3rd World Congress and Expo on Applied Microbiology November 07-09, 2016 Dubai, UAE

How safe is European internet cheese: A purchase and microbiological investigation

Dagmar Schoder, A Strauß, K Szakmary-Brandle and M Wagner University of Veterinary Medicine, Austria

The suitability for consumers of a variety of raw milk cheeses purchased over the internet was investigated in terms of packaging, Iabeling, physicochemical parameters and microbiological safety. 108 purchases from seven European countries were examined. The prevalence of *Salmonella* spp., L. *monocytogenes*, *E.coli* and coagulase positive *staphylococci* (SA) were determined. All 108 samples were described on websites as raw milk cheeses and thereby qualified for this study. However, after delivery it was noted that 4.6% (5/108) of cheeses were labeled to be manufactured from heat-treated or pasteurized milk. Delivery duration ranged from 24 hours to six days, receipt cheese temperatures ranged between 5-23 °C, whereas in 61.5% of all cases the temperature was higher than 15 °C. Cheese labeling was examined in respect of EC guideline 2000/13 and Regulation No. 853/2004. Only 17.6% (19/108) of cheeses were properly labeled. In 50.9%, 48.9%, 46.3% and 39.8% of all cases: Specific storage requirements, name and address of the manufacturer/packer or seller, net weight and minimum shelf life were missing. Even the labeling information "made from raw milk" was not apparent on 36% of all cheese items delivered. None of the 108 investigated cheeses showed a pH ≤5.0 and aW value ≤0.94. The pH and aW value for 2 samples (0.9%) and 11 samples (10.2%) was ≤4.4 or ≤0.92 at least at one of the three time points, respectively. *E.coli* and *SA* could be detected in a total of 29.6% (32/108) and 8.3% (9/108) of samples, respectively. The food borne pathogen *L. monocytogenes* was detected in 1.9% of all samples, one of which had counts of 9.5×103 CFU/g, whereas *Salmonella* spp., was not detected. Results reveal that labeling and hygiene concerns about the safety of Internet purchased cheeses in Europe are justified.

Biography

Dagmar Schoder is the Head of the working group Global Food Safety at the Institute of Milk Hygiene, Milk Technology and Food Science of the University of Veterinary Medicine in Vienna and President of Veterinarians Without Borders, Austria.

dagmar.schoder@vetmeduni.ac.at

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