Table S1. Changes of total bacterial counts in lamb liver paste with three different treatments during storage period.

Group	0 d	1 d	7 d	14 d	21 d	28 d
NF	3.82 ± 0.53 ^{Bb}	7.05 ± 1.08 ^{Aa}	8.32 ± 0.8 ^{Aa}	8.21 ± 1.5 ^{Aa}	8.32 ± 0.85 ^{Aa}	8.24 ± 0.19 ^{Aa}
SF	6.36 ± 0.55 ^{Ba}	7.96 ± 0.6 ^{ABa}	8.74 ± 1.78 ^{Aa}	8.17 ± 1.04 ^{Aa}	8.71 ± 1.15 ^{Aa}	8.22 ± 0.25 ^{Aa}
ST	3.97 ± 0.21 ^{Bb}	5.83 ± 0.35 ^{Ab}	4.42 ± 0.44 ^{Bb}	4.49 ± 0.49 ^{Bb}	5.59 ± 0.36 ^{Ab}	5.87 ± 0.84 ^{Ab}

Note: Uppercase letters are significant differences in the same row, lowercase letters are significant differences in the same column and the same metric.

Table S2. Changes of Lactobacillus colony count in lamb liver paste with three different treatments during storage period.

Group	0 d	1 d	7 d	14 d	21 d	28 d
NF	3.4 ± 0.23 ^{Cb}	6.92 ± 0.36 ^{Bb}	8.88 ± 1.42 ^{Aa}	7.38 ± 1.04 ^{ABa}	8.01 ± 1.15 ^{ABa}	8.34 ± 1.04 ^{ABa}
SF	5.38 ± 0.7 ^{Ba}	7.97 ± 1.13 ^{Aa}	8.45 ± 0.77 ^{Aa}	7.62 ± 0.95 ^{Aa}	7.95 ± 0.55 ^{Aa}	7.96 ± 0.8 ^{Aa}
ST	3.28 ± 0.3 ^{Cb}	4.34 ± 0.25 ^{Bc}	4.38 ± 0.2 ^{Bb}	4.18 ± 0.54 ^{Bb}	4.04 ± 0.24 ^{Bb}	5.17 ± 0.53 ^{Ab}

Note: Uppercase letters are significant differences in the same row, lowercase letters are significant differences in the same column and the same metric.

Table S3. Changes of pH value of lamb liver paste with three different treatments during storage period.

Group	0 d	1 d	7 d	14 d	21 d	28 d
NF	6.19 ± 0.52 ^{Aa}	5.9 ± 0.44 ^{Aa}	4.43 ± 0.18 ^{Bb}	4.36 ± 0.46 ^{Bb}	4.34 ± 0.54 ^{Bb}	4.38 ± 0.53 ^{Bb}
SF	6.2 ± 0.59 ^{Aa}	4.33 ± 0.42 ^{Bb}	4.28 ± 0.05 ^{Bb}	4.33 ± 0.29 ^{Bb}	4.25 ± 0.49 ^{Bb}	4.39 ± 0.73 ^{Bb}
ST	6.19 ± 0.35 ^{Aa}	6.11 ± 0.42 ^{Aa}	6.13 ± 0.51 ^{Aa}	6.19 ± 0.61 ^{Aa}	6.12 ± 0.25 ^{Aa}	6.16 ± 0.38 ^{Aa}

Note: Uppercase letters are significant differences in the same row, lowercase letters are significant differences in the same column and the same metric.

Table S4. Changes of Aw value of lamb liver paste with three different treatments during storage period.

Group	0 d	1 d	7 d	14 d	21 d	28 d
NF	0.86 ± 0.13 ^{Aa}	0.87 ± 0.1 ^{Aa}	0.86 ± 0.13 ^{Aa}	0.86 ± 0.15 ^{Aa}	0.87 ± 0.13 ^{Aa}	0.86 ± 0.03 ^{Aa}
SF	0.86 ± 0.07 ^{Aa}	0.86 ± 0.08 ^{Aa}	0.86 ± 0.19 ^{Aa}	0.86 ± 0.08 ^{Aa}	0.86 ± 0.08 ^{Aa}	0.86 ± 0.05 ^{Aa}
ST	0.87 ± 0.18 ^{Aa}	0.88 ± 0.07 ^{Aa}	0.86 ± 0.15 ^{Aa}	0.87 ± 0.11 ^{Aa}	0.87 ± 0.08 ^{Aa}	0.86 ± 0.06 ^{Aa}

Note: Uppercase letters are significant differences in the same row, lowercase letters are significant differences in the same column and the same metric.

Table S5. Changes of L* value of lamb liver paste with three different treatments during storage period.

Group	0 d	1 d	7 d	14 d	21 d	28 d
NF	52.03 ± 3.04 ^{Aa}	52.64 ± 5.97 ^{Aa}	53.63 ± 10.23 ^{Aa}	52.78 ± 5.34 ^{Aa}	54.85 ± 10.62 ^{Aa}	55.61 ± 3.99 ^{Aab}
SF	54.31 ± 4.28 ^{Aa}	55.25 ± 3.08 ^{Aa}	54.42 ± 2.62 ^{Aa}	56.2 ± 3.16 ^{Aa}	55.78 ± 3.74 ^{Aa}	58.38 ± 5.1 ^{Aa}
ST	51.81 ± 1.6 ^{Aa}	48.42 ± 5.03 ^{Aa}	51.25 ± 6.93 ^{Aa}	52.26 ± 2.37 ^{Aa}	53.7 ± 3.65 ^{Aa}	50.43 ± 4.08 ^{Ab}

Note: Uppercase letters are significant differences in the same row, lowercase letters are significant differences in the same column and the same metric.

Table S6. Changes of a* value of lamb liver paste with three different treatments during storage period.

Group	0 d	1 d	7 d	14 d	21 d	28 d
NF	6.03 ± 0.24 ^{Ba}	7.37 ± 0.4 ^{ABb}	8.23 ± 0.75 ^{Ab}	7.54 ± 1.44 ^{Ab}	7.4 ± 0.64 ^{ABb}	8.55 ± 1.02 ^{Ab}
SF	6.19 ± 0.28 ^{Ca}	9.24 ± 1.04 ^{Ba}	10 ± 0.59 ^{ABa}	9.82 ± 1.07 ^{ABa}	10.48 ± 1.23 ^{ABa}	11.08 ± 1.03 ^{Aa}
ST	6.14 ± 0.39 ^{Aa}	5.23 ± 0.43 ^{Bc}	5.14 ± 0.25 ^{Bc}	5.03 ± 0.62 ^{Bc}	4.96 ± 0.68 ^{Bc}	5.75 ± 0.55 ^{ABc}

Note: Uppercase letters are significant differences in the same row, lowercase letters are significant differences in the same column and the same metric.

Table S7. Changes of b* value of lamb liver paste with three different treatments during storage period.

Group	0 d	1 d	7 d	14 d	21 d	28 d
NF	11.91 ± 0.85 ^{Ab}	11.41 ± 0.66 ^{Ab}	12.07 ± 0.83 ^{Ab}	11.73 ± 0.96 ^{Aab}	12.29 ± 1.14 ^{Ab}	12.59 ± 1.46 ^{Ab}
SF	14.1 ± 0.34 ^{Aa}	13.05 ± 0.7 ^{Aa}	13.71 ± 1.55 ^{Aa}	13.58 ± 1.5 ^{Aa}	14.52 ± 0.98 ^{Aa}	14.85 ± 0.68 ^{Aa}
ST	12.11 ± 0.88 ^{Ab}	10.83 ± 1.13 ^{Ab}	11.27 ± 0.47 ^{Ab}	11.15 ± 1.59 ^{Ab}	11.34 ± 1.04 ^{Ab}	12.23 ± 0.7 ^{Ab}

Note: Uppercase letters are significant differences in the same row, lowercase letters are significant differences in the same column and the same metric.

Table S8. Changes of TVB-N in mutton liver paste with three different treatments during storage period.

Group	0 d	1 d	7 d	14 d	21 d	28 d
NF	13.25 ± 0.58 ^{BCa}	16.19 ± 0.84 ^{Aa}	11 ± 1.5 ^{Ca}	11.24 ± 2.08 ^{Cb}	13.07 ± 0.7 ^{Ca}	15.37 ± 1.48 ^{ABa}
SF	13.86 ± 2.23 ^{Aa}	11.68 ± 0.68 ^{Ab}	12.4 ± 1.98 ^{Aa}	14.68 ± 1.37 ^{Aa}	14.56 ± 2.9 ^{Aa}	11.87 ± 0.54 ^{Ab}
ST	13.23 ± 2.51 ^{Aa}	12.62 ± 1.97 ^{Ab}	13.07 ± 0.67 ^{Aa}	14.54 ± 2.61 ^{Aa}	15.38 ± 3.24 ^{Aa}	13.7 ± 2.25 ^{Aab}

Note: Uppercase letters are significant differences in the same row, lowercase letters are significant differences in the same column and the same metric.

Table S9. Changes of TBARS in mutton liver paste with three different treatments during storage period.

Group	0 d	1 d	7 d	14 d	21 d	28 d
NF	3.0 ± 0.05 ^{ABa}	3.6 ± 0.04 ^{Aa}	2.9 ± 0.01 ^{Ba}	2.0 ± 0.04 ^{Ca}	2.1 ± 0.05 ^{Ca}	1.9 ± 0.02 ^{Ca}
SF	3.8 ± 0.04 ^{Aa}	2.9 ± 0.05 ^{Bb}	2.6 ± 0.04 ^{BCa}	2.6 ± 0.08 ^{BCa}	2.0 ± 0.02 ^{CDa}	1.7 ± 0.01 ^{Da}
ST	3.7 ± 0.08 ^{Aa}	3.0 ± 0.02 ^{Bb}	2.6 ± 0.01 ^{Ba}	2.6 ± 0.02 ^{Ba}	1.9 ± 0.02 ^{Ca}	1.7 ± 0.01 ^{Ca}

Note: Uppercase letters are significant differences in the same row, lowercase letters are significant differences in the same column and the same metric.

Table S10. Changes of moisture content in lamb liver paste with three different treatments during storage period.

Group	0 d	1 d	7 d	14 d	21 d	28 d
NF	40.76 ± 1.67 ^{Aa}	39.59 ± 6.32 ^{Aa}	39.34 ± 5.71 ^{Aa}	40.19 ± 2.86 ^{Aa}	39.46 ± 5.59 ^{Aa}	39.73 ± 3.22 ^{Aa}
SF	39.19 ± 2.13 ^{Aa}	39.18 ± 5.77 ^{Aa}	39.52 ± 6.1 ^{Aa}	39.65 ± 2.49 ^{Aa}	39.94 ± 5.93 ^{Aa}	38.79 ± 2.39 ^{Aa}
ST	39.87 ± 2.58 ^{Aa}	38.9 ± 4.51 ^{Aa}	39.07 ± 3.53 ^{Aa}	39.62 ± 5.47 ^{Aa}	39.13 ± 3.82 ^{Aa}	38.59 ± 2.68 ^{Aa}

Note: Uppercase letters are significant differences in the same row, lowercase letters are significant differences in the same column and the same metric.

Table S11. Changes of protein content in lamb liver paste with three different treatments during storage period.

Group	0 d	1 d	7 d	14 d	21 d	28 d
NF	11.66 ± 0.54 ^{Aa}	11.42 ± 1.34 ^{Aa}	12.32 ± 1.74 ^{Aa}	12.81 ± 0.93 ^{Aa}	11.85 ± 1.75 ^{Aa}	12.59 ± 1.72 ^{Aa}
SF	11.32 ± 0.68 ^{Aa}	11.11 ± 1.27 ^{Aa}	11.4 ± 1.65 ^{Aab}	10.94 ± 1.38 ^{Ab}	10.99 ± 0.74 ^{Aa}	11.47 ± 1.16 ^{Aab}
ST	11.75 ± 1.28 ^{Aa}	10.18 ± 1.58 ^{ABa}	9.72 ± 1.02 ^{ABb}	9.32 ± 1.33 ^{Bb}	9.72 ± 1.83 ^{ABa}	10.14 ± 0.71 ^{ABb}

Note: Uppercase letters are significant differences in the same row, lowercase letters are significant differences in the same column and the same metric.

Table S12. Changes of crude fat content in lamb liver paste with three different treatments during storage period.

Group	0 d	1 d	7 d	14 d	21 d	28 d
NF	3.04 ± 0.64 ^{Bb}	4.35 ± 0.39 ^{Ab}	3.78 ± 0.23 ^{ABb}	4.19 ± 0.09 ^{Ab}	3.91 ± 0.49 ^{Ab}	4.15 ± 0.61 ^{Ac}
SF	3.77 ± 0.42 ^{Ca}	4.04 ± 0.69 ^{Cb}	4.59 ± 0.56 ^{BCb}	4.6 ± 0.09 B^{Cb}	5.36 ± 0.57 ^{ABa}	5.71 ± 0.51 ^{Ab}
ST	3.07 ± 0.11 ^{Bb}	5.75 ± 0.34 ^{Aa}	6.6 ± 1.36 ^{Aa}	6.02 ± 0.97 ^{Aa}	5.5 ± 0.39 ^{Aa}	6.78 ± 0.65 ^{Aa}

Note: Uppercase letters are significant differences in the same row, lowercase letters are significant differences in the same column and the same metric.