

Table S1. Microbial inactivation of *E. coli* and *S. aureus* at 30 and 60 min contact time, treated with PAW or PAS stored at different temperatures for up to 18 months. Table represents averages of 2 independent plasma treatments (Set 1 and 2). ND = not detected.

Contact time (min)	Storage time (months)	CTL	RT	4	-16	-80	-150
<b>Cell density (log<sub>10</sub> CFU/ml) ±SD</b>							
<b><i>E. coli</i> PAW set 1 + set 2</b>							
30	0	6.49±0.14	1.68±1.84	1.68±1.84	1.68±1.84	1.68±1.84	1.68±1.84
	1	6.33±0.08	5.67±0.57	5.68±0.07	4.90±0.87	2.49±1.41	1.37±1.50
	3	6.28±0.05	6.09±0.08	5.99±0.15	6.26±0.07	2.02±1.00	4.32±1.38
	6	6.15±0.06	5.85±0.12	5.79±0.06	5.61±0.60	1.13±1.25	2.74±0.58
	18	6.16±0.08	6.15±0.08	6.14±0.09	6.13±0.57	ND	ND
60	0	6.32±0.11	ND	ND	ND	ND	ND
	1	6.34±0.08	5.80±0.37	5.69±0.57	4.47±1.65	ND	ND
	3	6.31±0.14	6.00±0.18	5.70±0.09	6.09±0.19	ND	1.05±1.15
	6	6.14±0.07	5.87±0.08	5.81±0.20	5.80±0.08	ND	ND
	18	6.28±0.05	6.19±0.08	6.14±0.16	5.55±0.12	ND	ND
<b><i>S. aureus</i> PAW set 1 + set 2</b>							
30	0	6.23±0.22	1.78±1.95	1.78±1.95	1.78±1.9	1.78±1.95	1.78±1.95
	1	6.25±0.08	5.74±0.51	5.61±0.34	3.85±0.75	0.70±1.09	2.04±1.66
	3	6.18±0.12	6.19±0.15	6.01±0.19	6.15±0.07	2.59±0.52	3.95±0.72
	6	6.05±0.03	5.60±0.19	5.87±0.12	5.92±0.16	2.04±1.03	2.76±0.35
	18	6.11±0.08	6.22±0.12	6.25±0.07	5.66±0.49	ND	ND
60	0	6.29±0.02	ND	ND	ND	ND	ND
	1	6.19±0.10	5.85±0.34	5.73±0.38	4.10±1.39	ND	ND
	3	6.20±0.08	6.18±0.30	5.60±0.10	5.18±0.48	ND	ND
	6	6.20±0.04	5.66±0.09	5.77±0.11	4.94±0.42	ND	ND
	18	6.19±0.07	6.18±0.06	6.23±0.12	5.30±0.28	ND	ND
<b><i>E. coli</i> PAS set 1 + set 2</b>							
30	0	6.36±0.09	ND	ND	ND	ND	ND
	1	6.23±0.15	5.78±0.23	5.71±0.20	1.55±1.70	ND	ND
	3	6.25±0.05	6.03±0.22	5.79±0.26	6.27±0.15	ND	ND
	6	6.25±0.04	6.05±0.09	6.21±0.15	5.65±0.48	ND	ND
	18	6.23±0.04	6.19±0.06	6.21±0.13	6.23±0.04	ND	ND
60	0	5.98±0.51	ND	ND	ND	ND	ND
	1	6.27±0.11	5.78±0.32	6.17±0.11	2.97±0.83	ND	ND
	3	6.30±0.07	5.63±0.47	6.05±0.28	5.77±0.72	ND	ND
	6	6.27±0.07	6.09±0.05	6.11±0.15	6.16±0.08	ND	ND
	18	6.17±0.05	6.23±0.04	6.13±0.10	6.27±0.06	0.70±1.22	ND
<b><i>S. aureus</i> PAS set 1 + set 2</b>							
30	0	6.45±0.27	ND	ND	ND	ND	ND
	1	6.25±0.07	5.58±0.09	5.84±0.11	4.4±0.1.2	ND	0.35±0.86
	3	6.14±0.09	6.12±0.11	5.30±0.28	5.81±0.38	1.05±1.15	ND
	6	6.26±0.04	5.85±0.25	6.00±0.16	5.98±0.34	ND	ND
	18	6.27±0.04	6.19±0.08	6.18±0.09	6.12±0.02	ND	ND
60	0	6.38±0.06	0.35±0.86	0.35±0.86	0.35±0.86	0.35±0.86	0.35±0.86
	1	6.30±0.04	5.86±0.35	6.09±0.08	2.59±1.50	ND	ND
	3	6.16±0.07	6.14±0.10	5.36±0.38	4.96±0.17	ND	ND
	6	6.21±0.10	6.04±0.11	5.87±0.27	6.09±0.10	0.35±0.86	0.35±0.86

	18	6.15±0.12	6.24±0.06	6.06±0.14	6.13±0.10	0.70±1.22	ND
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Table S2. Microbial inactivation of *E. coli* and *S. aureus* at 30 and 60 min contact time, treated with PAW or PAS stored at different temperatures for up to 6 months. Table represents 1 independent plasma treatment (Set 3). ND = not detected.

Contact time (min)	Storage time (months)	CTL	RT	4	-16	-80	-150
<b>Cell density (log<sub>10</sub> CFU/ml) ±SD</b>							
<b><i>E. coli</i> PAW set 3</b>							
30	0	6.20±0.05	ND	ND	ND	ND	ND
	1	6.17±0.07	6.14±0.11	6.25±0.08	6.10±0.08	ND	ND
	3	6.38±0.06	6.28±0.05	6.30±0.07	6.22±0.09	ND	ND
	6	6.36±0.07	6.29±0.08	6.23±0.04	6.20±0.12	ND	ND
60	0	6.29±0.07	ND	ND	ND	ND	ND
	1	6.29±0.09	6.20±0.07	6.26±0.07	4.19±0.11	ND	ND
	3	6.31±0.06	6.24±0.03	6.30±0.05	6.13±0.12	ND	ND
	6	6.24±0.06	6.17±0.07	6.27±0.08	6.29±0.04	ND	ND
<b><i>S. aureus</i> PAW set 3</b>							
30	0	6.15±0.15	ND	ND	ND	ND	ND
	1	6.15±0.07	6.18±0.07	6.35±0.07	5.28±0.11	ND	ND
	3	6.20±0.07	6.19±0.11	6.12±0.09	6.22±0.11	ND	ND
	6	6.17±0.07	6.12±0.06	6.15±0.12	6.09±0.09	ND	ND
60	0	6.19±0.06	ND	ND	ND	ND	ND
	1	6.13±0.08	6.20±0.05	6.25±0.03	4.29±0.07	ND	ND
	3	6.28±0.08	6.20±0.07	6.17±0.09	6.06±0.04	ND	ND
	6	6.26±0.04	6.18±0.10	6.15±0.03	6.25±0.13	ND	ND
<b><i>E. coli</i> PAS set 3</b>							
30	0	6.17±0.09	ND	ND	ND	ND	ND
	1	6.26±0.04	6.17±0.05	6.14±0.13	6.25±0.05	ND	ND
	3	6.34±0.07	6.28±0.08	6.22±0.09	6.36±0.06	ND	ND
	6	6.06±0.04	6.17±0.05	6.30±0.07	6.13±0.16	ND	ND
60	0	6.25±0.06	ND	ND	ND	ND	ND
	1	6.37±0.05	6.21±0.06	6.20±0.10	5.10±0.10	ND	ND
	3	6.29±0.08	6.25±0.06	6.29±0.19	6.26±0.04	ND	ND
	6	6.22±0.09	6.16±0.09	6.12±0.14	5.68±0.05	ND	ND
<b><i>S. aureus</i> PAS set 3</b>							
30	0	6.18±0.06	ND	ND	ND	ND	ND
	1	6.20±0.07	6.30±0.07	6.16±0.05	6.17±0.05	ND	ND
	3	6.21±0.13	6.13±0.08	6.30±0.07	6.21±0.03	ND	ND
	6	6.23±0.07	6.10±0.08	6.32±0.09	6.40±0.05	ND	ND
60	0	6.27±0.04	ND	ND	ND	ND	ND
	1	6.18±0.10	6.12±0.06	6.31±0.05	5.23±0.10	ND	ND
	3	6.15±0.12	6.19±0.03	6.23±0.21	6.08±0.06	ND	ND
	6	6.13±0.06	6.25±0.06	6.13±0.08	6.35±0.08	ND	ND

Table S3. Microbial inactivation of *E. coli* and *S. aureus* at 30 and 60 min contact time, treated with PAW or PAS stored at different temperatures for up to 3 months. Table represents 1 independent plasma treatment (Set 4). ND = not detected.

Contact time (min)	Storage time (weeks/months)	CTL	RT	4	-16	-80	-150
<b>Cell density (log<sub>10</sub> CFU/ml) ±SD</b>							
<b><i>E. coli</i> PAW set 4</b>							
30	0	6.16±0.04	ND	ND	ND	ND	ND
	1	6.29±0.07	6.03±0.07	5.88±0.07	6.05±0.02	ND	ND
	2	6.28±0.02	6.13±0.01	6.16±0.13	6.24±0.06	ND	ND
	3	6.26±0.04	6.28±0.08	6.22±0.03	5.08±0.06	ND	ND
	3m	6.36±0.10	6.29±0.03	6.18±0.14	6.26±0.09	ND	ND
	6m	6.17±0.05	6.14±0.13	5.68±0.07	6.23±0.04	ND	ND
60	0	6.24±0.04	ND	ND	ND	ND	ND
	1	6.15±0.03	5.83±0.04	5.92±0.10	5.37±0.05	ND	ND
	2	6.13±0.12	6.17±0.04	6.16±0.08	6.10±0.10	ND	ND
	3	6.30±0.07	6.29±0.07	6.17±0.05	6.24±0.06	ND	ND
	3m	6.31±0.07	6.18±0.07	6.21±0.08	5.61±0.05	ND	ND
	6m	6.25±0.03	6.32±0.04	6.16±0.02	6.24±0.06	ND	ND
<b><i>S. aureus</i> PAW set 4</b>							
30	0	6.19±0.06	ND	ND	ND	ND	ND
	1	6.10±0.07	5.88±0.07	5.74±0.05	2.31±0.17	3.05±0.02	ND
	2	6.16±0.13	5.91±0.03	5.91±0.03	3.93±0.15	ND	ND
	3	6.28±0.08	6.20±0.07	6.16±0.08	5.10±0.10	ND	ND
	3m	6.41±0.11	6.27±0.06	6.24±0.06	6.22±0.03	ND	ND
	6m	6.27±0.04	6.20±0.07	6.18±0.16	6.47±0.05	ND	ND
60	0	6.12±0.02	ND	ND	ND	ND	ND
	1	6.17±0.11	5.90±0.10	5.86±0.04	3.47±0.03	ND	0.70±1.22
	2	6.18±0.07	6.06±0.15	6.04±0.05	4.93±0.15	ND	ND
	3	6.22±0.09	5.23±0.10	5.47±0.09	5.59±0.07	ND	ND
	3m	6.18±0.07	6.14±0.10	6.16±0.08	6.11±0.10	ND	ND
	6m	6.25±0.06	6.25±0.10	6.14±0.11	6.21±0.06	ND	ND
<b><i>E. coli</i> PAS set 4</b>							
30	0	6.25±0.03	ND	ND	ND	ND	ND
	1	6.17±0.05	5.83±0.10	5.83±0.04	4.44±0.04	ND	ND
	2	6.22±0.03	6.10±0.10	6.10±0.10	6.11±0.10	ND	ND
	3	6.18±0.07	6.15±0.17	6.25±0.06	5.65±0.05	ND	ND
	3m	6.35±0.05	6.26±0.06	6.38±0.06	6.43±0.06	ND	ND
	6m	6.37±0.05	6.43±0.05	6.28±0.08	6.27±0.04	ND	ND
60	0	6.18±0.07	ND	ND	ND	ND	ND
	1	6.12±0.02	5.86±0.08	5.63±0.07	6.32±0.05	ND	ND
	2	6.34±0.06	6.17±0.10	6.18±0.14	6.25±0.06	ND	ND
	3	6.30±0.08	6.25±0.06	6.17±0.14	5.44±0.08	ND	ND
	3m	6.40±0.07	6.35±0.03	6.36±0.04	6.37±0.15	ND	ND
	6m	6.43±0.06	6.36±0.12	6.26±0.04	6.28±0.07	ND	ND
<b><i>S. aureus</i> PAS set 4</b>							

30	0	6.22±0.08	ND	ND	ND	ND	ND
	1	6.14±0.12	5.21±0.17	5.31±0.17	6.01±0.05	ND	2.43±0.27
	2	6.23±0.04	6.12±0.06	6.14±0.11	6.26±0.06	ND	ND
	3	6.23±0.07	6.27±0.07	6.11±0.10	6.13±0.06	ND	ND
	3m	6.31±0.08	6.29±0.09	6.16±0.13	6.20±0.05	ND	ND
	6m	6.20±0.07	6.10±0.10	6.27±0.04	6.28±0.07	ND	ND
60	0	6.16±0.04	ND	ND	ND	ND	ND
	1	6.09±0.09	5.11±0	5.11±0	ND	ND	ND
	2	6.21±0.06	5.25±0.06	6.10±0.10	4.70±0.11	ND	ND
	3	6.28±0.05	6.21±0.06	6.30±0.07	5.08±0.06	ND	ND
	3m	6.16±0.05	6.22±0.13	6.34±0.08	6.27±0.03	ND	ND
	6m	6.16±0.13	6.24±0.04	6.26±0.09	6.24±0.03	ND	ND