



BACTERIAL DISEASES

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ANALYSIS OF THE SUBMISSION FOR DIAGNOSTIC INVESTIGATION OF DIARRHOEA SAMPLES FROM SUCKLING PIGLETS IN THE NETHERLANDS IN THE PERIOD FROM SEPTEMBER 2015 TO NOVEMBER 2017

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Here we present the analysis of samples of diarrhoea from new borne piglets (max. 4 days old) gathered by veterinarians and analysed at IVD laboratory in Hannover, Germany. Sampling kits were provided by IDT Biologika, containing 3 swabs and the sample tubes, and analysis was paid for by IDT Biologika as part of the service around Clostriporc A.

Analysis was done for Rotavirus type A, PED, TGE, pathogenic *E. coli*, *Clostridium perfringens* type A (CpA) and C, *Clostridium difficile* and alpha-hemolytic Streptococci, differentiated by PCR to *Enterococcus durans* and *E. hirae*. Viruses were detected by PCR. Attachment factors and toxins of *E. coli* were detected by PCR, as were the toxin genes of *Clostridium*. Production of toxins of *C. perfringens* was detected by immunoblot.

396 samples in a total of 70 submissions came from piglets aged 0 to 4 days old. No PED, nor TGE was found. Rotavirus was found in 9 submissions of which 4 had also pathogenic *E. coli*. 7 out of 70 submissions had no CpA in them. 5 of these had pathogenic *E. coli* and 2 also high counts of *E. hirae*. In 1 submission only *C. perfr.* type C was found. Of the 60 submissions without Rotavirus or CpC, 55 showed moderate to large amounts of CpA. In 16 out of 60 CpA produced alpha- and beta2-toxin in the immunoblot. 20 out of these 60 submissions were tested for *E. hirae*, 11 submissions had samples with large amounts of *E. hirae*. In 30 out of these 60 pathogenic *E. coli* was found (ETEC, UPEC or NTEC). In many submissions multiple pathogens were found.

Analysis of diarrhoea samples from neonatal piglets is complex and in many cases multiple pathogens are found. In many herds the simultaneous application of multiple vaccines against these various pathogens is necessary.