# Comparative Study of Alternative Methods for Food Safety Control in Poultry Slaughterhouses

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## Abstract

The sensitivity of different methods for the isolation and identification of *Campylobacter*, *Listeria* and *Salmonella* was compared, and their application in food safety control in a poultry slaughterhouse was evaluated. The VIDAS, SimPlate, Reveal and VIP systems were used, together with traditional microbiological methods. The study was carried out in a slaughterhouse and in the poultry carving room. One hundred and twenty samples (40 per microorganism) obtained from carcasses, viscera, different chicken parts, water and the environment were evaluated. For *Campylobacter*, the VIDAS system performed better than plate confirmation. The traditional method yielded results similar to those obtained with the SimPlate method. For *Listeria*, the plate count method proved less sensitive than the VIDAS, VIP and Reveal systems, which yielded similar results. For *Salmonella*, the VIDAS system displayed a detection rate comparable to that of traditional methods, while the Reveal system detected twice as many positive samples (16 in total). The Reveal method performed significantly better than either the plate count method or the VIDAS system. The alternative methods used here could be successfully applied in food safety control in poultry slaughterhouses, providing similar or better results and taking less time to perform. The VIDAS system, in general, and the Reveal system in the case of *Listeria* and *Salmonella*, appear to be effective alternatives to traditional methods.