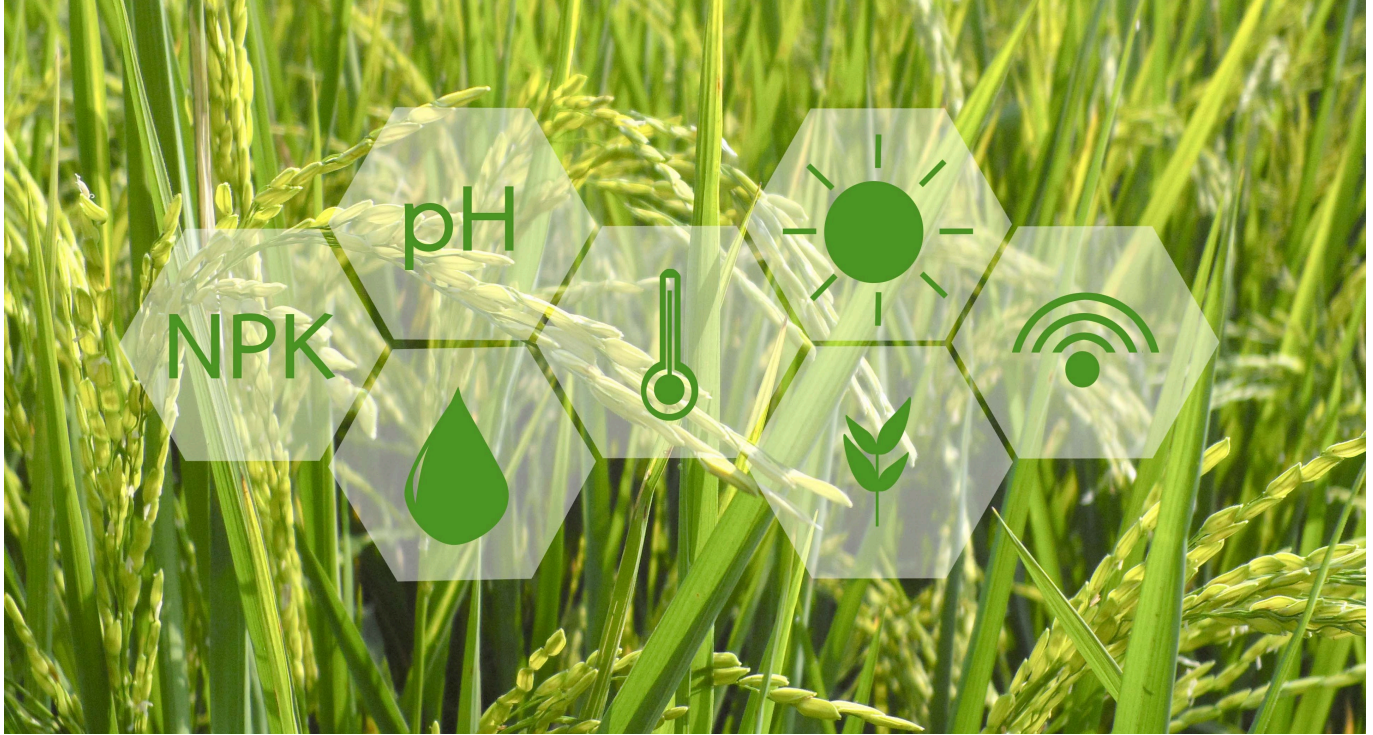


**TECH OFFER**

**On-product Food-grade Bio Barcode for Farm to Fork Traceability**



**KEY INFORMATION**

TECHNOLOGY CATEGORY:

Personal Care - Nutrition & Health Supplements

Personal Care - Fragrances

Foods - Ingredients

Foods - Quality & Safety

Foods - Processes

TECHNOLOGY READINESS LEVEL (TRL): **TRL7**

COUNTRY: **SINGAPORE**

ID NUMBER: **TO174839**

**OVERVIEW**

Traditional traceability technologies often rely on barcodes, QR codes, and holograms on external packaging. These methods are always more susceptible to both intentional and unintentional removal or tampering.

This technology offer is a patented innovation that uses natural food ingredients as a unique bio barcode tag for identification. Tags can be added directly as a powder or liquid to products for batch tagging.

The technology helps to prove compliance by offering tamper-proof assurance from raw material and hence improves the supply chain integrity by preventing counterfeiting, product dilution, and cross-contamination; at the same time, the tags protect brand value, and transparency as well as establish brand recognition.

The technology provider is interested to do test-bedding with food ingredients companies, FMCG companies, agri-food growers, and trading companies who are concerning traceability in their value chain.

## TECHNOLOGY FEATURES & SPECIFICATIONS

The technology covers life science, food technology, and bioinformatics sciences.

The properties of the tags are as follows:

- natural, food-grade and patented DNA-based unique identifier
- safe-to-eat, tasteless and invisible
- highly resistant to temperature and chemical conditions in the food processing
- as lasting as the shelf life of the product to which they are added
- can be detected through PCR, and obtain the individual traceability reports in 2hours
- can be integrated into the existing barcode labelling, RFID and blockchain system

It ensures forensic traceability resulting in higher standards of food safety, quality control, responding to customer complaints and protecting the company's reputation.

## POTENTIAL APPLICATIONS

Potential applications of this technology offer include (but are not limited to):

- Food and beverage products (plant-based meat, alcohol, coffee, palm oil, etc.)
- Cosmetics
- Fragrance
- Personal Care
- Pharmaceuticals

## UNIQUE VALUE PROPOSITION

Compared with existing technology, this patented technology is a food-grade ingredient, applied in minute parts-per-million quantity and can be added to the product without affecting the taste or texture. This gives a tamper-proof solution that could potentially solve the traceability issues and protect the brand reputation as well as the product integrity at the same time.

While the ingredient is food-grade and applied in minute parts-per-million quantity; the technology provider continues extensive work with food regulatory experts familiar with Australian, US, Europe, UK and Singapore food regulations ensure the compliance of their products.

The technology provider is interested to do test-bedding with food ingredients companies, FMCG companies, agri-food growers, and trading companies who are concerning traceability in their value chain.