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## APPENDICES

### Appendix A Extraction Time of Sericin by Autoclaving Under High Pressure and Temperature

The effect of extraction time on the yield of sericin was examined which extracted from silk cocoons by boiling in distilled water (1 g of silk cocoon: 10 ml of distilled water) in an autoclave at 121 °C at different time.

**Table A1** The effect of extraction time of sericin by autoclaving method

Autoclave time (hr)	Solid content of sericin (mg/ml)				
	1	2	3	Average	S.D.
0.25	16.1	15.1	16.1	15.8	0.6
0.5	22.8	23.8	23.1	23.2	0.5
1	25.3	24.9	24.9	25.0	0.2
2	28.1	27.9	27.5	27.8	0.3
4	27.2	28.6	29.4	28.4	1.1

Autoclave time (hr)	Solid content of sericin (mg/ml)	Percent increase (%)
0.25	15.8	-
0.5	23.2	46.8
1	25.0	58.2
2	27.8	75.9
4	28.4	79.7

## Appendix B Nitrogen Content of Different Sericin Concentration in Bacterial Cellulose

The amount of sericin incorporated into bacterial cellulose pellicle was determined by using Kjeldahl method for determining the nitrogen contents of sericin.

**Table B1** Nitrogen content of different sericin concentration in bacterial cellulose

Sericin concentration (mg/ml)	mg of N/ g of sample				
	1	2	3	Average	S.D.
10	76.92	79.96	68.38	75.09	6.00
20	89.01	77.91	90.78	85.90	6.98
30	108.07	92.43	102.02	100.84	7.88
40	110.85	119.07	111.47	113.80	4.58
50	126.83	132.50	133.33	130.89	3.54

### Appendix C Antioxidant Activity of Bacterial Cellulose Containing Sericin

The antioxidant activity of sericin was determined based on the 2,2-diphenyl-1-picrylhydrazyl (DPPH) free radical scavenging activity method.

**Table C1** Antioxidant activity of sericin in bacterial cellulose

Sericin concentration (mg/ml)	Scavenging activity (%)				
	1	2	3	Average	S.D.
10	22.06	21.13	20.24	21.14	0.91
20	34.57	32.26	35.82	34.22	1.81
30	50.21	46.54	48.91	48.55	1.86
40	59.25	57.01	55.36	57.21	1.95
50	67.69	67.26	70.45	68.47	1.73

## Appendix D Swelling Behavior

**Table D1** Water absorption capacity of bacterial cellulose containing sericin

Sericin concentration (mg/ml)	Water absorption capacity (%)				
	1	2	3	Average	S.D.
0	483.87	467.65	464.62	472.04	10.35
10	591.13	606.15	552.31	583.20	27.79
20	722.09	704.68	792.86	739.88	46.70
30	868.38	923.79	807.08	866.42	58.38
40	756.64	775.00	733.33	754.99	20.88
50	695.68	790.38	747.45	744.50	47.42

## Appendix E Water Vapor Transmission Rate

**Table E1** Water vapor transmission rate of bacterial cellulose containing sericin

Sericin concentration (mg/ml)	Water vapor transmission rate (g/m <sup>2</sup> /hour)				
	1	2	3	Average	S.D.
0	2188.71	2258.98	2483.93	2310.54	154.22
10	1436.93	1388.17	1465.10	1430.07	38.92
20	1157.14	1024.20	894.89	1025.41	131.13
30	728.87	770.61	762.54	754.01	22.14
40	746.52	713.67	742.31	734.17	17.88
50	679.88	683.04	687.36	683.43	3.76

## Appendix F Sericin Releasing Behavior

**Table F1** Sericin releasing profile of BC/Sericin 10 mg/ml in tris-HCl buffer

Time (hr)	Absorbance at 562 nm	Protein Concentration ( $\mu\text{g/ml}$ )	%Sericin Releasing	Average	SD
0.166	0.2848	14.7000	4.85	4.44	0.37
	0.2738	13.1286	4.33		
	0.2698	12.5571	4.14		
0.333	0.2964	16.3571	5.40	4.78	0.55
	0.2746	13.2429	4.37		
	0.2788	13.8429	4.57		
0.5	0.3879	29.4286	9.71	8.93	1.23
	0.3412	22.7571	7.51		
	0.3850	29.0143	9.58		
0.75	0.3909	29.8571	9.85	10.64	0.83
	0.4057	31.9714	10.55		
	0.4260	34.8714	11.51		
1	0.4528	38.7000	12.77	12.61	0.14
	0.4474	37.9286	12.52		
	0.4477	37.9714	12.53		
1.30	0.5534	53.0714	17.52	17.83	0.64
	0.5512	52.7571	17.41		
	0.5757	56.2571	18.57		
2	0.5518	52.8429	17.44	20.03	2.69
	0.6028	60.1286	19.84		
	0.6658	69.1286	22.81		
3	0.6373	65.0571	21.47	23.78	2.34
	0.7366	79.2429	26.15		
	0.6852	71.9000	23.73		

Time (hr)	Absorbance at 562 nm	Protein Concentration ( $\mu\text{g/ml}$ )	%Sericin Releasing	Average	SD
5	0.9097	103.9714	34.31	30.56	3.53
	0.7610	82.7286	27.30		
	0.8197	91.1143	30.07		
8	0.9003	102.6286	33.87	34.44	0.50
	0.9181	105.1714	34.71		
	0.9189	105.2857	34.75		
12	0.9971	116.4571	38.43	37.77	0.61
	0.9716	112.8143	37.23		
	0.9805	114.0857	37.65		
24	1.0093	118.2000	39.01	41.30	2.29
	1.0576	125.1000	41.29		
	1.1065	132.0857	43.59		
36	1.0861	129.1714	42.63	41.31	1.53
	1.0226	120.1000	39.64		
	1.0653	126.2000	41.65		
48	1.0849	129.0000	42.57	42.95	1.23
	1.0718	127.1286	41.96		
	1.1220	134.3000	44.32		
60	1.0982	130.9000	43.20	43.05	1.22
	1.0678	126.5571	41.77		
	1.1191	133.8857	44.19		
72	1.0816	128.5286	42.42	43.04	0.56
	1.1041	131.7429	43.48		
	1.0989	131.0000	43.23		



**Table F2** Sericin releasing profile of BC/Sericin 20 mg/ml in tris-HCl buffer

Time (hr)	Absorbance at 562 nm	Protein Concentration ( $\mu\text{g/ml}$ )	%Sericin Releasing	Average	SD
0.166	0.4393	36.7714	8.45	10.25	1.56
	0.5264	49.2143	11.31		
	0.5159	47.7143	10.97		
0.333	0.4920	44.3000	10.18	11.55	1.61
	0.5208	48.4143	11.13		
	0.5877	57.9714	13.33		
0.5	0.5353	50.4857	11.61	12.12	1.11
	0.5895	58.2286	13.39		
	0.5278	49.4143	11.36		
0.75	0.7511	81.3143	18.69	18.81	1.02
	0.7259	77.7143	17.87		
	0.7874	86.5000	19.89		
1	0.8278	92.2714	21.21	20.51	0.67
	0.7875	86.5143	19.89		
	0.8036	88.8143	20.42		
1.30	0.8301	92.6000	21.29	24.93	3.32
	0.9648	111.8429	25.71		
	1.0278	120.8429	27.78		
2	1.0967	130.6857	30.04	30.87	0.93
	1.1526	138.6714	31.88		
	1.1160	133.4429	30.68		
3	1.2514	152.7857	35.12	36.47	1.21
	1.3226	162.9571	37.46		
	1.3028	160.1286	36.81		

Time (hr)	Absorbance at 562 nm	Protein Concentration ( $\mu\text{g/ml}$ )	%Sericin Releasing	Average	SD
5	1.2451	151.8857	34.92	37.09	1.90
	1.3512	167.0429	38.40		
	1.3380	165.1571	37.97		
8	1.3107	161.2572	37.07	39.23	1.97
	1.3905	172.6571	39.69		
	1.4284	178.0714	40.94		
12	1.4353	179.0571	41.16	42.62	2.24
	1.4459	180.5714	41.51		
	1.5582	196.6143	45.20		
24	1.6120	204.3000	46.97	47.28	0.31
	1.6310	207.0143	47.59		
	1.6219	205.7143	47.29		
36	1.5300	192.5857	44.27	47.38	3.01
	1.6309	207.0000	47.59		
	1.7133	218.7714	50.29		
48	1.6306	206.9571	47.58	48.13	1.66
	1.7042	217.4714	49.99		
	1.6072	203.6143	46.81		
60	1.6290	206.7286	47.52	48.06	0.83
	1.6745	213.2286	49.02		
	1.6322	207.1857	47.63		
72	1.6680	212.3000	48.80	48.21	0.76
	1.6578	210.8429	48.47		
	1.6236	205.9571	47.35		

**Table F3** Sericin releasing profile of BC/Sericin 30 mg/ml in tris-HCl buffer

Time (hr)	Absorbance at 562 nm	Protein Concentration ( $\mu\text{g/ml}$ )	%Sericin Releasing	Average	SD
0.166	0.5367	50.6857	10.33	10.57	0.40
	0.5372	50.7571	10.35		
	0.5605	54.0857	11.03		
0.333	0.5299	49.7143	10.14	11.72	1.55
	0.5874	57.9286	11.81		
	0.6360	64.8714	13.23		
0.5	0.6728	70.1286	14.30	15.04	0.65
	0.7072	75.0429	15.30		
	0.7145	76.0857	15.51		
0.75	0.8469	95.0000	19.37	19.96	0.56
	0.8703	98.3429	20.05		
	0.8848	100.4143	20.47		
1	0.9901	115.4571	23.54	23.78	1.49
	1.0534	124.5000	25.38		
	0.9520	110.0143	22.43		
1.30	1.1633	140.2000	28.58	28.79	2.04
	1.2437	151.6857	30.92		
	1.1042	131.7571	26.86		
2	1.2275	149.3714	30.45	31.94	1.29
	1.3025	160.0857	32.64		
	1.3058	160.5571	32.73		
3	1.2709	155.5714	31.72	33.26	1.37
	1.3394	165.3572	33.71		
	1.3612	168.4714	34.35		

Time (hr)	Absorbance at 562 nm	Protein Concentration ( $\mu\text{g/ml}$ )	%Sericin Releasing	Average	SD
5	1.6202	205.4714	41.89	43.70	1.63
	1.6988	216.7000	44.18		
	1.7283	220.9143	45.04		
8	1.6628	211.5571	43.13	45.32	1.93
	1.7876	229.3857	46.77		
	1.7633	225.9143	46.06		
12	1.8029	231.5714	47.21	49.52	2.37
	1.9656	254.8143	51.95		
	1.8780	242.3000	49.40		
24	1.8634	240.2143	48.97	51.71	2.99
	2.0670	269.3000	54.90		
	1.9421	251.4571	51.27		
36	1.9391	251.0286	51.18	52.10	2.70
	1.8980	245.1572	49.98		
	2.0752	270.4714	55.14		
48	1.8789	242.4286	49.42	51.79	2.19
	2.0270	263.5857	53.74		
	1.9743	256.0571	52.20		
60	2.0014	259.9286	52.99	53.68	0.59
	2.0363	264.9143	54.01		
	2.0368	264.9857	54.02		
72	1.9831	257.3143	52.46	53.85	1.50
	2.0236	263.1000	53.64		
	2.0856	271.9571	55.44		

**Table F4** Sericin releasing profile of BC/Sericin 40 mg/ml in tris-HCl buffer

Time (hr)	Absorbance at 562 nm	Protein Concentration ( $\mu\text{g/ml}$ )	%Sericin Releasing	Average	SD
0.166	0.7376	79.3857	14.34	17.09	2.39
	0.8878	100.8429	18.22		
	0.9070	103.5857	18.71		
0.333	1.0088	118.1286	21.34	20.81	0.71
	0.9988	116.7000	21.08		
	0.9571	110.7429	20.01		
0.5	1.0355	121.9429	22.03	24.72	2.39
	1.1715	141.3714	25.54		
	1.2122	147.1857	26.59		
0.75	1.1979	145.1429	26.22	27.19	1.39
	1.2972	159.3286	28.79		
	1.2112	147.0429	26.57		
1	1.3741	170.3143	30.77	31.88	1.97
	1.3721	170.0286	30.72		
	1.5056	189.1000	34.16		
1.30	1.5407	194.1143	35.07	37.58	2.20
	1.7000	216.8714	39.18		
	1.6736	213.1000	38.50		
2	1.6202	205.4714	37.12	39.25	1.90
	1.7617	225.6857	40.77		
	1.7266	220.6714	39.87		
3	1.8385	236.6571	42.76	46.08	4.04
	2.1415	279.9429	50.58		
	1.9221	248.6000	44.91		

Time (hr)	Absorbance at 562 nm	Protein Concentration ( $\mu\text{g/ml}$ )	%Sericin Releasing	Average	SD
5	2.0870	272.1571	49.17	47.73	1.37
	2.0251	263.3143	47.57		
	1.9817	257.1143	46.45		
8	2.0899	272.5714	49.25	50.37	0.98
	2.1593	282.4857	51.04		
	2.1512	281.3286	50.83		
12	2.2109	289.8571	52.37	52.52	0.32
	2.2313	292.7714	52.89		
	2.2087	289.5428	52.31		
24	2.1917	287.1143	51.87	52.92	1.01
	2.2699	298.2857	53.89		
	2.2351	293.3143	52.99		
36	2.2759	299.1428	54.05	53.07	1.06
	2.2438	294.5572	53.22		
	2.1942	287.4714	51.94		
48	2.3407	308.4000	55.72	54.32	1.21
	2.2623	297.2000	53.69		
	2.2571	296.4572	53.56		
60	2.3272	306.4714	55.37	54.62	1.22
	2.3238	305.9857	55.28		
	2.2436	294.5286	53.21		
72	2.3138	304.5572	55.02	54.84	0.94
	2.2674	297.9286	53.83		
	2.3390	308.1571	55.67		

**Table F5** Sericin releasing profile of BC/Sericin 50 mg/ml in tris-HCl buffer

Time (hr)	Absorbance at 562 nm	Protein Concentration ( $\mu\text{g/ml}$ )	%Sericin Releasing	Average	SD
0.166	0.9518	109.9857	19.82	18.16	2.19
	0.9194	105.3571	18.98		
	0.7906	86.9571	15.67		
0.333	0.9519	110.0000	19.82	22.33	2.30
	1.0682	126.6143	22.81		
	1.1279	135.1429	24.35		
0.5	1.0558	124.8429	22.49	24.43	1.70
	1.1570	139.3000	25.10		
	1.1802	142.6143	25.70		
0.75	1.3171	162.1714	29.22	30.15	0.82
	1.3646	168.9571	30.44		
	1.3776	170.8143	30.78		
1	1.4441	180.3143	32.49	35.07	2.34
	1.6217	205.6857	37.06		
	1.5674	197.9286	35.66		
1.30	1.6930	215.8714	38.90	41.51	2.52
	1.8019	231.4286	41.70		
	1.8885	243.8000	43.93		
2	1.7742	227.4714	40.99	42.31	2.58
	1.9411	251.3143	45.28		
	1.7613	225.6286	40.65		
3	2.0241	263.1714	47.42	49.75	2.27
	2.2007	288.4000	51.96		
	2.1188	276.7000	49.86		

Time (hr)	Absorbance at 562 nm	Protein Concentration ( $\mu\text{g/ml}$ )	%Sericin Releasing	Average	SD
5	2.1737	284.5429	51.27	51.03	1.36
	2.2120	290.0143	52.25		
	2.1079	275.1428	49.58		
8	2.2480	295.1571	53.18	53.14	0.31
	2.2335	293.0857	52.81		
	2.2571	296.4572	53.42		
12	2.2540	296.0143	53.34	53.67	0.33
	2.2799	299.7143	54.00		
	2.2671	297.8857	53.67		
24	2.3596	311.1000	56.05	54.45	1.41
	2.2575	296.5143	53.43		
	2.2750	299.0143	53.88		
36	2.3280	306.5857	55.24	55.33	2.44
	2.2386	293.8143	52.94		
	2.4283	320.9143	57.82		
48	2.4575	325.0857	58.57	56.23	2.31
	2.3640	311.7286	56.17		
	2.2782	299.4714	53.96		
60	2.4444	323.2143	58.24	56.65	1.58
	2.3823	314.3428	56.64		
	2.3215	305.6572	55.07		
72	2.4658	326.2714	58.79	58.14	1.36
	2.4764	327.7857	59.06		
	2.3798	313.9857	56.57		



**Table F6** Sericin releasing profile of BC/Sericin 50 mg/ml in tris-HCl buffer containing 0.01%w/v NaCl

Time (hr)	Absorbance at 562 nm	Protein Concentration ( $\mu\text{g/ml}$ )	%Sericin Releasing	Average	SD
0.166	0.6914	72.7857	13.77	19.90	5.31
	1.0368	122.1286	23.11		
	1.0260	120.5857	22.82		
0.333	0.9220	105.7286	20.01	23.61	4.03
	1.0275	120.8000	22.86		
	1.2165	147.8000	27.97		
0.5	1.1640	140.3000	26.55	30.40	3.58
	1.3292	163.9000	31.01		
	1.4259	177.7143	33.63		
0.75	1.0540	124.5857	23.57	32.69	8.14
	1.4875	186.5143	35.29		
	1.6325	207.2286	39.21		
1	1.1617	139.9714	26.48	35.99	8.41
	1.7536	224.5286	42.48		
	1.6247	206.1143	39.00		
1.30	1.5926	201.5286	38.13	38.42	7.37
	1.8812	242.7571	45.93		
	1.3362	164.9000	31.20		
2	1.6096	203.9571	38.59	44.25	5.90
	1.8020	231.4429	43.79		
	2.0452	266.1857	50.37		
3	1.9181	248.0286	46.93	51.85	5.39
	2.0686	269.5286	51.00		
	2.3134	304.5000	57.62		

Time (hr)	Absorbance at 562 nm	Protein Concentration ( $\mu\text{g/ml}$ )	%Sericin Releasing	Average	SD
5	1.9481	252.3143	47.74	52.92	5.58
	2.3585	310.9429	58.83		
	2.1123	275.7714	52.18		
8	2.1891	286.7429	54.26	56.89	2.63
	2.2864	300.6429	56.89		
	2.3837	314.5429	59.52		
12	2.2821	300.0286	56.77	57.23	0.90
	2.2776	299.3857	56.65		
	2.3374	307.9286	58.26		
24	2.3256	306.2429	57.95	57.86	4.21
	2.1652	283.3286	53.61		
	2.4769	327.8571	62.04		
36	2.4489	323.8571	61.28	58.70	3.18
	2.2221	291.4571	55.15		
	2.3892	315.3286	59.66		
48	2.4151	319.0286	60.36	59.21	3.50
	2.2270	292.1571	55.28		
	2.4750	327.5857	61.98		
60	2.4258	320.5571	60.65	60.64	1.55
	2.3679	312.2843	59.09		
	2.4823	328.6349	62.18		
72	2.4326	321.5240	60.84	61.53	0.61
	2.4672	326.4742	61.77		
	2.4750	327.5857	61.98		

**Table F7** Sericin releasing profile of BC/Sericin 50 mg/ml in tris-HCl buffer containing 0.1%w/v NaCl

Time (hr)	Absorbance at 562 nm	Protein Concentration ( $\mu\text{g/ml}$ )	%Sericin Releasing	Average	SD
0.166	0.8496	95.3857	17.95	24.59	6.19
	1.1349	136.1429	25.61		
	1.3058	160.5571	30.21		
0.333	1.0600	125.4428	23.60	30.81	6.46
	1.4004	174.0714	32.75		
	1.5240	191.7286	36.07		
0.5	1.3925	172.9429	32.54	34.35	1.63
	1.4775	185.0857	34.82		
	1.5095	189.6571	35.68		
0.75	1.5089	189.5714	35.67	37.09	1.66
	1.5470	195.0143	36.69		
	1.6298	206.8429	38.92		
1	1.7218	219.9857	41.39	42.95	2.42
	1.8836	243.1000	45.74		
	1.7338	221.7000	41.71		
1.30	1.9708	255.5571	48.08	44.39	3.30
	1.7348	221.8429	41.74		
	1.7948	230.4143	43.35		
2	1.9610	254.1571	47.82	47.93	0.72
	1.9408	251.2714	47.28		
	1.9939	258.8571	48.70		
3	2.0334	264.5000	49.76	54.16	4.34
	2.2009	288.4286	54.27		
	2.3560	310.5857	58.44		

Time (hr)	Absorbance at 562 nm	Protein Concentration ( $\mu\text{g/ml}$ )	%Sericin Releasing	Average	SD
5	2.4175	319.3714	60.09	54.42	5.32
	2.0249	263.2857	49.54		
	2.1776	285.1000	53.64		
8	2.4372	322.1857	60.62	58.23	3.02
	2.3858	314.8429	59.24		
	2.2221	291.4571	54.84		
12	2.5040	331.7286	62.41	59.24	3.48
	2.2472	295.0429	55.51		
	2.4063	317.7714	59.79		
24	2.2266	292.1000	54.96	59.66	4.85
	2.5869	343.5714	64.64		
	2.3909	315.5714	59.37		
36	2.3326	307.2429	57.81	60.28	2.17
	2.4838	328.8429	61.87		
	2.4578	325.1286	61.17		
48	2.4098	318.2714	59.88	61.02	1.14
	2.4516	324.2429	61.01		
	2.4945	330.3714	62.16		
60	2.4176	319.3857	60.09	61.47	1.22
	2.4837	328.8286	61.87		
	2.5050	331.8715	62.44		
72	2.4786	328.0949	61.73	62.02	1.16
	2.4523	324.3500	61.03		
	2.5367	336.4051	63.29		

**Table F8** Sericin releasing profile of BC/Sericin 50 mg/ml in tris-HCl buffer containing 0.5%w/v NaCl

Time (hr)	Absorbance at 562 nm	Protein Concentration ( $\mu\text{g/ml}$ )	%Sericin Releasing	Average	SD
0.166	1.1016	131.3857	24.79	25.65	3.18
	1.2641	154.6000	29.17		
	1.0347	121.8286	22.99		
0.333	1.3537	167.4000	31.58	34.14	2.51
	1.5397	193.9714	36.60		
	1.4525	181.5143	34.25		
0.5	1.4970	187.8714	35.45	35.55	3.16
	1.6200	205.4429	38.76		
	1.3858	171.9857	32.45		
0.75	1.6105	204.0857	38.51	41.95	3.77
	1.8876	243.6714	45.98		
	1.7169	219.2857	41.37		
1	1.7521	224.3143	42.32	45.11	3.18
	1.9841	257.4571	48.58		
	1.8301	235.4572	44.43		
1.30	1.9669	255.0000	48.11	47.87	3.93
	2.0987	273.8286	51.67		
	1.8077	232.2571	43.82		
2	2.1576	282.2428	53.25	51.25	3.31
	2.1504	281.2143	53.06		
	1.9417	251.4000	47.43		
3	2.1626	282.9571	53.39	55.33	1.73
	2.2856	300.5286	56.70		
	2.2555	296.2286	55.89		

Time (hr)	Absorbance at 562 nm	Protein Concentration ( $\mu\text{g/ml}$ )	%Sericin Releasing	Average	SD
5	2.2019	288.5714	54.45	59.20	4.17
	2.4397	322.5428	60.86		
	2.4927	330.1143	62.29		
8	2.3047	303.2571	57.22	61.55	3.96
	2.4986	330.9571	62.44		
	2.5926	344.3857	64.98		
12	2.3602	311.1857	58.71	62.00	2.96
	2.5738	341.7000	64.47		
	2.5123	332.9143	62.81		
24	2.5792	342.4714	64.62	62.52	1.99
	2.4324	321.5000	60.66		
	2.4923	330.0572	62.27		
36	2.4733	327.3429	61.76	63.34	1.68
	2.5250	334.7286	63.16		
	2.5972	345.0429	65.10		
48	2.4170	319.3000	60.25	64.06	4.35
	2.5244	334.6429	63.14		
	2.7342	364.6143	68.80		
60	2.4371	322.1714	60.79	64.46	4.31
	2.5331	335.8799	63.37		
	2.7495	366.8043	69.21		
72	2.4522	324.3255	61.19	64.72	4.37
	2.5327	335.8256	63.36		
	2.7643	368.9176	69.61		

**Appendix G Cytotoxicity Test****Table G1** Absorbance of cell cultured with samples compared to control at a wavelength of 570 nm

	Absorbance at 570 nm				
	1	2	3	Average	S.D.
Cell control	1.342	1.284	1.414	1.347	0.065
Bacterial cellulose	1.106	1.098	1.256	1.153	0.089
BC/Sericin 30 mg/ml	0.837	0.769	0.936	0.847	0.084
BC/Sericin 50 mg/ml	0.933	0.965	1.024	0.974	0.046

**Table G2** Percent cell viability of human dermal fibroblast cell lines

	Cell viability (%)				
	1	2	3	Average	S.D.
Cell control	100	100	100	100	0
Bacterial cellulose	82	86	89	85.67	0.09
BC/Sericin 30 mg/ml	62	60	66	62.67	0.08
BC/Sericin 50 mg/ml	70	75	72	72.33	0.05



## CURRICULUM VITAE

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1. Pittayaapipon, P.; and Rujiravanit, R. (2012, April 24<sup>th</sup>) Bacterial Cellulose Containing Silk Sericin for Wound Dressing Applications. Proceedings of the 3<sup>rd</sup> Research Symposium on Petrochemical and Materials Technology and The 18<sup>th</sup> PPC Symposium on Petroleum, Petrochemicals, and Polymers, Bangkok, Thailand.

**Presentations:**

1. Pittayaapipon, P.; and Rujiravanit, R. (2011, August 24-26) Preparation of Bacterial Cellulose Containing Silk Sericin for Wound Care Application. Paper presented at 6<sup>th</sup> International Symposium in Science and Technology at Kansai University 2011, Osaka, Japan.
2. Pittayaapipon, P.; and Rujiravanit, R. (2012, January 11-13) Development of Bacterial Cellulose Containing Silk Sericin for Wound Dressing Application. Paper presented at the 6<sup>th</sup> Pure and Applied Chemistry International Conference 2012, Chiang mai, Thailand.
3. Pittayaapipon, P.; and Rujiravanit, R. (2012, April 24<sup>th</sup>) Bacterial Cellulose Containing Silk Sericin for Wound Dressing Applications. Paper presented at the 3<sup>rd</sup> Research Symposium on Petroleum, Petrochemicals, and Advanced Materials and The 18<sup>th</sup> PPC Symposium on Petroleum, Petrochemicals, and Polymers, Bangkok, Thailand.

