Abstract

Enrofloxacin is an antibiotic widely used in animal husbandry. Foods from animal origins such as pork, beef, chicken, fish, and shrimp, especially chicken and eggs were suspected to be contaminated by enrofloxacin and its metabolite, ciprofloxacin. Antibiotic contamination causes deterioration in meat quality and effects on human health. Screening test for enrofloxacin and ciprofloxacin residues in chicken breast and eggs by High Performance Thin layer Chromatography have been developed. Appropriate solvents were used for extracting the residues from samples before analyzing by high performance thin layer chromatography which could distinguish the residues from other substances. The detection limit, sensitivity and specificity in chicken breast were 100 ppb, 90% and 100%, respectively. The detection limit, sensitivity and specificity in eggs were 100 ppb, 80% and 100%, respectively. Liquid chromatography mass spectrometry was used as the confirmatory method to analyze the same samples that were used in validation experiments of High Performance Thin layer Chromatography. According to Liquid chromatography mass spectrometry, all samples were conformed. Chicken breast and egg samples from various sources around Bangkok were sampled and tested by High Performance Thin layer Chromatography. From 116 samples of chicken meat, only one sample was out of the limit of enrofloxacin residue (100 ppb). All 62 egg samples were within the same limit of enrofloxacin residue (100 ppb).