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## Comparison of conventional urine culture and BACT/ALERT® PF PLUS bottles for monitoring urinary tract infections in companion animals under different clinical and therapeutic conditions

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Urinary tract infections (UTIs) are common in companion animals. According to current guidelines, sporadic UTIs can typically be managed with a short course of antibiotics. However, recurrent UTIs are common and warrants closer follow-up. Assessing treatment efficacy typically requires a temporary suspension for culture to prevent false negative results, which may pose risks of infection worsening or recurrence. This study compares conventional urine culture with BACT/ALERT® PF PLUS bottles, which neutralize antimicrobials and may allow accurate microbiological monitoring during treatment. A total of 814 urine samples, mostly from animals under antibiotic therapy, were collected via cystocentesis. Each sample was tested with both conventional culture on CHROMID® CPS® ELITE and BACT/ALERT® PF PLUS and incubated with the BACT/ALERT® 3D system. Positive samples were plated for identification via MALDI-TOF MS and underwent antibiotic susceptibility testing. Results were evaluated considering clinical history and urinalysis. BACT/ALERT® PF PLUS demonstrated greater sensitivity, detecting pathogens in samples negative by conventional culture and identifying additional bacterial species. This method was especially useful in follow-up of recurrent or complicated UTIs. It supports informed decision-making on antimicrobial therapy discontinuation, thereby promoting targeted treatment and contributing to antimicrobial resistance prevention.

### Keywords

UTIs, Comparison, BACT/ALERT® PF PLUS bottles

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### Professional Status of the submitter, who is also the speaker

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