

OPTIMIZATION OF PLATING MEDIA AND ENRICHMENT BROTHS FOR ISOLATION OF *SALMONELLA* SPECIES FROM HUMAN STOOL SAMPLES (POSTER)

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There is no single standard method for isolation of *Salmonella* spp. from human stool specimens. The use of unsuitable method may lead to under diagnosis of Salmonella. This study aimed to optimize the use of plating media and enrichment broths for isolation of *Salmonella* spp. from human stool samples. Methods: Stool samples from 1,060 both patients and healthy persons were inoculated onto Modified Semisolid Rappaport Vassiliadis (MSRV), Hektoen Enteric (HE) and MacConkey (MAC) media and into Selenite-F broth (SF) and Buffered Peptone Water (BPW) enrichment broths for enhancement the growth of salmonella. After overnight incubation, SF and BPW broths were subcultured onto each set of MSRV, HE and MAC agar. Standard biochemical identification and serogrouping were used to detect salmonella. Results: A total of 145 positive *Salmonella* spp. were isolated in this study. The 69 *Salmonella* were isolated by a primary plating step and 67, 12, 10 of these isolates were recovered from MSRV, MAC and HE agar respectively and 15 of these were recovered only in this step (not recovered in enhancement in SF or BPW broths) and 11 of them were isolated from MSRV medium alone. The 95 *Salmonella* spp. were recovered in the step of enhancement in SF broth and 90, 23, 38 of these were isolated from MSRV, MAC, HE media respectively and 23 of these were obtained only by SF enhancement (not isolated from the primary plating step or enhancement in BPW broth). The 103 *Salmonella* isolates were recovered by enhancement in BPW broth and 100, 6, 8 of these isolates were recovered from MSRV, MAC and HE media respectively and 23 of these were recovered only in the step of enhancement in BPW broth (not recovered during primary plating or step of enhancement in SF broth). Conclusion: The optimized method with the highest recovery of *Salmonella* from human stool samples was the use of MSRV, HE and MAC agar as plating media during primary plating and enhancement the growth in the combination of both SF and BPW enrichment broths, followed by subculturing onto MSRV, HE and MAC media.

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