A novel, direct diagnostic approach for rapid susceptibility testing and identification of pathogenic microorganisms in clinical specimens by means of Liofilchem® PATHOGENIC SYSTEM AST.

**Objectives:**
In line with the achievement of a prompt and adequate initial antimicrobial therapy in critical care and vascular surgery units for an optimal clinical management of these vulnerable classes of patients, we aimed to evaluate the performance of a novel rapid diagnostic system, PATHOGENIC SYSTEM AST, for detecting, presumptive identifying and susceptibility testing of pathogenic microorganisms directly from clinical specimens.

**Methods:**
Between June 1st and August 31st, 2013, 51 vascular and critical care unit patients were enrolled in the study. A total of 34 clinical samples (25 vascular prosthetic graft samples and 19 bronchoalveolar lavages samples) were collected. The study was conducted at the University Hospital of Bordeaux, France.

**Results:**
The results of Liofilchem® PATHOGENIC SYSTEM AST were in total concordance with those obtained by the hospital routine Diagnostic Laboratory and by the reference method. The test identified correctly both monomicrobial as well as polymicrobial clinical specimens. It is noteworthy that the absence of color change could mean either the absence of pathogens or their susceptibility to the antibiotics tested by the system. The color based presumptive identification of the microorganisms and their susceptibility data obtained after 24 h for all 51 samples tested during this study were in total concordance with those obtained by the hospital routine Diagnostic Laboratory and the reference method.

**Conclusion:**
Liofilchem® PATHOGENIC SYSTEM AST is a promising method for obtaining only after 24 h, both susceptibility data and a presumptive identification of the microorganisms from patients in Intensive Care and Vascular Surgery Units for an optimal clinical management of these vulnerable classes of patients.

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**Pathogens:**
- Candida albicans
- Klebsiella pneumoniae
- Klebsiella pneumoniae + Escherichia coli
- Pseudomonas aeruginosa
- Candida albicans

**Assays:**
- ID panel
- AST panel

**References:**
- ECCMID 2014 P0349