



With effect from **SEPTEMBER 2017** we are moving from the traditional culture method to Real Time PCR for enteric pathogen testing. The benefits are increased sensitivity and a higher detection rate. Once received and processed in the microbiology lab, negative results will be available within 24 hours. Positive results will be followed up with culture and sensitivities for final reporting.

STOOL OCP AND CULTURE			
Sample Type	Current test & method (SPAR)	New method – change of Test Code from SPAR to PENT . Please request as PENT*	Comments
Stool	Stool for Ova, Cysts & Parasites (OCP) Microscopy and Culture	Serosep EntericBio PCR Bacteria/Bacterial Toxins • Salmonella • Campylobacter • Shigella • VTEC Parasites • Cryptosporidium • Giardia	All stool samples will be tested for UK Pathogens. Overseas pathogens will only be tested if requested and travel history and clinical details are provided. Samples that are positive for the bacterial pathogens will be cultured to provide sensitivities and, if indicated, for PHE referral. Samples will be kept for 7 days after receipt to allow for additional testing if required.

Please add the code **PENT to your practice system's test menu if you request electronically.*

STOOL FOR OCP			
Sample Type	Current test & method (OCP)	New method – Test code remains unchanged: OCP	Comments
Stool	Stool for Ova, Cysts & Parasites (OCP)	Requests for OCP only will include testing for cryptosporidium and giardia by PCR	Overseas pathogens will only be tested if requested and travel history and clinical details are provided.

C. DIFFICILE DETECTION			
Sample Type	Current test & method (CLOS)	New method – Test code remains unchanged: CLOS	Comments
Stool	Alere Techlab Duo Card (GDH & Toxin combo)	Serosep Enteric Bio PCR (GDH) Alere Techlab EIA (Toxin)	Change to PCR and Elisa methods. Two tier GDH & Toxin <i>c. diff</i> screening based on PHE guidance. Improved sensitivity and specificity for both targets tested. Primary <i>c. diff</i> gene screening using Enteric Bio PCR. Secondary sequential testing using Alere EIA to confirm Toxin.

GASTRO VIRUS DETECTION (INCLUDING ROTAVIRUS)			
Sample Type	Current test & method (ROTA)	New method – Test code remains unchanged: ROTA	Comments
Stool	Launch Meridian Rotavirus Immunocard Bioconnection Rotavirus Immunocard	Multiplex Gastro PCR • Rotavirus • Pan Adenovirus • Adenovirus Type F Improved sensitivity and specificity for combined rotavirus and adenovirus targets using PCR.	Change to PCR method for improved sensitivity and specificity. Additional PCR panel for Norovirus 1&2 is also available (request as NORO).

ENTERIC ORGANISM RAPID DETECTION			
Sample Type	Current test & method (EORD)	No change – Test Code remains unchanged: EORD	Comments
Stool	xTAG® Gastrointestinal Pathogen Panel Luminex 200	Multiplex PCR Simultaneous Detection of 15 nucleic acids from multiple gastroenteritis causing Viruses, Parasites and Bacteria.	This profile includes the following: Bacteria and Bacterial Toxins: <i>Salmonella</i> , <i>Shigella</i> , <i>Campylobacter</i> , <i>Clostridium difficile</i> Toxin A/B, <i>Enterotoxigenic E. Coli (ETEC)</i> LT/ST, <i>E. coli</i> O157, <i>Shiga-like Toxin Producing E. coli (STEC)</i> stx 1/stx 2, <i>Vibrio cholera</i> , <i>Yersinia enterocolitica</i> Viruses: <i>Adenovirus</i> 40/41, <i>Rotavirus</i> A, <i>Norvirus</i> G1/G11 Parasites: <i>Gardia</i> , <i>Entamoeba histolytica</i> , <i>Cryptosporidium</i>

VTEC PCR POSITIVE RESULTS AND CLINICAL IMPACT			
<ul style="list-style-type: none"> 74 VTEC PCR positive results were detected between 01/04/15 – 31/03/16, of which 44 were VT1 positive, 15 were VT2 positive and 15 were VT1 + VT2 positive. No <i>E. coli</i> O157 culture positive samples were detected from this group, and Reference Laboratory results confirmed a wide range of non-O157 VTEC that would not have been detected by our previously used culture methods. The clinical significance of these non-O157 VTEC cases remains unclear in the UK and minimal guidance is available for the management of non-O157 VTEC positive patients. In addition, public health management of other bacterial enteric pathogens has traditionally hinged on a positive culture result. Initially, PCR positive/culture negative results and non-O157 VTEC cases led to confusion amongst clinicians and local public health teams, and temporary distrust of the laboratory. This required intensive support and education as well as rigorous discussions with Public Health England to develop interim management protocols. Since more laboratories have adopted these PCR techniques, understanding has increased and a national guideline for the interpretation of PCR assays for gastrointestinal pathogens is now available. More data are required to fully understand the implications of PCR positive/culture negative cases and non-O157 VTEC cases. In the meantime, clinicians continue to assess and manage positive PCR cases on the basis of clinical history, signs and symptoms. 			