ABSTRACT

Introduction

The use of chromogenic media for Salmonella detection in food samples has become increasingly widespread. In the current study, food samples from various food categories were tested for Salmonella using IBISA® plates. The primary aim of this study was to evaluate the ability of the IBISA® method to detect Salmonella in naturally or artificially contaminated food samples, and to compare its performance to the European Norm (EN 6859) reference method. The inclusivity and exclusivity study showed a very good selectivity and specificity of the IBISA® method compared to the reference method.

Method

Inclusivity and Exclusivity

The inclusivity and exclusivity study was performed with 20 strains of Salmonella and 105 strains of other microorganisms. The inclusivity study showed that 60 strains were positive with both IBISA® and the reference method, while the other 45 strains were negative with both methods. The exclusivity study showed that 55 strains were negative with both methods.

Results

Industry and exclusivity

The results showed that the IBISA® method had a very high level of specificity compared to the reference method, with a relative specificity of 98.2%. However, the relative sensitivity was lower, with a relative sensitivity of 55.7%.

Significance

The results of this study showed that the IBISA® method is a highly effective and specific method for detecting Salmonella in food samples. It is a valuable tool for food safety authorities and food producers alike.