Abstract
Yerba mate (Ilex paraguariensis St. Hil.) has been studied for its important biological activities mainly attributed to phenolic compounds. This study evaluated the antimicrobial activity of methanolic and ethanolic extracts of yerba mate against food pathogens, such as Staphylococcus aureus, Listeria monocytogenes, Salmonella Enteritidis and Escherichia coli through minimum inhibitory (MIC) and bactericidal (MBC) concentrations, in addition to the determination of chemical composition by gas chromatography with mass spectrometry (GC-MS) and phenolic content. The most effective extract had its activity evaluated under different pH conditions by growth curve analysis. All microorganisms except E. coli were inhibited. The ethanolic extract showed the lowest MIC/MBC (0.78/0.78 mg/ml), the highest phenolic content (193.9 g.GAE/kg) and the presence of chlorogenic acid derivatives, especially 3-O-caffeoylquinic and caffeic acid. This extract was able to inhibit microbial growth at pH 7 and 8.

Keywords
Yerba mate, antimicrobial activity, staphylococcus aureus, listeria monocytogenes, salmonella enteritidis.