



NCIMB offers accurate identification of bacterial and fungal isolates, strain to strain comparison, community analysis of mixed samples and quantification of organisms or groups of organisms in a sample.

## Our customers

Our customers include household names in food, drink and energy production as well as some of the world's biggest pharmaceutical manufacturers. We also work with small companies and start-ups.

## Why use NCIMB?

**GMP compliant:** Our bacterial and fungal identification service is GMP compliant and we operate a well established quality management system certified to ISO 9001:2015.

**Fast turnaround:** We offer a range of turnaround times for our microbial isolate identification service including same-day interim reporting of samples received before 10 am. Our range of turnaround options allows our customers to pick the best value service for their requirements and get fast results when it really matters.

**Accurate identification:** We use a genotypic approach to the identification of isolates. In other words we base our identification on DNA sequencing. We use this method because it has the potential to offer an unambiguous result. Ultimately, it is the DNA sequence that defines the species.

**Customer-focused:** At NCIMB we strive to put our customer's needs first, and offer a flexible service with a range of turnaround times and reports that can be tailored to customer requirements. Whoever we are working with and whatever product or service we are providing, we pride ourselves on delivering high levels of customer service.

**Best available identification:** By their nature, environmental isolates can be very diverse, however, no commercially available validated identification methods are exhaustive in their coverage. Therefore, we sometimes find that the validated database we use returns a genus rather than a species level match. In these cases we can use sequence data to search other published sources and our own culture collection to obtain species level matches.

## Expert advice available

One of the things our customers tell us they value about our service is the help and advice that they get from our scientific staff. We are always happy to help you choose the right service to meet your needs – whether you need to identify an isolate, know what is in a mixed sample, compare closely related isolates or obtain quantitative information about a species or group of organisms.



## 16S sequencing of bacterial isolates (500bp)

This is our standard service for bacterial identification. The first 500 base pairs of the 16S rRNA gene are sequenced and an identification is made using the validated MicroSEQ database in the first instance.

## qPCR

Use our quantitative polymerase chain reaction (qPCR) to detect and quantify microorganisms. We can develop customised assays for organisms or functional genes of interest as well as undertaking commonly requested tests.

## Full gene 16S sequencing

500 bp sequencing is usually but not always enough to identify bacteria at species level. However, there are some cases where full gene sequencing is a good option for species level identification.

## Strain to strain comparison

Bacterial strain comparison and differentiation can be valuable, for example when investigating process contaminants. We can undertake whole genome sequencing for this purpose and compare sequences obtained.

## D2 LSU fungal sequencing

Our standard service for fungal identification is based on the D2 region of the large subunit ribosomal DNA (D2 LSU). The sequences obtained are analysed against the validated MicroSEQ database.

## Mixed cultures

Our standard ID service is for pure isolates. We can also accept mixed cultures and other sample types such as water, slimes or contaminated products for plating out or analysis by 16S metagenomics. Turnaround times are usually 3 – 10 days.

## ITS fungal sequencing

In some cases D2 LSU sequencing will only return a genus rather than species level identification. In these cases we can sequence a different section of DNA – either one or both of the internal transcribed spacer regions (ITS)

## What we accept

We accept isolates that are not known to be greater than ACDP category 2 and ACGM class 1. We don't accept active cultures of dangerous human pathogens or organisms isolated from clinical or diseased plant materials for identification.

### Contact us for a quote and more information on how to send and package samples

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