Introduction Rapid microbiology methods have long been essential tools of the clinical and food industry microbiology laboratories.Along the same lines, with automation usually comes enhanced objectivity.Moreover, RMMs also show improved sensitivity, efficiency, selectivity, accuracy, high throughput, and low false-positive rate, leading to higher efficiency.13 These features of RMMs provide an opportunity to assess the significance of viable but nonculturable or stressed microorganisms.Therefore, more screenings and repeat tests could be performed in all stages of production, improving the surveillance process.13 Real-time control and early warning of contamination are essential before introducing raw materials and other product components to the process, validating manufacturing, or distributing finished products.Swift diagnosis of infectious diseases by clinical labs and the need for prompt test results from perishable food items have been strong incentives for the use of rapid methods.Traditionally, growth-based methods require growing microorganisms in media, which microbiologists must examine visually, looking for colony-forming units (CFU) in solid media types and measuring turbidity in liquid broths.Advantages of RMMs The implementation of RMMs also provides interesting economic features, because of the significant reductions in time to result over conventional methods.RMMs involves an easy-to-handle protocol, with a negligible production of waste, minimal operator variability, reduced staff training requirement, and possibility of automation.Thus, RMMs can improve manufacturing consistency by permitting faster implementation of corrective actions and fostering opportunities to improve the safety of the process.Immediate reactions to contamination Corrective actions can be taken earlier because RMMs provide faster results, thus enabling a more proactive response to instances of microbial contamination and out-of-trend situations.Additionally, RMMs can assist in the design of more robust, automated processes that could reduce the opportunity for contamination altogether.From a manufacturing perspective, a faster time to result can enable companies to release raw materials quickly, transfer in-process work to the next stage, and bring finished products to market, which can shorten the production cycle, reduce inventory requirements, and free up working capital.One of the explanations offered by the pharmaceutical industry for not using rapid microbiology methods is the uncertainty over regulatory acceptance.The process of evaluating, validating and implementing rapid microbiology test methods can be an expensive and time consuming task.Moreover, the shorter analysis time reduces the probability of contamination, improving the robustness.Some rapid methods can help laboratories reduce worker subjectivity, and automated systems that provide test results in a clear, pass-fail approach can take the guesswork out of plating and .waiting.2.3.4