Abstract
Microbial quality and safety are a function of the cumulative effect of the temperature of raw materials, production processes, storage and transportation. Improving quality and safety increases the demand for refrigerated meat products. This study focuses on alternatives to improve the cold chain including sector studies to determine temperature profiles and thus identify critical improvements to the cold chain. Information from temperature recorders attached to product shipments can be used to identify the frequency and severity of temperature abuses. Although, similar information is obtained by time-temperature indicators (TTI), these devices respond to the package temperature and can result in the reprocessing, rejection or destruction of acceptable products. Finally, databases and software available for the implementation of predictive microbiology, i.e., mathematical models relating substrate composition and temperature with microbial growth in foods, can be used to evaluate alternatives to eliminate microbial risks and extend microbial shelf life.

Keywords
Refrigerated meat products, microbial spoilage, cold chain, temperature abuse.