

Studing the Efficency of Loop-Meadiated Isothermal Amplification of Salmonella

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Background & Objectives: Salmonellas are a group of Entrobactria that cause infectious diseases in human and animals Typhoid, Bacteriemi, Entrocolit and Salmonelose are caused by this bacteria turned to be a major health problem in developing countries, such as our country Iran. Therefore, quick, accurate, reliable and on time diagnosis seems to be vital to prevent it from spreading widely and become epidemic.

Methods: There are various diagnosis methods such culture, Immune assay Methods, PCR and Real time PCR. All methods above require long diagnosis time, numerous bacteria colonies for test, expensive lab equipment and expert lab personnel. That's why a new methods is used to minimize the failures of previous.

Methods:In this way we used LAMP (Loop-Mediated iso thermal amplification of DNA) with two florescent prob and compared with PCR, LAMP (Loop-Mediated iso thermal amplification of DNA).

Results: In this study PCR takes more than 3 hours to determine Salmonella and with LAMP (Loop-Mediated iso thermal amplification of DNA) takes 2hours but with LAMP (Loop-Mediated iso thermal amplification of DNA) by Using florescent Prob.Time is reduced to 70 min. So, this reduction of time with more specificity and accurately is very important.

Conclusion: According to results, LAMP with two florescent prob is more rapid, accurate, economic and more specific methods with vast practical usage in medical diagnosis laboratories, legal medical, agricultural and research fields. Another advantage of this methods is its independence to cycles temperature and thermo cycling and replacement with one simple Thermo block and color detection is more accurate than turbidity detection in LAMP (Loop-Mediated iso thermal amplification of DNA).

Keywords: Efficency; Loop-Meadiated; Salmonella