

## THE PROMICOL ROBOTIC SYSTEM

- Automated data capture from production line to point of analysis
  - Automated sample analysis, measurement and results
    - Flexible and simple data management
      - High sample throughput
      - Low labour requirement

Increasing costs are forcing many food and beverage companies to consolidate production sites and increase production volumes. The benefits this provides are

- Improved logistics
- Economies of scale

The downside is that QC management face increasing pressures from today's large production volumes.

The additional workload caused by the increased numbers of laboratory samples can be addressed simply by

- Employing more laboratory staff.
- Utilizing more automated test procedures.

This approach is in itself costly and offers only a partial solution.

Data management is the real problem facing QC management. Data management fast becomes the bottleneck within the laboratory, rather than the sheer number of samples.



**Now you have a choice, a solution to your data management problems**



**Your Choice  
Our Solution**

# Sample Management

Established “Bar Code” technology is used to identify and track individual products from production line to point of analysis.

Sample management and data capture starts in production. Routine samples from individual production lines are collected into crates.

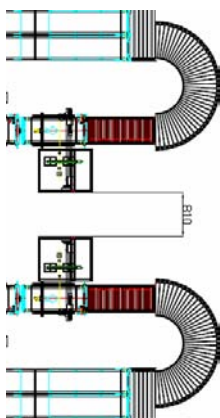


The crates eliminate the need for individual sample handling and are the vehicle for the sample’s progress throughout the entire QC procedure, from incubation to final result analysis.

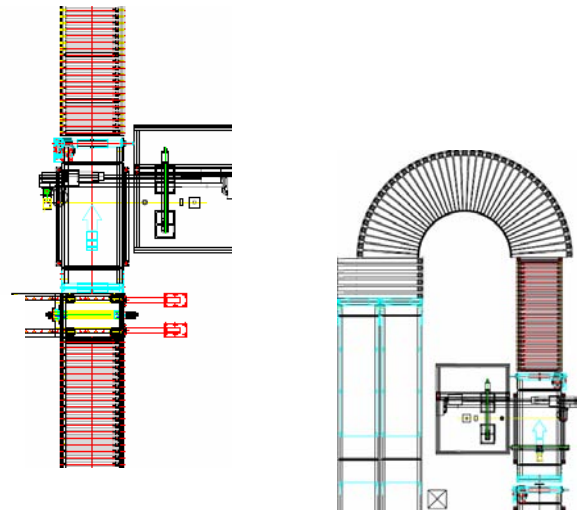
The crates are allocated specific bar codes, which contain all relevant production information. The crate code also contains essential parameters used to define the “sample map”. The “sample map” defines key coordinates such as pack size, position, and height to enable accurate automatic sampling from each product package type.

Our experienced consultants work closely with you to identify your exact needs and requirements.

The individual design of the Promicol Robotic System is customized to accommodate:

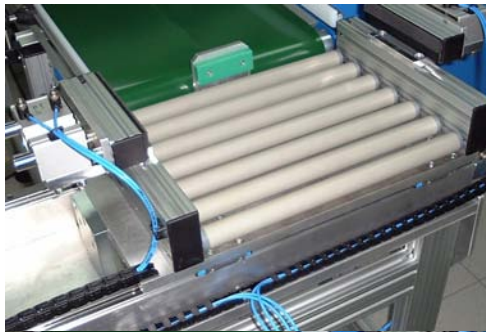


- **The available space and working environment**
- **Your varied packaging formats**
- **The sample analysis format**
- **Your sample throughput requirements**



## Sample Handling

After incubation the complete crates are placed on the conveyor of the Promicol Robotic System for final testing. Scanners on the conveyor read the bar codes on the sample crates and the software automatically selects the product “sample map” from the database in preparation for product sampling.



Our design solutions offer a “shaking device” to thoroughly mix viscous or flavored products as sample crates progress along the conveyor to the sampling station. The shaking is critical for accurate detection of contaminations in products where settling of the product’s components or ingredients occurs.

At the sampling station the robotic sampling arm is the heart of the Promicol Robotic System.

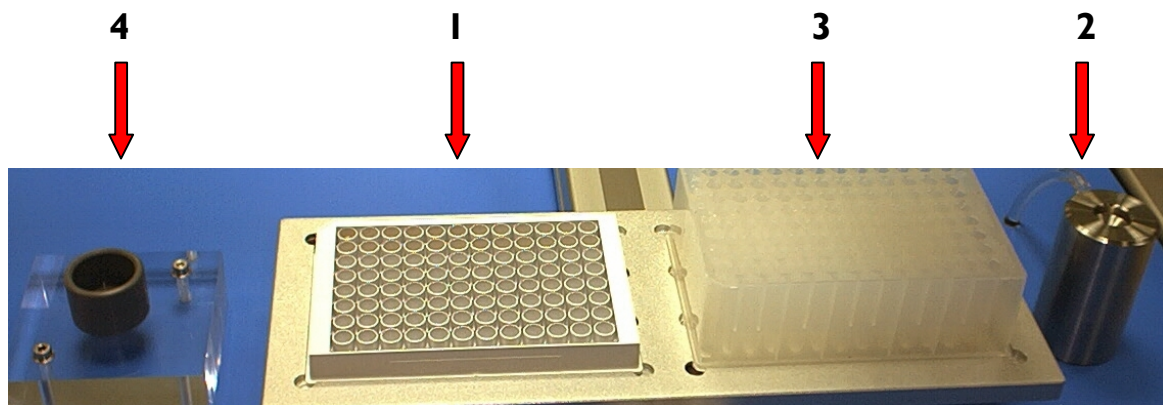


The sampling arm performs three standard operations

- Sampling from the unopened packages
- Sample transfer to the microplate **(1)**
- Washing of the sampling needle between samples **(2)**

Software options are available to provide

- Sample dilution for viscous products **(3)**
- Reagent addition to the microplate **(4)**



## Sample Identification

The sampling arm of the Promicol Robotic System is equipped with a number of options for sample identification capture.

- Bar code scanner to read individual product bar codes
- Camera to retrieve unreadable or damaged bar codes
- Digital camera for advanced image capture and optical character recognition



A bar code is used to identify each microplate. The exact location and identification of each sample in the microplate is linked to this bar code. Complete data transfer of the microplate and its samples is fully automatic to the Promilite III instrument prior to measurement.



To measure samples, the operator simply scans the microplate bar code with a hand held scanner and the complete inventory of all the samples in that microplate is retrieved from the instrument data base and measurement can be started.

Data transfer from the Robotic System is direct to the Proscreen Data Base. The User simply scans the microplate Bar Code to retrieve the complete microplate & sample ID's automatically and places the microplate into the PromiLite III instrument for measurement.

After sampling the complete Sample Crates are automatically transported to a "Holding Area" until the data is analysed. Results can be selected easily by any combination of date, product, protocol, or just Fail & Re-test and can easily be exported to spreadsheets. Software options allow recall of captured digital images of actual product by simply "clicking" on the result.



With the Promicol Robotic System a single operator is easily capable of processing 400 samples per hour.

## The Promicol Robotic System

- **Fast-automated sample tracking from production line to final analysis.**
- **Secure data management with a high degree of flexibility**
- **High sample throughput**

**Your Choice  
Our Solution**