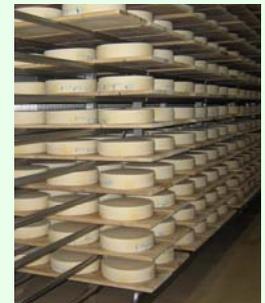


Wooden boards used for cheese ripening

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1. Introduction

Due to its porous structure wood was nearly eliminated in food processing during the last decades. However, in traditional cheese ripening, wood is given preference to stainless steel or plastics. Hence, the aim of our study was to evaluate cleaning and sanitation procedures that guarantee the hygienic safety of cheeses when ripened on wooden surfaces.



2. Material and Methods

Longitudinally cut smooth spruce boards (2-3 cm thick) were cut into 7-cm squares. Only blocks without splits or knots were used.



Contamination with *Listeria monocytogenes* (10^5 - 10^6 CFU/cm²). Thereafter the blocks were stored in a wet chamber at 21-28°C.



Cleaning: Soaking 15 min in a solution of hot (50°C) alkaline detergent followed by brushing for approx. 30 sec and rinsing with hot water



Heat desinfection: 80°C, 5 min and 65°C, 15 min, respectively



Sample preparation: Planing off 2 mm wood surface

Detection and enumeration of *Li. monocytogenes* in the wood shavings (3-4g) according to ISO 11290-1&2



3. Results and Discussion

After contamination *Listeria* counts increased 0.8 log on average (n=9) during 20-24 h storage indicating absence of antimicrobial properties of the wood in use.

Li. monocytogenes was not detected in the wood shavings after cleaning and heat desinfection at 80°C and 65°C, respectively. Contrary, cleaning without desinfection was not able to remove the germs from the upper 2 mm wood layer (table 1).

Table 1: Detection of *Listeria monocytogenes* in wood shavings after cleaning and heat desinfection

Cleaning	Desinfection	<i>Li. mono.</i>	n
50°C, 15 min	-	positive	9
50°C, 15 min	80°C, 5 min	negative	9
50°C, 15 min	65°C, 15 min	negative	9

4. Conclusions

Wooden boards do not affect the hygienic safety of cheeses if the following safety measures are regarded:

- use of smooth boards in good repair
- thorough cleaning and sanitation by heat desinfection