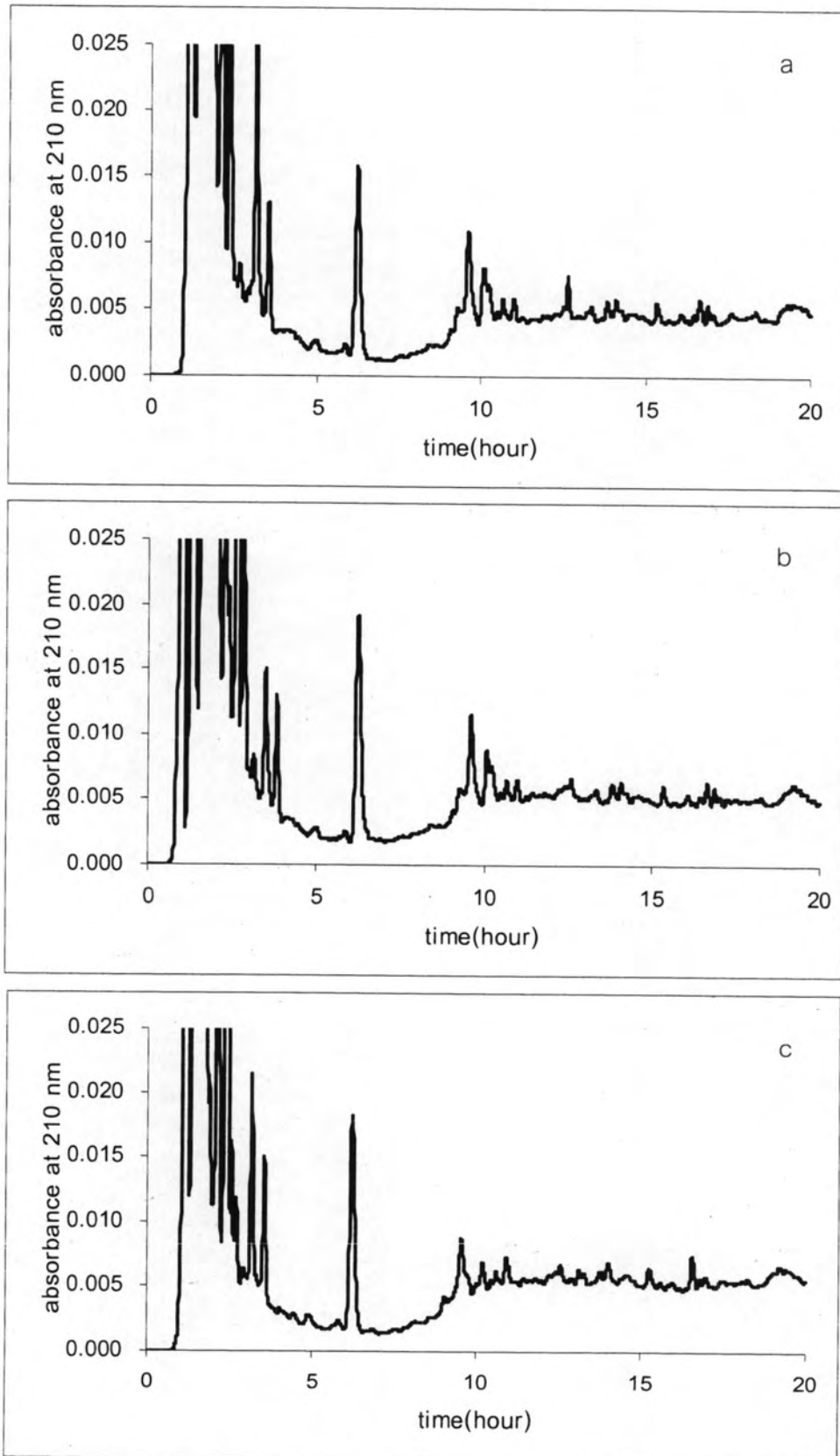


Figure E4 Chromatograms of *V. parahaemolyticus* DMST 23799 colonies cultured on NA for 24 (a), 48 (b) and 72 hours (c)

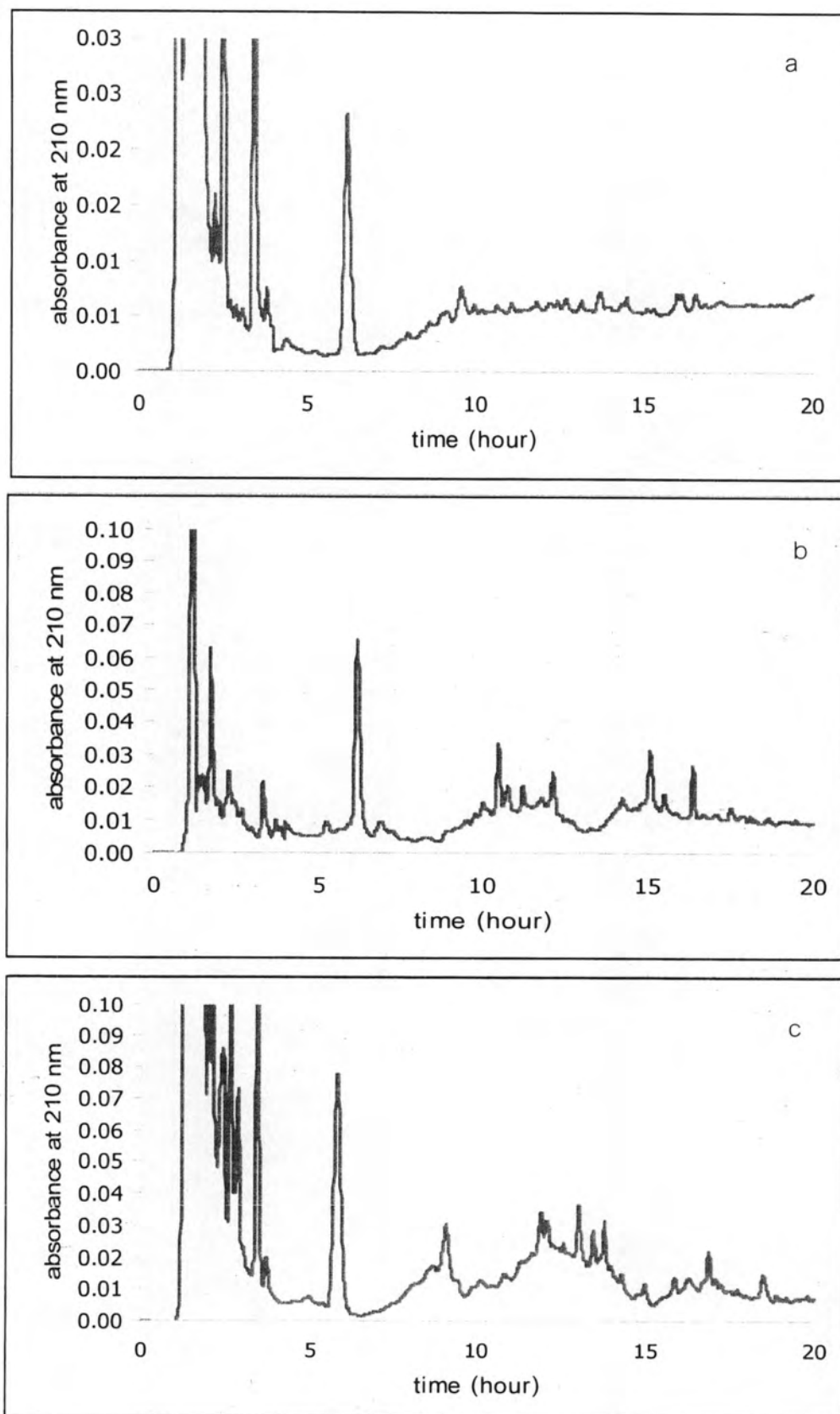


Figure E5 Chromatograms of *V. parahaemolyticus* DMST 23798 colonies cultured for 24 hours on different agar media: NA (a), PCA (b), TCBS (c), and LB agar (d)

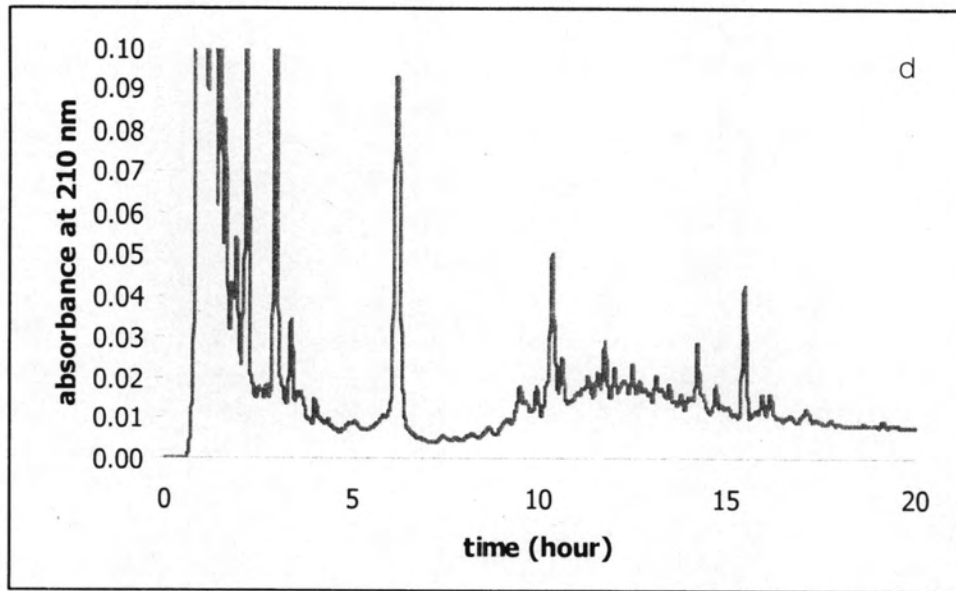


Figure E5 Chromatograms of *V. parahaemolyticus* DMST 23798 colonies cultured for 24 hours on different agar media: NA (a), PCA (b), TCBS (c), and LB agar (d) (continue)

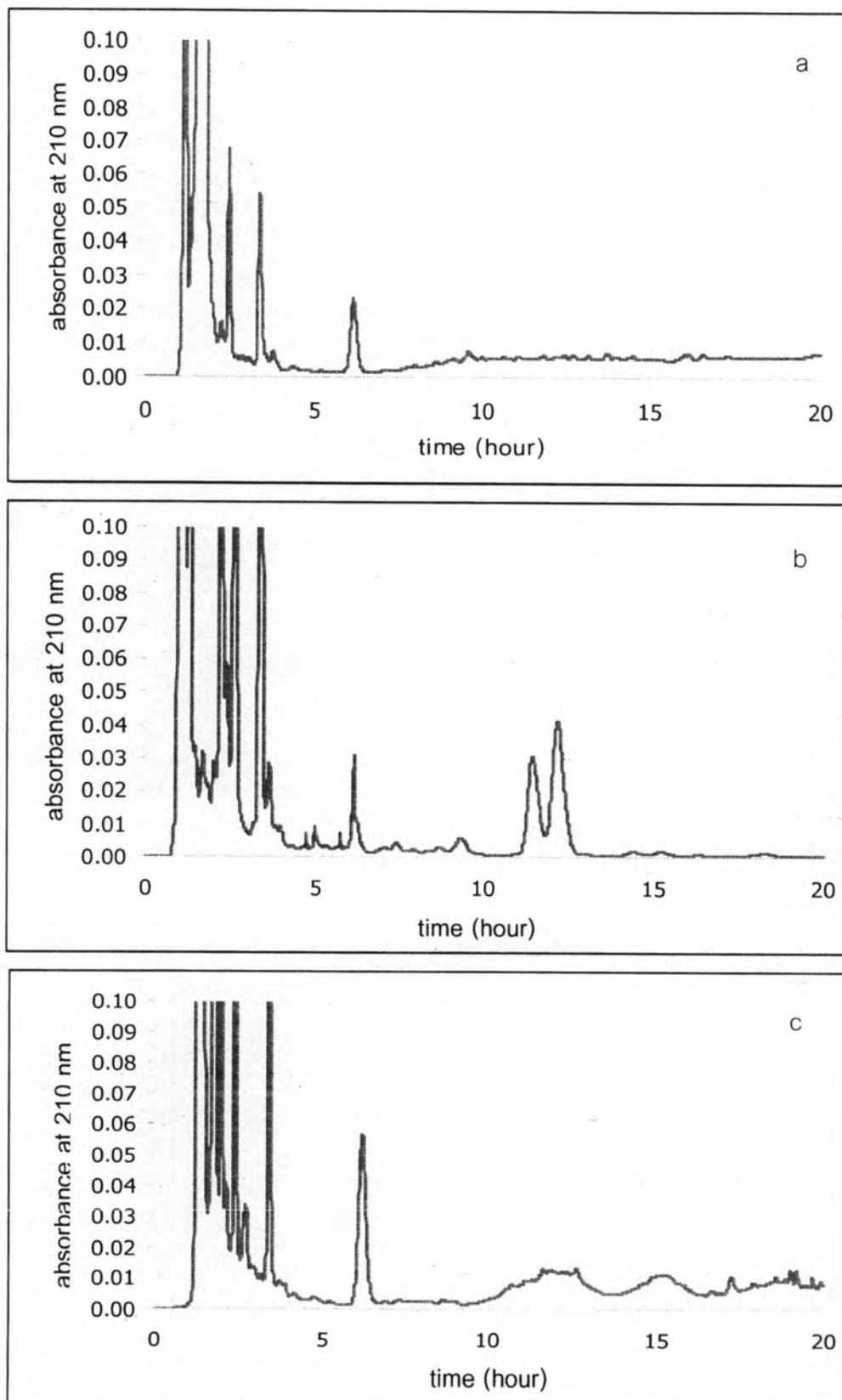


Figure E6 Chromatograms of *V. parahaemolyticus* ATCC 17803 colonies cultured for 24 hours on three NA different in salt concentrations: 0.5% (a), 3% (b), and 8% NaCl (c).

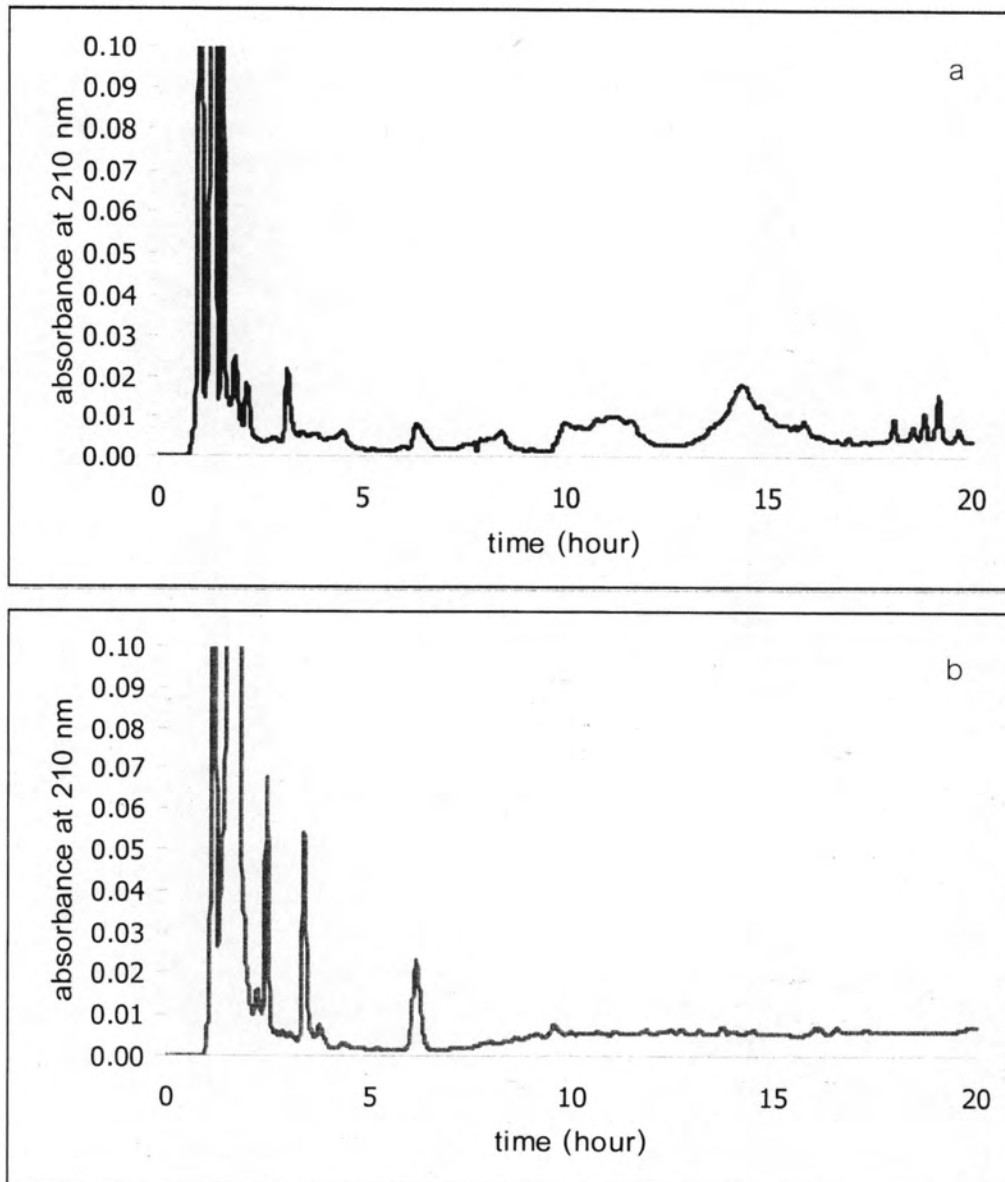


Figure E7 Chromatograms of *V. parahaemolyticus* ATCC 17803 colonies cultured on NA for 24 hours at 15 °C (a) and room temperature (b)

APPENDIX F

Table F1 TPC and OD₅₂₀ of *V.parahaemolyticus* DMST 23798 cultured in 1% peptone water containing 8%NaCl

time (hour)	TPC (logCFU/ml)		OD ₅₂₀	
	mean ^A	%RSD	mean ^A	%SD
0	2.29 ± 0.02	0.67	0.0092 ± 0.0094	101.29
2	2.30 ± 0.08	3.31	0.0151 ± 0.0096	63.62
4	2.459 ± 0.07	3.00	0.0155 ± 0.0171	110.33
6	2.61 ± 0.05	2.03	0.0215 ± 0.0131	60.93
8	2.84 ± 0.11	3.77	0.0300 ± 0.0251	83.77
10	3.05 ± 0.07	2.15	0.0321 ± 0.0287	89.45
12	3.18 ± 0.09	2.83	0.0133 ± 0.0117	87.81
14	3.43 ± 0.16	4.69	0.0213 ± 0.0196	91.68
16	3.749 ± 0.07	1.74	0.05 ± 0.0075	15.07
18	3.9 ± 0.05	1.16	0.0611 ± 0.01522	24.92
20	4.13 ± 0.09	2.20	0.0725 ± 0.0016	2.14
22	4.57 ± 0.05	1.10	0.0743 ± 0.0015	2.04
24	4.90 ± 0.05	1.01	0.0760 ± 0.0020	2.65
26	5.14 ± 0.05	0.98	0.0785 ± 0.0019	2.37
42	6.36 ± 0.05	0.83	0.0817 ± 0.0014	1.72

^Amean ± SD from 3 replication

Table F2 TPC and OD₅₂₀ of *V.vulnificus* ATCC 27562 culture in 1% peptone water containing 8%NaCl

time (hour)	TPC (logCFU/ml)		OD ₅₂₀	
	mean ^A	%RSD	mean ^A	%SD
0	2.84 ± 0.10	3.47	0	0
2	2.85 ± 0.09	3.02	0	0
4	2.70 ± 0.13	4.90	0	0
6	2.76 ± 0.08	2.75	0	0
8	2.63 ± 0.11	4.06	0	0
10	2.54 ± 0.09	3.43	0	0
12	2.36 ± 0.10	4.19	0	0
14	2.11 ± 0.07	3.15	0	0
16	1.96 ± 0.10	5.18	0	0
18	1.66 ± 0.16	9.77	0	0
20	1.39 ± 0.06	4.39	0	0
22	1.23 ± 0.09	6.90	0	0
24	1.10 ± 0.26	23.29	0	0
26	0.85 ± 0.48	56.71	0	0
42	0.56 ± 0.49	87.26	0	0

^A mean ± SD from 3 replication

Table F3 TPC and OD₅₂₀ of *V.cholerae* DMST 2873 culture in 1% peptone water containing 8%NaCl

time (hour)	TPC (logCFU/ml)		OD ₅₂₀	
	mean ^A	%RSD	mean ^A	%SD
0	2.58 ± 0.03	1.19	0	0
2	2.54 ± 0.12	4.64	0	0
4	2.45 ± 0.06	2.32	0	0
6	2.35 ± 0.09	3.95	0	0
8	2.28 ± 0.09	3.98	0	0
10	2.30 ± 0.08	3.54	0	0
12	2.17 ± 0.08	3.46	0	0
14	2.13 ± 0.05	2.15	0	0
16	2.02 ± 0.12	5.71	0	0
18	1.98 ± 0.04	1.82	0	0
20	1.97 ± 0.13	6.60	0	0
22	1.58 ± 0.09	5.72	0	0
24	1.29 ± 0.066	5.08	0	0
26	0.90 ± 0.33	36.89	0	0
42	0.85 ± 0.35	41.29	0	0

^Amean ± SD from 3 replication

Table F4 TPC and OD₅₂₀ of *V.parahaemolyticus* DMST 23798 and *V.vulnificus* ATCC 27562 mixed culture in 1% peptone water containing 8%NaCl

time (hour)	TPC (logCFU/ml)		OD ₅₂₀	
	mean ^A	%RSD	mean ^A	%SD
0	2.69 ± 0.05	1.70	0.0031 ± 0.0054	173.19
2	2.74 ± 0.09	3.31	0.0012 ± 0.0021	173.24
4	2.85 ± 0.09	3.03	0.0026 ± 0.0044	173.20
6	2.93 ± 0.08	2.71	0.0044 ± 0.0076	173.19
8	3.09 ± 0.02	0.68	0.0093 ± 0.0152	163.10
10	3.2 ± 0.07	2.05	0.0149 ± 0.0145	96.98
12	3.30 ± 0.06	1.78	0.0177 ± 0.02777	156.87
14	3.41 ± 0.08	2.35	0.0174 ± 0.0301	172.71
16	3.55 ± 0.07	2.07	0.0393 ± 0.0114	28.91
18	3.95 ± 0.07	1.86	0.0636 ± 0.0181	28.43
20	4.94 ± 0.04	0.90	0.0827 ± 0.0039	4.69
22	5.44 ± 0.07	1.22	0.0765 ± 0.0015	1.96
24	5.96 ± 0.09	1.43	0.0749 ± 0.0014	1.88
26	6.37 ± 0.09	1.43	0.0716 ± 0.0011	1.48
42	7.73 ± 0.09	1.16	0.0847 ± 0.0018	2.18

^Amean ± SD from 3 replication

Table F5 TPC and OD₅₂₀ of *V.parahaemolyticus* DMST 23798 and *V.cholerae* DMST 2873 mixed culture in 1% peptone water containing 8%NaCl

time (hour)	TPC (logCFU/ml)		OD ₅₂₀	
	mean ^A	%RSD	mean ^A	%SD
0	2.43 ± 0.11	4.67	0.0008 ± 0.0011	141.97
2	2.53 ± 0.17	6.70	0.0022 ± 0.0039	173.21
4	2.64 ± 0.13	4.95	0.0113 ± 0.0102	90.12
6	2.86 ± 0.11	3.68	0.0143 ± 0.0126	87.76
8	3.27 ± 0.09	2.84	0.0098 ± 0.0063	64.38
10	3.59 ± 0.18	4.88	0.0257 ± 0.0110	42.79
12	3.85 ± 0.10	2.49	0.0200 ± 0.0322	161.29
14	4.05 ± 0.07	1.61	0.0269 ± 0.0197	73.10
16	4.56 ± 0.10	2.20	0.0346 ± 0.0177	51.28
18	4.83 ± 0.11	2.22	0.0594 ± 0.0090	15.07
20	5.05 ± 0.18	3.45	0.0811 ± 0.0023	2.84
22	5.25 ± 0.08	1.34	0.0782 ± 0.0018	2.27
24	5.72 ± 0.08	1.32	0.0733 ± 0.0016	2.20
26	5.96 ± 0.10	1.63	0.0712 ± 0.0011	1.60
42	7.95 ± 0.15	1.83	0.0844 ± 0.0009	1.05

^Amean ± SD from 3 replication

BIOGRAPHY

Miss Rachatida Det-udom was born on January 8, 1983 in Nakornprathom province. She graduated with the Bachelor Degree of Science in Department of Biotechnology, Faculty of Science, King Mongkut's Institute of Technology Ladkrabang in 2004. she has been a graduate student in the Master's Degree in Food Technology program, Faculty of Science, Chulalongkorn University since 2005.

Publication from this thesis

1. Evaluation and application of colorimetry for AHL analysis from *V.parahaemolyticus* determination based on AHL production. (short communication, in preparation).
2. Investigation of factors associated with AHL production of *V.parahaemolyticus*, a quantitative analysis by colorimetry (in preparation).
3. AHL profile of *V.parahaemolyticus*, a qualitative analysis by HPLC (in preparation).