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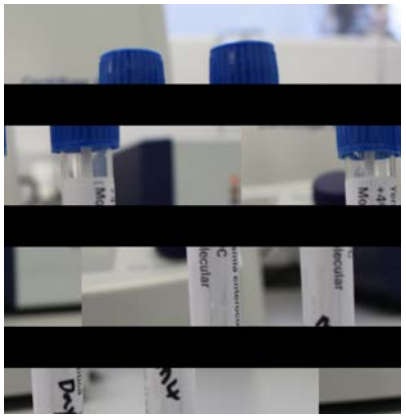
Assessing the DNA recovery and stability of five common enteric bacteria using the MWE Fecal Transwab® as a transport device

Aims/Objectives:

- Determine the suitability of the Fecal Transwab® manufactured by Medical Wire & Equipment (MWE) as a sample format for specimen delivery

- Determine if DNA, from five different enteric bacteria, can be recovered from MWE Fecal Transwab® Cary Blair medium after incubation at specified conditions over a four month period



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Methods

- Duplicate Fecal Transwab® were inoculated with a 100µL suspension containing one of the five defined bacteria and stored at both 4°C and 22°C over a period of 112 days
- All five bacterial pathogens were manually extracted using the QIAGEN QIAamp MiniElute Virus Spin Kit
- Detection were performed using the Fast-Track Diagnostics Bacterial gastroenteritis kit on the QIAGEN Rotor-Gene Q thermocycler platform

Campylobacter jejuni *Clostridium difficile* *Salmonella* Typhimurium *Shigella sonnei* *Yersinia enterocolitica*

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Key Findings

- All 96 inoculated Fecal Transwab® tested gave a strong PCR positive signal.
- All five enteric bacteria demonstrated good stability, showing no significant increase or decrease in the bacterial load detected.
- The study results suggests that the swab sample format could be compatible for use with molecular testing, used in routine practice this can aid in time efficiencies and improve the turn around time of patient diagnosis.
- The use of swabs in developing an EQA panel, aimed at the molecular testing of enteric bacteria, could be feasible. However the impacts of large scale production require consideration.