



MICROBIAL SOLUTIONS

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Accugenix® Microbial Identification & Strain Typing Services

Charles River's Accugenix® microbial ID and strain typing services offer unparalleled accuracy with the most relevant reference libraries of bacteria, filamentous fungi and yeasts. We've driven the development and adoption of the most progressive technologies to improve our clients' environmental monitoring, reduce their costs and protect their brands. Our flexible solutions allow clients to outsource to our experts or use our services in-house.

Areas of Expertise Include:

- Accugenix® libraries
- AccuBLAST®
- Access® System
- AccuGENX-ID®
- Tracking and Trending Data Management
- AccuGENX-ST®
- AccuPRO-ID®

Why Is Accuracy So Important?

Accurate identification of environmental isolates improves reporting capabilities, facilitating full investigation of root causes for contamination and informed decision-making. With accurate data, it is possible to fully understand issues that arise and develop an appropriate plan to reduce production recovery time and minimize the impact to the supply chain cycle.

The Charles River Difference

Charles River has invested in the technology, instrumentation and expertise to conquer genotypic- and proteotypic-based testing methods, process validation, cGMP compliance and other rigorous regulatory standards at the global level. With a focus on building relationships and delivering the highest quality service, our team of scientists and technical experts can accelerate our clients' transition to more sophisticated microbial identification solutions and simplify their business practices to support their compliance initiatives, all at affordable pricing.

| EVERY STEP OF THE WAY

Partnering with Charles River can help:

- Decrease the cost per reportable result while increasing accuracy of identifications
- Improve operational efficiencies while reducing compliance risk
- Offset the capital investment costs of upgrading technologies with our contract laboratory services
- Streamline environmental monitoring processes through innovative data management applications
- Protect brands and, more importantly, consumers or patients, while improving micro QC program quality

The Accugenix® Libraries

The industry's most comprehensive and up-to-date databases for environmental isolates, our Accugenix® reference libraries contain more than 8,000 entries for bacteria, filamentous fungi, yeast and other relevant isolates found in today's manufacturing environments. As we continue to partner with clients to identify unknown samples, our databases continue to grow, making Accugenix® unmatched for breadth and accuracy.

AccuGENX-ID®

Comparative DNA sequencing of the 16S rRNA gene in bacteria and the ITS2 rRNA region in fungi is recognized across the industry as the most accurate and reproducible method for identifying unknown microorganisms. AccuGENX-ID® utilizes this technology through our BacSeq identification for bacteria and FunITS identification for fungi. Our sequencing technique is independent of the health or growth conditions of the isolate; samples can be viable or nonviable cultures or simply genomic DNA from a microbe. For each sample submitted for identification, the resulting DNA sequence is compared against our validated libraries for bacteria and fungi.

AccuGENX-ID® is the ideal solution for aseptic-filled products and contamination investigations, achieving maximum accuracy with minimum hassle and delivering rapid and reproducible results in as little as six hours.

AccuPRO-ID®

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. This extensive library is backed up by our AccuGENX-ID® 16S and ITS2 rDNA sequencing method at no additional cost.

Providing higher accuracy rates and faster results, AccuPRO-ID® is a less expensive option for environmental monitoring programs. The service is both an attractive alternative to the genotypic service and far superior to antiquated biochemical identification systems.

AccuBLAST®

Our AccuBLAST® service is designed exclusively for customers who have purchased the MicroSEQ® identification system and are not confident in the identifications made by the automated system. The AccuBLAST® service employs our own unrivaled sequence libraries and expert data analysis to generate meaningful reports, allowing us to deliver IDs more quickly and accurately.

Tracking and Trending Data Management

Complementing our Accugenix® solutions is our value-added tracking and trending data management software. This innovative tool generates the sophisticated reports you need to drive decision making, allowing you to address issues, prove compliance, and strengthen your overall environmental monitoring program.

Strain Typing with AccuGENX-ST®

In production facilities, it is often necessary to determine the source of a contamination, ascertain if a certain production strain is the correct one, or establish the “normal” flora for the facility. Our strain typing service makes it possible to reliably track and trend some of the most difficult microorganisms encountered in aseptic and non-sterile production facilities. AccuGENX-ST®, a cGMP service for single- or multilocus sequence typing, combined with the accuracy of our AccuGENX-ID® rDNA genotypic identification, solves these issues.

The Axcress® System

The Axcress® System features the precision of the Bruker MALDI Biotyper instrument with the industry-leading Accugenix® proprietary microbial libraries through a secure online network. Based on MALDI-TOF mass spectrometry, the MALDI Biotyper has become widely accepted across industry segments as the next generation of microbial identification. While conventional biochemical identification requires time-consuming incubation and ancillary precursory tests after selecting the microbes from the culture plate, the Axcress® system allows for instantaneous identification of isolated colonies from a plate. Any samples not identified can always be sent to our facilities for additional testing. This allows us to continually increase our database entries to support gaps in coverage, based on your frequently occurring microorganisms.

Product Line	Product	Turnaround Time	Code	
AccuGENX-ID®	AccuGENX-ID® bacteria (16S 500bp)	Same day	BacSeq-0	
		1 day	BacSeq-1	
		2 day	BacSeq-2	
		5 day	BacSeq-5	
	AccuGENX-ID® fungi (ITS2)	Same day	FunITS-0	
		1 day	FunITS-1	
		2 day	FunITS-2	
		5 day	FunITS-5	
	AccuGENX-ID® ProSeq	1 day	PROSEQ-1	
		5 day	PROSEQ-5	
	AccuPRO-ID®	AccuPRO-ID® bacteria and yeast	Same day	AccuPRO-ID-0
			1 day	AccuPRO-ID-1
2 day			AccuPRO-ID-2	
5 day			AccuPRO-ID-5	
AccuBLAST®	AccuBLAST® analysis of 16S raw data sequence files	Same day	AccuBLAST-0	
		1 day	AccuBLAST-1	
		2 day	AccuBLAST-2	
AccuGENX-ST®	AccuGENX-ST® sequence-based strain typing	5 day	AccuGENX-ST-5	
	AccuGENX-XGST® multi-locus sequence-based strain typing	5 day	AccuGENX-XGST-5	
Access® System	Access® MALDI Biotyper-CM package Starter kit for MALDI-TOF MS Barcode scanner for MALDI Biotyper Reference physiocare pack (tips and pipettes) Software package MALDI Biotyper 4.0 SR1 MALDI SW security pack for SW 4.0		AXC550	
	Access® MALDI Biotyper Smart CM package Starter kit for MALDI-TOF Smart MS Barcode scanner for MALDI Biotyper Reference physiocare pack (tips and pipettes) Software package MALDI Biotyper 4.0 SR1 MALDI SW security pack for SW 4.0		AXC650	