

Rapid detection of the most important pathogenic microorganisms in water and Food by (*Chromogenic media*)

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Abstract

Background and Objectives: Chromogenic media are the newest methods applied for rapid detection of pathogenic microorganisms in drinking water and food from 1998-2008. These Specific media contained the compounds acting as a substrate for microbial enzymes and, according to the type of enzyme, produce specific color. The aim of this study was to introduce the chromogenic media as a powerful tool in rapid detection of pathogenic agents in drinking water and food.

Material and Methods: In this review article, the published papers about the use of chromogenic media in rapid detection of water and food-born pathogens were investigated.

Results: The studies conducted in different countries show that the chromogenic media are very sensitive, specific and with high performance ; therefore, we can use it to detect the most important pathogenic microorganisms (such as *Salmonella spp*, *E.coli*, *S.aureus*, *L.monocytogenes*, and *Candida spp.*) in water and food samples.

Conclusion: Because chromogenic media, in comparison with the other rapid detection methods such as PCR and ELISA, are very sensitive and cheaper, it can be applied as an alternative method.

Key words: Chromogenic media, Rapid detection, water and food, Microorganism