

**Supplementary Table S2.** Mean populations (in log<sub>10</sub> cfu/gr) of Total Mesophilic Counts, Total Psychrophilic Counts, *Brochothrix thermosphacta* and Lactic Acid Bacteria in meat pieces from thigh region (standard deviation in parenthesis).

Lot	Storage (Days)	Treatment											Sig.
		Co	Ch	Ch + or	Ch + va	Ch + or + va	Va	Al	Al + or	Al + va	Al + or + va	Al + ol + va	
TMC	0	5.18 (0.20) <sup>Aa</sup>	5.18 (0.2) <sup>Aab</sup>	5.18 (0.20) <sup>Aab</sup>	5.18 (0.20) <sup>Aab</sup>	5.18 (0.20) <sup>Aab</sup>	5.18 (0.20) <sup>Aa</sup>	5.18 (0.20) <sup>Aa</sup>	5.18 (0.20) <sup>Aa</sup>	5.18 (0.20) <sup>Aa</sup>	5.18 (0.20) <sup>Aa</sup>	5.18 (0.20) <sup>Aa</sup>	NS
	1	6.80 (1.49) <sup>Aab</sup>	4.21 (0.70) <sup>Aa</sup>	5.40 (1.20) <sup>Aab</sup>	5.63 (0.79) <sup>Aab</sup>	4.87 (0.04) <sup>Aab</sup>	5.47 (0.01) <sup>Aab</sup>	5.60 (0.15) <sup>Aa</sup>	6.46 (0.56) <sup>Aab</sup>	6.06 (0.19) <sup>Ab</sup>	5.87 (0.04) <sup>Aab</sup>	6.00 (0.01) <sup>Aab</sup>	NS
	3	6.60 (0.59) <sup>ABCab</sup>	5.23 (0.61) <sup>ABab</sup>	4.74 (0.30) <sup>Aa</sup>	4.81 (0.36) <sup>Aa</sup>	5.19 (1.04) <sup>Aa</sup>	6.69 (0.42) <sup>ABCbc</sup>	6.39 (0.12) <sup>ABCb</sup>	6.95 (0.06) <sup>BCb</sup>	6.17 (0.21) <sup>ABCb</sup>	7.37 (0.53) <sup>Cab</sup>	7.47 (0.49) <sup>Cbc</sup>	*
	7	5.70 (1.41) <sup>Aa</sup>	5.30 (0.33) <sup>Aab</sup>	5.87 (0.21) <sup>Aab</sup>	5.96 (0.12) <sup>Aab</sup>	5.95 (0.06) <sup>Aab</sup>	5.60 (0.01) <sup>Aab</sup>	6.60 (0.15) <sup>Abc</sup>	7.34 (0.70) <sup>Ab</sup>	6.77 (0.01) <sup>Ac</sup>	7.32 (0.91) <sup>Aab</sup>	7.00 (0.01) <sup>Abc</sup>	NS
	14	6.00 (0.01) <sup>ABab</sup>	5.74 (0.17) <sup>Abc</sup>	6.92 (0.61) <sup>ABab</sup>	6.69 (0.42) <sup>ABb</sup>	6.84 (0.08) <sup>ABb</sup>	6.53 (0.61) <sup>ABabc</sup>	7.14 (0.28) <sup>ABc</sup>	7.14 (0.28) <sup>ABb</sup>	6.90 (0.01) <sup>ABc</sup>	7.54 (0.55) <sup>Bb</sup>	7.44 (0.65) <sup>ABbc</sup>	*
	21	7.17 (0.21) <sup>ABb</sup>	7.17 (0.21) <sup>ABc</sup>	7.17 (0.21) <sup>ABb</sup>	6.74 (0.05) <sup>ABb</sup>	6.21 (0.70) <sup>Aab</sup>	6.95 (0.06) <sup>ABc</sup>	6.97 (0.03) <sup>ABbc</sup>	7.09 (0.42) <sup>ABb</sup>	6.81 (0.14) <sup>ABc</sup>	7.75 (0.58) <sup>Bb</sup>	8.00 (0.01) <sup>Bc</sup>	**
Sig.		***	***	***	***	*	***	***	***	***	***	***	
TPC	0	5.00 (0.01) <sup>Aa</sup>	5.00 (0.01) <sup>Aab</sup>	5.00 (0.01) <sup>Aab</sup>	5.00 (0.01) <sup>Aa</sup>	5.00 (0.01) <sup>Aa</sup>	5.00 (0.01) <sup>Aa</sup>	5.00 (0.01) <sup>Aa</sup>	5.00 (0.01) <sup>Aa</sup>	5.00 (0.01) <sup>Aa</sup>	5.00 (0.01) <sup>Aa</sup>	5.00 (0.01) <sup>Aa</sup>	NS
	1	7.00 (1.50) <sup>Aab</sup>	4.17 (0.21) <sup>Aa</sup>	4.74 (0.70) <sup>Aa</sup>	5.77 (0.49) <sup>Aab</sup>	5.70 (1.20) <sup>Aab</sup>	5.90 (0.15) <sup>Ab</sup>	5.90 (0.01) <sup>Ab</sup>	6.69 (0.67) <sup>Ab</sup>	6.30 (0.15) <sup>Ab</sup>	6.13 (0.32) <sup>Ab</sup>	6.00 (0.01) <sup>Ab</sup>	NS
	3	7.30 (0.01) <sup>Cab</sup>	6.19 (0.91) <sup>ABCabc</sup>	5.09 (0.42) <sup>ABab</sup>	5.31 (1.00) <sup>Aa</sup>	6.61 (1.00) <sup>ABCab</sup>	6.95 (0.06) <sup>ABCcd</sup>	7.14 (0.28) <sup>BCc</sup>	7.39 (0.12) <sup>Cbc</sup>	6.69 (0.01) <sup>ACb</sup>	7.69 (0.12) <sup>Cc</sup>	7.95 (0.06) <sup>Cc</sup>	**
	7	7.17 (0.21) <sup>ABab</sup>	6.38 (0.49) <sup>Abc</sup>	6.51 (0.04) <sup>Abc</sup>	6.67 (0.23) <sup>Aabc</sup>	7.09 (0.12) <sup>ABab</sup>	6.84 (0.08) <sup>Ac</sup>	7.84 (0.08) <sup>BCd</sup>	8.30 (0.33) <sup>Ccd</sup>	7.84 (0.28) <sup>BCc</sup>	8.30 (0.01) <sup>Ccd</sup>	8.17 (0.21) <sup>Ccd</sup>	***
	14	7.39 (0.42) <sup>Aab</sup>	7.30 (0.33) <sup>Ac</sup>	7.45 (0.63) <sup>ABCc</sup>	7.65 (0.06) <sup>ABCDc</sup>	7.69 (0.12) <sup>ABCDb</sup>	7.39 (0.12) <sup>ABd</sup>	8.54 (0.08) <sup>De</sup>	8.30 (0.01) <sup>ABCDcd</sup>	7.90 (0.15) <sup>ABCDc</sup>	8.45 (0.21) <sup>BCDd</sup>	8.47 (0.01) <sup>CDd</sup>	*
	21	9.70 (1.41) <sup>Ab</sup>	8.17 (0.21) <sup>Ad</sup>	7.69 (0.42) <sup>Ac</sup>	7.27 (0.4) Abc	7.54 (0.28) <sup>Aab</sup>	7.47 (0.21) <sup>Ad</sup>	8.3 (0.01) <sup>Ade</sup>	8.65 (0.06) <sup>Ad</sup>	8.17 (0.21) <sup>Ac</sup>	8.47 (0.21) <sup>Ad</sup>	8.39 (0.21) <sup>Ad</sup>	NS
Sig.		***	***	***	***	***	***	***	***	***	***	***	
<i>B. thermosphacta</i>	0	4.52 (0.13) <sup>Aa</sup>	4.52 (0.13) <sup>Aab</sup>	4.52 (0.13) <sup>Aa</sup>	4.52 (0.13) <sup>Aa</sup>	4.52 (0.13) <sup>Aa</sup>	4.52 (0.13) <sup>Aa</sup>	4.52 (0.13) <sup>Aa</sup>	4.52 (0.13) <sup>Aa</sup>	4.52 (0.13) <sup>Aab</sup>	4.52 (0.13) <sup>Aa</sup>	4.52 (0.13) <sup>Aa</sup>	NS
	1	4.47 (0.49) <sup>Aa</sup>	3.43 (0.30) <sup>Aa</sup>	4.24 (1.58) <sup>Aa</sup>	4.32 (0.91) <sup>Aa</sup>	4.34 (0.70) <sup>Aa</sup>	4.74 (0.05) <sup>Aa</sup>	5.02 (0.28) <sup>Aab</sup>	4.77 (0.49) <sup>Aa</sup>	4.30 (0.33) <sup>Aa</sup>	5.06 (0.08) <sup>Aab</sup>	4.00 (0.01) <sup>Ab</sup>	NS

Sig.	3	5.39 (0.12) <sup>ABab</sup>	4.72 (0.81) <sup>ABab</sup>	3.77 (0.21) <sup>Aa</sup>	3.95 (0.06) <sup>ABa</sup>	5.30 (1.41) <sup>ABa</sup>	4.90 (0.15) <sup>ABa</sup>	6.02 (0.14) <sup>Bbc</sup>	6.09 (0.42) <sup>Bab</sup>	5.17 (0.21) <sup>ABbc</sup>	4.87 (0.04) <sup>ABab</sup>	5.30 (0.01) <sup>ABc</sup>	*
	7	6.17 (0.21) <sup>DEab</sup>	4.24 (0.28) <sup>Aab</sup>	5.47 (0.10) <sup>BCDa</sup>	4.54 (0.08) <sup>ABa</sup>	4.97 (0.40) <sup>ABCa</sup>	4.84 (0.08) <sup>ABa</sup>	6.90 (0.01) <sup>Ec</sup>	6.67 (0.51) <sup>DEb</sup>	6.00 (0.01) <sup>CDEd</sup>	6.36 (0.58) <sup>DEc</sup>	5.69 (0.12) <sup>CDcd</sup>	***
	14	6.87 (1.41) <sup>Aab</sup>	5.57 (0.12) <sup>Abc</sup>	6.26 (0.44) <sup>Aa</sup>	4.00 (0.01) <sup>Aa</sup>	5.02 (0.91) <sup>Aa</sup>	5.30 (0.01) <sup>Ab</sup>	6.30 (0.85) <sup>Abc</sup>	5.75 (0.58) <sup>Aab</sup>	6.00 (0.12) <sup>Ad</sup>	5.69 (0.01) <sup>Abc</sup>	5.39 (0.01) <sup>Ac</sup>	NS
	21	8.71 (1.07) <sup>Db</sup>	6.17 (0.21) <sup>BCc</sup>	6.02 (0.28) <sup>BCa</sup>	4.00 (0.01) <sup>Aa</sup>	5.02 (0.91) <sup>ABa</sup>	6.24 (0.08) <sup>BCc</sup>	6.60 (0.01) <sup>CDc</sup>	6.24 (0.55) <sup>BCab</sup>	5.81 (0.14) <sup>ABCcd</sup>	5.69 (0.12) <sup>ABCbc</sup>	5.90 (0.15) <sup>ABCd</sup>	***
		***	***	***	NS	NS	**	***	***	***	***	**	
LAB	0	2.00 (0.01) <sup>Aa</sup>	2.00 (0.01) <sup>Aa</sup>	2.00 (0.01) <sup>Aa</sup>	2.00 (0.01) <sup>Aa</sup>	2.00 (0.01) <sup>Aa</sup>	2.00 (0.01) <sup>Aa</sup>	2.00 (0.01) <sup>Aa</sup>	2.00 (0.01) <sup>Aa</sup>	2.00 (0.01) <sup>Aa</sup>	2.00 (0.01) <sup>Aa</sup>	2.00 (0.01) <sup>Aa</sup>	NS
	1	3.55 (0.49) <sup>ABb</sup>	2.00 (0.01) <sup>Aa</sup>	2.00 (0.01) <sup>Aa</sup>	2.00 (0.01) <sup>Aa</sup>	2.00 (0.01) <sup>Aa</sup>	2.00 (0.01) <sup>Aa</sup>	2.87 (0.04) <sup>ABb</sup>	3.81 (0.14) <sup>Bb</sup>	3.02 (0.91) <sup>ABabc</sup>	2.74 (0.70) <sup>ABa</sup>	3.90 (0.01) <sup>Bb</sup>	*
	3	3.84 (0.18) <sup>BCbc</sup>	2.00 (0.01) <sup>Aa</sup>	2.00 (0.01) <sup>Aa</sup>	2.00 (0.01) <sup>Aa</sup>	2.00 (0.01) <sup>Aa</sup>	3.77 (0.10) <sup>BCb</sup>	3.54 (0.28) <sup>Bc</sup>	3.81 (0.14) <sup>BCb</sup>	2.23 (0.33) <sup>Aab</sup>	3.92 (0.03) <sup>BCb</sup>	4.17 (0.01) <sup>Cb</sup>	***
	7	3.54 (0.08) <sup>Ab</sup>	4.20 (0.76) <sup>Ab</sup>	3.81 (0.36) <sup>Ab</sup>	3.81 (0.36) <sup>Ab</sup>	3.87 (0.21) <sup>Ab</sup>	3.87 (0.21) <sup>Ab</sup>	3.77 (0.21) <sup>Ac</sup>	4.65 (0.63) <sup>Abc</sup>	4.00 (0.01) <sup>Abcd</sup>	4.54 (0.28) <sup>Ab</sup>	4.00 (0.01) <sup>Ab</sup>	NS
	14	4.54 (0.08) <sup>Ac</sup>	4.50 (0.14) <sup>Ab</sup>	4.65 (0.63) <sup>Ab</sup>	4.24 (0.08) <sup>Ab</sup>	4.74 (0.05) <sup>Ac</sup>	4.47 (0.49) <sup>Abc</sup>	4.04 (0.11) <sup>Ac</sup>	4.95 (0.29) <sup>Abc</sup>	4.69 (0.01) <sup>Ad</sup>	4.92 (0.10) <sup>Abc</sup>	4.69 (0.01) <sup>Ac</sup>	NS
	21	5.14 (0.28) <sup>ABd</sup>	4.84 (0.28) <sup>ABb</sup>	5.81 (0.04) <sup>Bc</sup>	5.65 (0.06) <sup>ABc</sup>	5.09 (0.12) <sup>ABc</sup>	5.11 (0.36) <sup>ABc</sup>	5.17 (0.01) <sup>ABd</sup>	5.14 (0.28) <sup>ABc</sup>	4.74 (0.70) <sup>Accd</sup>	5.84 (0.08) <sup>Bc</sup>	5.17 (0.21) <sup>ABd</sup>	*
		***	***	***	***	***	***	***	***	***	***	***	

Treatment: Co: Control; Ch: Chitosan; Ch + or: Chitosan + oregano; Ch + va: Chitosan + vacuum; Ch + or + va: Chitosan + oregano + vacuum; Va: Vacuum; Al: Alginate; Al + or: Alginate + oregano; Al + va: Alginate + vacuum; Al + or + va: Alginate + oregano + vacuum; Al + ol + va: Alginate + olive + vacuum.

<sup>A-E</sup> Mean values in the same row (corresponding to the same days of storage) not followed by a common uppercase letter differ significantly ( $p$ -value < 0.05).

<sup>a-e</sup> Mean values in the same column (corresponding to the same treatment) not followed by a common lowercase letter differ significantly ( $p$ -value < 0.05).

\*  $p$ -value < 0.05; \*\*  $p$ -value < 0.01; \*\*\*  $p$ -value < 0.001; <sup>NS</sup> no significance ( $p$ -value > 0.05).