

Supplementary Materials: Meat Starter Culture Reduces *Aspergillus parasiticus* Production of Aflatoxins on Meat-Based and Salami Model Media

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Table S1. Aflatoxin B1 production (mean \pm SD $\mu\text{g/kg}$) and colony diameter (mean \pm SD mm) by *A. parasiticus* grown on cooked meat agar media at 25 °C and at temperatures in the ripening chamber for 21 days.

Medium and incubation conditions	AFB1 ($\mu\text{g/kg}$)					COLONY DIAMETER (mm)				
	2 days	7 days	14 days	21 days	KW (P)	2 days	7 days	14 days	21 days	KW (P)
CMA IN	1.86 ^d ± 0.17	9.18 ^c ± 0.44	116.94 ^b ± 2.79	397.89 ^{a,*} ± 5.68	≤ 0.001	20.50 ^{c,*} ± 0.34	70.00 ^{b,*} ± 0.26	85.00 ^{a,*} ± 0.00	85.00 ^{a,*} ± 0.00	≤ 0.001
CMA-SC IN	1.03 ^c ± 0.15	2.54 ^a ± 0.29	1.67 ^b ± 0.38	1.86 ^{b,*} ± 0.43	0.034	14.17 ^{d,*} ± 0.17	42.83 ^{c,*} ± 0.31	50.33 ^{b,*} ± 0.21	62.67 ^{a,*} ± 0.84	≤ 0.001
CMA-GYE IN	7.29 ^{d,*} ± 0.38	4652.73 ^{c,*} ± 73.11	12356.73 ^{b,*} ± 104.63	16330.81 ^{a,*} ± 146.72	≤ 0.001	23.50 ^{d,*} ± 0.22	60.50 ^{c,*} ± 0.22	75.00 ^{b,*} ± 0.20	77.50 ^{a,*} ± 0.22	≤ 0.001
CMA-GYESC IN	17.16 ^{d,*} ± 2.60	2667.08 ^{c,*} ± 132.34	9696.74 ^{b,*} ± 158.44	12939.97 ^{a,*} ± 120.91	≤ 0.001	19.83 ^{c,*} ± 0.17	56.50 ^{b,*} ± 0.56	85.00 ^{a,*} ± 0.00	85.00 ^{a,*} ± 0.00	≤ 0.001
CMA RC	1.09 ^d ± 0.20	3.46 ^c ± 0.18	4.56 ^b ± 0.13	6.21 ^a ± 0.08	≤ 0.001	15.83 ^{d,*} ± 0.31	46.83 ^{c,*} ± 0.31	60.50 ^{b,*} ± 0.56	72.17 ^a ± 0.40	≤ 0.001
CMA-SC RC	1.62 ^a ± 0.27	2.43 ^a ± 0.35	1.93 ^a ± 0.40	2.16 ^a ± 0.42	0.365	10.50 ^{c,*} ± 0.34	10.83 ^{c,*} ± 0.31	22.17 ^{b,*} ± 0.31	25.50 ^a ± 0.50	≤ 0.001
CMA-GYE RC	7.86 ^{c,*} ± 0.77	10789.54 ^{b,*} ± 124.84	14536.24 ^{a,*} ± 193.29	14886.08 ^{a,*} ± 130.27	≤ 0.001	20.50 ^{d,*} ± 0.34	44.50 ^{c,*} ± 0.43	61.17 ^{b,*} ± 0.40	65.00 ^a ± 0.37	≤ 0.001
CMA-GYESC RC	34.52 ^{d,*} ± 5.23	8496.85 ^{c,*} ± 756.01	13873.48 ^{a,*} ± 284.95	12065.03 ^{b,*} ± 239.55	≤ 0.001	18.00 ^{d,*} ± 0.26	46.00 ^{c,*} ± 0.37	68.83 ^{b,*} ± 0.40	76.17 ^a ± 0.40	≤ 0.001

KW – Kruskal-Wallis test; P - statistical significance. For abbreviations, see the paragraph 4.2 Culture media preparation. IN: incubation at constant temperature of 25 °C; RC: temperatures typical for salami ripening presented in Fig. S1. a-d: data with different superscript letters within row differ significantly ($p \leq 0.05$). * represents statistically significant difference between same type of media and the same incubation treatment incubated with and without SC ($p \leq 0.05$).

Table S2. Aflatoxin B1 production (mean \pm SD $\mu\text{g/kg}$) and colony diameter (mean \pm SD mm) by *A. parasiticus* grown on salami model media at 25 °C and at ripening chamber temperatures during 21 days.

Medium and incubation conditions	AFB1 ($\mu\text{g/kg}$)					COLONY DIAMETER (mm)				
	2 days	7 days	14 days	21 days	KW (P)	2 days	7 days	14 days	21 days	KW (P)
SM-G IN	40.21 ^{d,*} ± 6.11	2726.36 ^{c,*} ± 46.23	4148.87 ^{b,*} ± 25.44	7357.69 ^{a,*} ± 58.02	≤ 0.001	5.33 ^{d,*} ± 0.21	19.67 ^c ± 0.33	24.67 ^{b,*} ± 0.49	33.50 ^{a,*} ± 0.56	≤ 0.001
SM-GSC IN	17.33 ^{c,*} ± 0.71	1383.89 ^{b,*} ± 56.95	1397.64 ^{b,*} ± 77.58	1748.36 ^{a,*} ± 36.71	≤ 0.001	9.50 ^{d,*} ± 0.34	19.67 ^{c,*} ± 0.49	35.83 ^{b,*} ± 0.31	43.67 ^{a,*} ± 0.49	≤ 0.001
SM-GYE IN	12.15 ^d ± 0.88	2226.37 ^{c,*} ± 107.82	4405.24 ^b ± 115.53	6169.45 ^{a,*} ± 112.82	≤ 0.001	5.83 ^{d,*} ± 0.31	21.50 ^{c,*} ± 0.43	34.00 ^{b,*} ± 0.37	40.67 ^{a,*} ± 0.33	≤ 0.001
SM-GYESC IN	13.58 ^d ± 1.26	1907.98 ^{c,*} ± 186.03	4437.13 ^b ± 135.56	5810.05 ^{a,*} ± 50.95	≤ 0.001	9.83 ^{d,*} ± 0.31	28.50 ^{c,*} ± 0.34	43.67 ^{b,*} ± 0.49	52.00 ^{a,*} ± 0.26	≤ 0.001
SM-G RC	9.18 ^c ± 0.29	1901.59 ^{b,*} ± 59.60	3394.03 ^{b,*} ± 73.95	3766.93 ^{a,*} ± 88.42	≤ 0.001	5.33 ^{d,*} ± 0.21	12.00 ^{c,*} ± 0.26	17.33 ^{b,*} ± 0.80	19.17 ^{a,*} ± 0.40	≤ 0.001
SM-GSC RC	8.31 ^c ± 0.28	1089.05 ^{b,*} ± 19.47	1439.15 ^{a,*} ± 56.76	1362.30 ^{a,*} ± 27.49	≤ 0.001	7.83 ^{d,*} ± 0.31	17.17 ^{c,*} ± 0.79	21.83 ^{b,*} ± 0.17	23.50 ^{a,*} ± 0.34	≤ 0.001
SM-GYE RC	8.37 ^d ± 0.32	1427.43 ^{b,*} ± 25.95	1361.61 ^{c,*} ± 41.38	1826.73 ^{a,*} ± 73.88	≤ 0.001	5.33 ^{d,*} ± 0.21	14.83 ^{c,*} ± 0.31	20.83 ^{b,*} ± 0.31	23.50 ^{a,*} ± 0.34	≤ 0.001
SM-GYESC RC	10.51 ^d ± 0.73	1063.36 ^{c,*} ± 22.26	1941.55 ^{a,*} ± 100.78	1450.81 ^{b,*} ± 51.93	≤ 0.001	8.50 ^{d,*} ± 0.22	13.00 ^{c,*} ± 0.26	20.83 ^b ± 0.31	23.17 ^a ± 0.40	≤ 0.001

KW – Kruskal-Wallis test; P - statistical significance. For abbreviations, see the paragraph 4.2 Culture media preparation. IN: incubation at constant temperature of 25 °C; RC: temperatures typical for salami ripening presented in Fig. S1. a-d: data with different superscript letters within row differ significantly ($p \leq 0.05$). * represents statistically significant difference between same type of media and the same incubation treatment incubated with and without SC ($p \leq 0.05$).

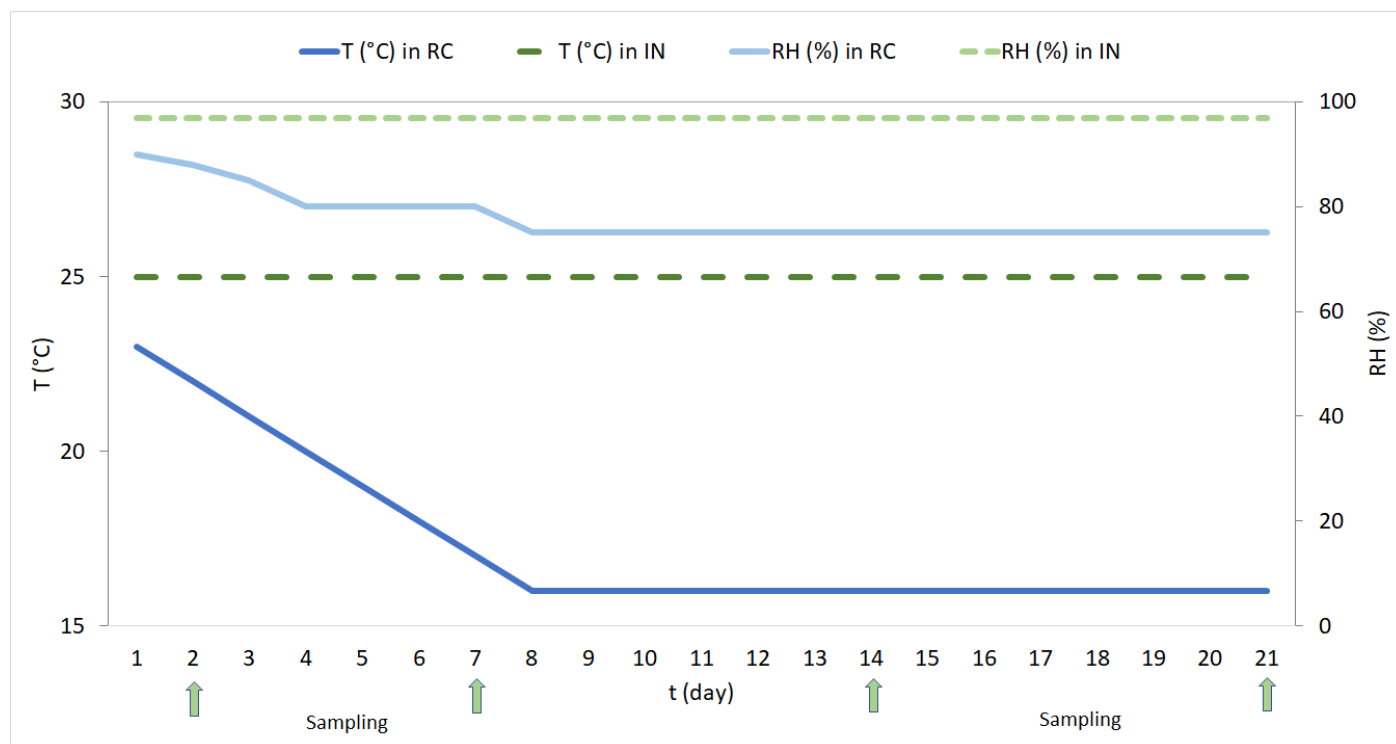


Figure S1. Temperature and relative humidity during the 21-day incubation of media in the ripening chamber (RC) and in the incubator (IN).