

MICROBIAL SOLUTIONS

AccuPRO-ID®

AccuPRO-ID Advantages:

- Less dependent on growth conditions
- Affordable pricing
- Rapid turnaround times available with 99% on-time delivery of results
- Species-level identifications
- Tracking & Trending of EM data
- Leading spectra database
- No Gram stain or ancillary testing required

The AccuPRO-ID® solution from Charles River provides accurate, reproducible, rapid and economical microbial identification for regulated industries required to identify microorganisms on a routine basis.

Polyphasic Microbial Identification

AccuPRO-ID® offers a first-in-industry polyphasic approach to microbial identification. As the earliest contract laboratory to adopt MALDI-TOF technology for identification of bacteria, we offer an industry-leading MALDI-TOF library that is focused on bacteria and yeast relevant to production environments. Accurate identification of unknown isolates is an essential first step in understanding the impact microorganisms have in an environmental monitoring (EM) program. If a species-level ID is not obtained, the sample is automatically transferred to AccuGENX-ID® at no additional cost.

Risk and Value

Traditionally, routine IDs have been made with simple microbiological exam or utilizing manual or semi-automated phenotypic systems that differentiate between organisms based on the results of biochemical tests. There is very little complexity in the data from these phenotypic systems, which can lead to limited differentiation between microorganisms. Additionally, since microorganisms isolated from manufacturing environments will likely be physiologically stressed, they may not fully express their phenotypic or biochemical characteristics. This can lead to inconclusive test results and subjective interpretation, and thus a higher rate of erroneous identifications and greater costs.

The AccuPRO-ID® MALDI-TOF library offers an efficient, cost-effective method for obtaining accurate identifications of microorganisms isolated from production environments, as opposed to other ID platforms that focus mainly on isolates from a clinical setting.

EVERY STEP OF THE WAY



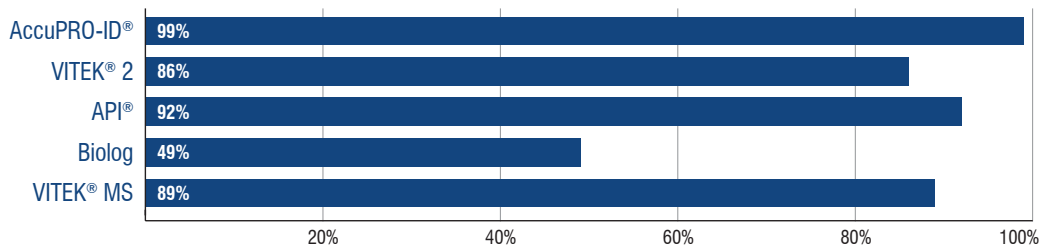
To read more about the methods and conclusion of this study [click here](#).

Comparative Performance Study

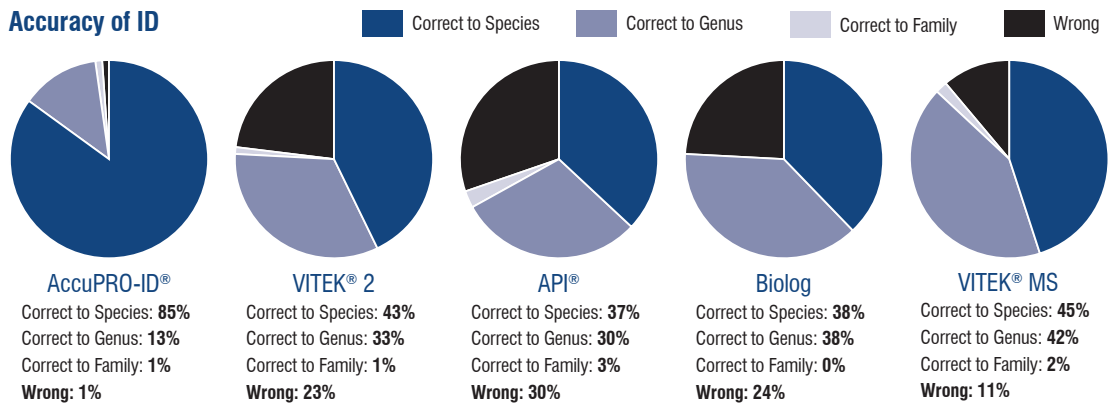
When identifications are based on phenotypic characteristics, such as with the VITEK® 2 Compact, API® strips, VITEK® MS or Biolog, the methods are highly error prone, variable and subjective. Phenotypic methods have been in use for decades, and most of the commercial identification systems are focused on clinical investigations, which is apparent in the limited database coverage. Both the impact of the library and the inherent variability of biochemical and phenotypic systems significantly affect the accuracy of bacterial identification.

A study of four phenotypic-based commercial systems was conducted to investigate the accuracy of results compared to the MALDI-TOF-based identification method used by AccuPRO-ID®. The figures below demonstrate overall accuracy of identifications as well as each system's ability to identify to the family, genus and species of the identified isolate.

Isolates with ID



Accuracy of ID



Despite all the systems having a relatively high performance, it is important to note the drop in percentage from performance to species-level accuracy with the VITEK® 2, API®, Biolog and VITEK® MS systems. Accuracy of an organism's identification plays a large role in product release and EM program.