An indirect enzyme-linked immunosorbent assay for detection of antibodies to Actinobacillus pleuropneumoniae serovar 7 in pig serum

Lipopolysaccharide (LPS) antigen was purified from Actinobacillus pleuropneumoniae serovar 7 by phenol-water extraction and fractionated on a S-100 Sephacryl column. High molecular weight fractions of LPS purified from the S-100 column were pooled and used as antigen in an indirect serovar 7 ELISA. The ELISA was evaluated with sera from pigs experimentally infected with 11 different A. pleuropneumoniae serovars of biotype 1. Estimation of sensitivity and specificity of the A. pleuropneumoniae serovar 7 ELISA was performed using pig sera from herds naturally infected with A. pleuropneumoniae serovar 7 as well as sera from herds free of infection with A. pleuropneumoniae serovar 7. When compared to the complement fixation test (CFT) as a reference test, the ELISA showed much higher sensitivity and statistically equivalent specificity.