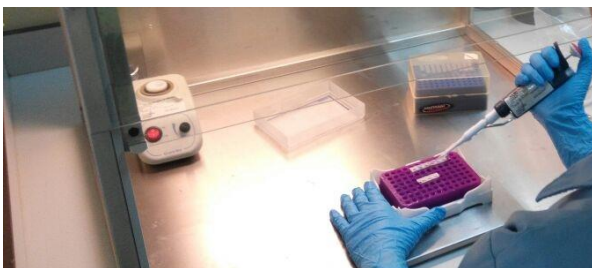


## Bacterial Profiling in Food Safety

### Introduction

The advent of Next-Generation Sequencing (NGS) has enabled food manufacturers and labs to build safer and less expensive food safety programs.

NGS is a culture-free method that identifies and classifies both **cultured and uncultured** bacteria based on the DNA present in a sample utilising a universal taxonomic marker present in all bacteria. NGS able to provide broad investigative projects like environmental monitoring studies, where food safety professionals need a complete view of the microorganisms in their lab and their functional attributes.



**Complete bacterial profiling** is applicable to:

- Spoilage investigations
- Shelf life studies
- Environmental monitoring
- Hygiene programs
- Food fermentation
- Sanitation test

### Methodology

A “library” of amplified taxonomic markers that carries unique identifiers is read by a sequencer. Taxonomic classifications of bacteria are obtained through mapping of the sequences to a curated database.

DNA Extraction

Library Preparation

Sequencing

Analysis

Sample type:

- Liquid sample: 2 L in sterile bottles
- Solid sample: 10 g in sterile bottle
- Swab sample: 3 swabs/sample
- DNA sample:  $\geq 200$  ng

Please contact us to discuss your analysis requirement and we will assist you with the proposal.

ALS Malaysia is part of the ALS global laboratory group and is an ISO 17025 accredited laboratory equipped with state-of-the-art facilities.

