1. INTRODUCTION AND OBJECTIVES

Dim Sum originates from the Cantonese cuisine which available in the form of small dumplings, buns, rolls and small appetizer-like dishes containing mainly minced meat or seafood fillings. Pork dumplings are one kind of Dim sum which is well-known and has become part of Thai culture. They are considered by many locals as a Thai food. The meal looks like a parcel or a little bag consisting of a square sheet of wheat dough filled mainly with minced pork which is mixed with ingredients such as sugar, pepper, minced garlic, mushrooms and carrots.

Traditional, pork dumplings is a heat-treated and ready-to-eat meal manufactured by local producers including street vendors and market people. This food is also served in restaurants in tiers of bamboo steamers or small to medium-sized plates. During the last years the frozen food industry has begun to produce pork dumplings for the distribution in supermarkets. The deep frozen food must be reheated before it is consumed.

The vendors of pork dumplings mainly offer their goods in streets, public places and at the market. The major concern is related to food safety but other concerns are also reported such as sanitation problems (inadequate access to potable water supply, garbage disposal and unsanitary environmental condition such as waste accumulation in the street). There is a lack of knowledge among street vendors about sanitary and food hygiene; however, there are no comprehensive surveillances of street foods in Thailand although the risk of serious food poisoning outbreaks linked to street foods remains a threat in many parts of the world, with microbiological contamination being one of the most significant problems (FAO, 1997).

Since 2004, the government of Thailand introduced a food safety policy known as "safe and wholesome food for all". In cooperation with the Ministry of Agriculture and Cooperatives and other authorities the Ministry of Public Health has implemented measures for a strict, regular surveillance and monitoring of the contamination of all food types available in the Thai market. All food producers, food vendors, restaurants and supermarkets are requested to cooperate with the government to control the safety of their products.

According to the investigations by the Bureau of Epidemiology of the Ministry of Public Health, animal-origin food is the major source of food borne diseases. Bacteria such as *Salmonella spp.,Staphylococcus aureus* and *Vibrio parahaemolyticus* are the most frequent food borne pathogens followed by plant/animal poisoning, chemicals and viruses respectively. While the quality of the starting materials is always of major importance, post-harvest factors such as handling, processing, transportation and storage may influence the microbiological profile of the finished product at the consumer's table.

The determination of the microbiological quality of foods needs to be established by analytical protocols to detect indicator and pathogenic organisms. On the basis of the microbiological results the foods are classified according to legislatively established limits, criteria or proposed guidelines. Commonly approved indices of microbial quality include the Aerobic Plate Count (APC), the *Enterobacteriaceae* and the coliforms.

This study was designed to characterize the microbiological profile of pork dumplings at the point of sale in Chiang Mai, Thailand. Taking into account the available information this surveillance is the first report about pork dumplings. In particular, this study is designed to compare the microbiological profile of industrial products with samples of small enterprises. Furthermore, the effect of heating on the microbiological load before the consumption of dumplings is quantified. As indicator bacteria for the microbiological quality and the hygienic status, the enumeration of the mesophilic aerobic bacteria, lactic acid bacteria, *Enterobacteriaceae*, coliforms, *Pseudomonas spp.* and coagulase-positive staphylococci are used.

Objectives

1. To determine the microbiological quality profile of Dim sum (pork dumplings)

1.1 Comparing industrial samples with items from small enterprises (restaurants, markets, street vendors)

1.2 Quantifying the effect of reheating for consumption on the microbiological load

2. To compare the results with official food criteria and other standards

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3. To provide the basic information to establish an appropriate quality assurance system for the hygienic status of Dim sum

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