

Supplementary Material

The Enterotoxin Gene Profiles and Enterotoxin Production of *Staphylococcus aureus* Strains Isolated from Artisanal Cheeses in Belgium

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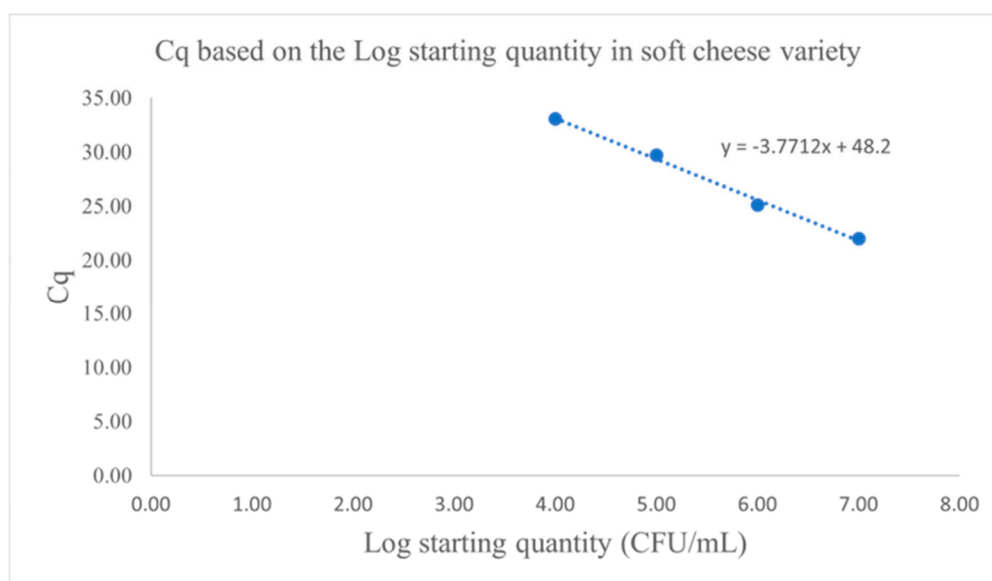
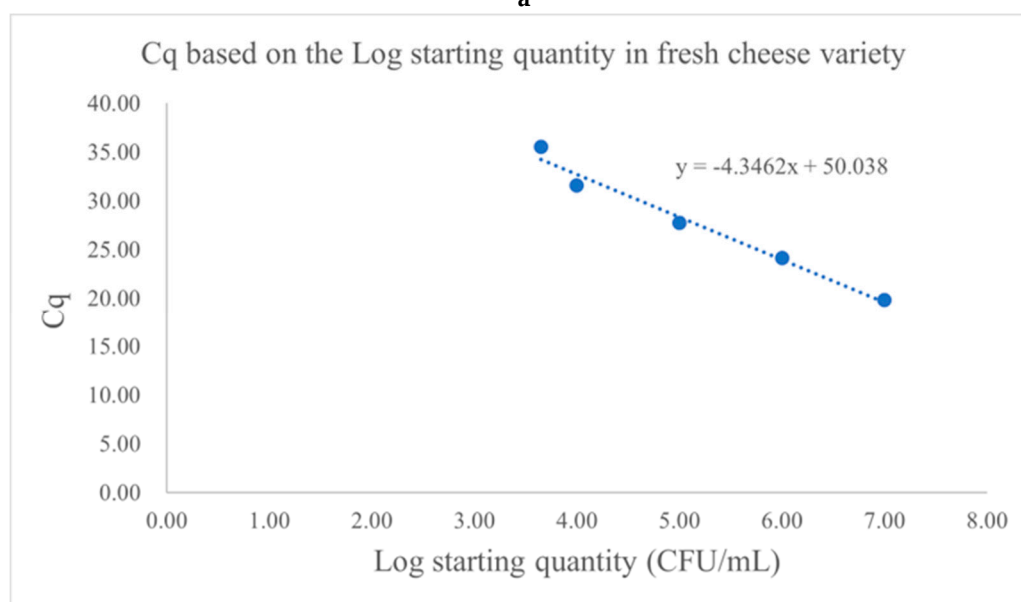
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Table S1. Identification of genes coding for enterotoxins with the NAuRA genetic tool in 49 strains of the *S. aureus* isolated from the different Belgian artisanal cheeses. Each number corresponds to an allele variant coding for an enterotoxin. When toxin was detected via LC-MS, the letter T was added. NA: non-applicable, toxin not searched. +: SEG truncated gene.

Strain	SEA	SEC	SEG	SEI	SEL	SEM	SEN	SEO	SEP	SEIU	SEIX	SEY	SEIW	SEIZ	TSST1
03A-1 D0			3/T	4/T		23/T	3/T	3/T	2/T		9/T				
03A-1 DE											6/T				
03A-2 D0											6/T				
03B-1 D0											6/T				
03B-2 D0											6/T				
03C-1 D0											6/T				
03C-2 D0											6/T				
13A-1 DE		14/T			2/T						7/T		13/NA		2/T
13B-1 D0	2/T	2/T			2/T						7		13/NA		2/T
13C-1 DE	2/T	2/T			2/T						7		13/NA		2/T
18C-1 D0			16	14/T		22/T	15	11		12/T	31/T		28/NA		
23A-1 D0			+/T	8/T		21	6	5		9	12/T	4/T		1/T	
23A-1 DE			+	8		21	6	5		9	12/T	4/T		1/T	
23A-2 D0			+	8/T		21	6	5		9	12/T	4/T		1/T	
23A-2 DE			+	8		21	6	5		9	12/T	4/T		1/T	
23B-1 D0			+	8/T		21	6	5		9	12/T	4/T		1/T	
23B-1 DE			+	8		21	6	5		9	12	4/T		1/T	
23B-2 D0			+	8		21	6	5		9	12/T	4/T		1/T	
23B-2 DE			+	8		21	6	5		9	12	4/T		1/T	
23C-1 D0			+	8/T		21	6	5		9	12/T	4/T		1/T	
23C-1 DE			+	8		21	6	5		9	12/T	4/T		1/T	

23C-2 DE		+/T	8		21	6	5	9	12	4/T		1/T
24B-1 DE		+/T	8		21/T	6	5/T	9	12	4/T		1/T
26C-1 DE		16	14/T		22/T	15	11/T	12/T	31/T		28/NA	
27A-1 D0	15	+	8	1/T		6	5	9	12	4/T		1/T 5/T
27A-2 D0	7/T	+	8/T	1/T		6	5	9	12/T	4/T		1/T 5/T
27B-1 D0	7/T	+	8/T	1/T		6	5	9	12/T	4/T		1/T 5/T
27B-2 D0	7/T	+	8	1/T		6	5	9	12/T	4/T		1/T 5/T
27C-1 D0	7/T	+	8/T	1/T		6	5	9	12/T	4/T		1/T 5/T
27C-2 D0	7/T	+	8	1/T		6	5	9	12	4/T		1/T 5/T
28A-1 D0									56/T			
28B-1 D0									56/T			
28B-2 D0									56/T			
29A-1 D0									6/T			
29A-1 DE (low coverage)									6/T			
29A-2 D0									6/T			
29A-2 DE (low coverage)									6/T			
29B-1 D0 (contami nation)									6/T			
29B-2 D0									6/T			
29C-1 D0									6/T			
29C-1 DE									6/T			
29C-2 D0									6/T			
29C-2 DE									6/T			
32A-1 D0		+/T	8			6	27	9	12	4/T		1/T
32A-2 D0		+/T	8/T			6	5	9	12/T	4/T		1/T
32B-1 D0		+/T	8/T			6	5	9	12/T	4/T		1/T
32B-2 D0		+/T	8/T			6	5	9	12/T	4/T		1/T
32C-1 D0		+/T	8/T			6	5	9	12/T	4/T		1/T
32C-2 D0		+/T	8/T			6	5	9	12/T	4/T		1/T

**a****b**

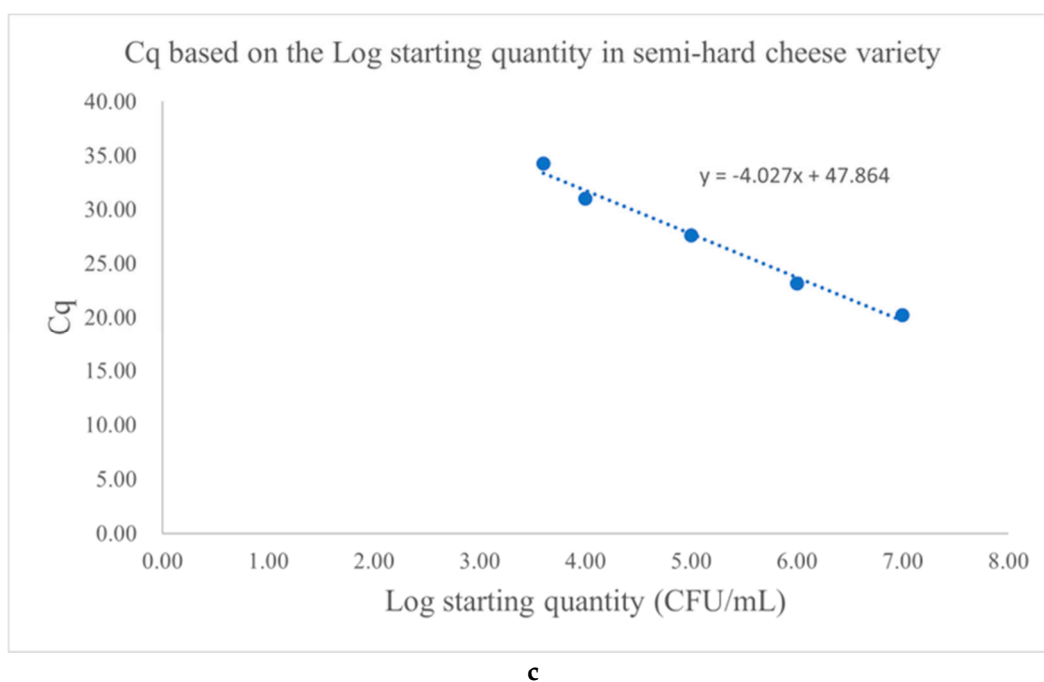


Figure S1. Standard curve for *nuc* gene qPCR of cheese suspensions inoculated with *S. aureus* ATCC29213.

Table S2. Description of the main characteristics of the different cheese varieties studied.

Variety	Type of cheese	Sub-type of cheese	Ripening time (weeks)	Shelf life (days)	Origin of milk	Type of milk
1	SC	Smear-coat	3	40	Cow	Raw
2	FC	Type maquée	0	19	Cow	Raw
3	FC	Type maquée	0	14	Cow	Raw
4	FC	Type maquée	0	16	Cow	Pasteurized
5	FC	Mold-drained	0	10	Ewe	Pasteurized
6	SC	Bloomy rind	2	30	Goat	Raw
7	FC	Type maquée	0	7	Cow	Raw
8	FC	Type maquée	0	12	Cow	Raw
9	SHC	Type Gouda	8	21	Ewe	Pasteurized
10	SHC	Type Saint-Paulin	12	21	Ewe	Raw
11	SHC	Type Saint-Paulin	6	14	C	Raw
12	SHC	Curd-pressed	24	14	Cow	Raw
13	FC	Fresh	0	15	Goat	Raw
14	SHC	Type Gouda	8	21	Cow	Pasteurized
15	SHC	Type Gouda	3	30	Cow	Pasteurized
16	FC	Mold-drained	0	8	Goat	Raw
17	FC	Mold-drained	0	14	Cow	Raw
18	SHC	Type Gouda	6	21	Cow	Raw
19	SC	Bloomy rind	3	30	Cow	Pasteurized
20	SC	Bloomy rind	2	30	Cow	Raw
21	SHC	Type Saint-Paulin	3	21	Cow	Raw
22	FC	Type maquée	0	10	Goat	Raw
23	SHC	Type Saint-Paulin	6	30	Cow	Raw

24	SHC	Type Saint-Paulin	2	21	Cow	Raw
25	FC	Type maquée	0	10	Cow	Raw
26	SHC	Type Saint-Paulin	5	14	Cow	Raw
27	SC	Smear-coat	2	30	Cow	Raw
28	FC	Type maquée	0	10	Cow	Raw
29	SC	Bloomy rind	3	28	Cow	Raw
30	SC	Smear-coat	4	30	Cow	Raw
31	SC	Smear-coat	3	40	Cow	Raw
32	SHC	Type Saint-Paulin	3	14	Cow	Raw

Legend: SC: soft cheese; FC: fresh cheese; SHC: semi-hard cheese. In Belgium, 'type maquée' is a typical white cheese/cottage cheese originating from Wallonia. Lost samples are shown in grey.