Bioluminescent assay of sterility or cleanliness in hospital environment

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Bioluminescent assay was applied for rapid control of sterility or cleanliness in hospital environment. Bacteria cells were collected using swab technique from different surfaces including surgical tables, furniture, floor in resuscitation units, medical equipment, linen, hands of medical personnel etc. The samples with total bacterial contamination (TBC) above 50 CFU/100 cm\textsuperscript{2} were analyzed by bioluminescence at once. The samples with lower TBC value were incubated in nutritive media for 6-12 h followed by bioluminescent assay. For removal of non-bacterial ATP and/or concentrating bacteria cells samples analyzed were filtered through Filtravette\textsuperscript{TM} (special luminometric microcuvette with the bottom made from bacterial membrane filter). ATP release and measurement of bioluminescent signal were performed in the same Filtravette\textsuperscript{TM}. A positive correlation between CFU determined by standard Plate Count and bacterial ATP concentration measured by bioluminescent assay was observed.