

NUTRACEUTICAL TRACEABILITY

Supply chain fraud prevention technology







OVERVIEW

Natural Trace is at the forefront of food safety and traceability, providing ground-breaking solutions to the nutraceutical industry. Our proprietary technology ensures the integrity of your products from raw materials to the consumer's hands.

INDUSTRY SNAPSHOT

The nutraceutical industry is experiencing rapid growth, driven by increasing consumer demand for health and wellness products. With this expansion comes heightened scrutiny from regulators and consumers alike, emphasizing the need for transparency, quality assurance, and safety.

The rise of counterfeit supplements and the complex global supply chains have made traceability tools essential. Companies are now adopting advanced technologies to ensure product authenticity, safeguard their brand reputation, and comply with stringent regulatory standards.

Traceability solutions not only enhance consumer trust but also streamline operations and mitigate risks associated with fraud and contamination.

BENEFITS FOR INDUSTRY



| \leq | Safeguarding Brand Reputation |
|--------|-------------------------------|
| \leq | Product Authentication |
| | Protect Intellectual Property |
| | Supply Chain Integrity |
| | Prevent Fraud |
| [| Control Licensed Product Use |

Provenance Verification





KEY TECHNOLOGIES



A food-safe (food-grade), GMO-free, invisible tag that seamlessly blends into products, ensuring safety and ease of use. Each NaturalTag $^{\text{TM}}$ functions as a bio-barcode with unique identity for traceability.

Invisible tracer for authenticity and traceability



An exceptionally sensitive PCR based test designed to detect and read the results of the tag with precision and accuracy.







A digital surveillance platform capturing results and product insights from NaturalDetect™

Valuable data directly linked to your product.







APPLICATIONS

Raw Material Verification

Validate the origin and quality of raw materials used in supplements.

Finished Product Authentication

Ensure the integrity of your products before they reach the market.

Manufacturing Oversight

Monitor production processes and secure your intellectual property

DILUTION

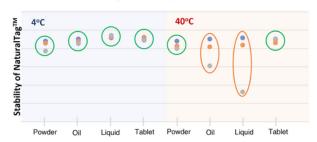
Dilution is a major fraud concern, where a small percentage of authentic ingredients are mixed with fillers or lower-quality substitutes to increase volume. This practice compromises product integrity, misleads consumers, and can pose safety risks.

With Natural Trace's advanced traceability technology, the extent of dilution can be detected through that of NaturalTag™. NaturalDetect™ provides sensitive identification of unauthorized dilution, ensuring product authenticity and quality are maintained.

STABILITY

Stability of NaturalTag[™] in various nutraceutical matrices; tablet, powder and capsules over time for accelerated aging assessment. NaturalTag[™] is stable over the shelf life of various nutraceutical products.

NaturalTag[™] Stability (Nutraceutical)



Natural Tag $^{\mathrm{TM}}$ is stable in various nutraceutical matrices



NaturalTag™ is stable in various nutraceutical matrices longterm







SUPPLY CHAIN PARTNER

Innovative Technology

Leveraging biotechnology to provide a unique, inproduct traceability solution

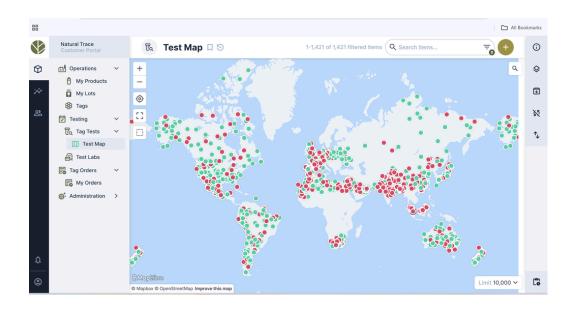
Partnering with Leading Brands

Working with industry leaders to enhance food safety, authenticity, and traceability.

Scalable Solutions

Designed to grow with your business, various product lines and market demands.

DATA UNLOCKED



NaturalCloud™ delivers comprehensive insights by capturing data from NaturalDetect™.

NaturalCloud™ empowers customers with:

Product Surveillance: Monitor product authenticity and tagging status across the supply chain.

Batch-Level Insights: Track distribution and traceability metrics.

Compliance and Reporting: Access verification data and automated reports.

Risk Alerts: Get notifications on counterfeiting, supply chain breaches, and hotspots.





USE CASE A: CONTROL LICENSED INGREDIENTS

A leading nutraceutical ingredient company creates a proprietary natural ingredient backed by clinically proven benefits. With increasing concerns over adulteration and dilution in the industry, they needed a robust solution to protect their ingredient's authenticity and maintain their brand's reputation.

By integrating Natural Trace's biotechnology traceability system, they applied NaturalTag[™] directly to their raw ingredient at the source. This ensured that at every stage, from harvest to processing and final formulation, their ingredient remained verifiable. Using NaturalDetect[™], they could validate authenticity quickly and confidently, and NaturalCloud[™] provided global supply chain data for monitoring oversight.

This advanced traceability reassured their manufacturing partners and end customers that the ingredient was genuine, ethically sourced, and fully traceable; strengthening trust and securing their competitive edge in the nutraceutical market.



USE CASE B: COUNTERFEIT PROTECTION

A premium nutraceutical brand faced a growing threat of counterfeit versions of its flagship supplement flooding online marketplaces. These fake products not only undermined sales but also posed serious risks to consumer safety and brand reputation.



To combat this, the brand integrated Natural Trace's advanced traceability technology into its supply chain. By incorporating NaturalTag™, a non-GMO, food-safe bio-barcode, directly into their supplement product during manufacture, they enabled seamless authentication at every stage, from contract manufacturers to retail shelves.

Using NaturalDetect^{M}, distributors and retailers could verify the product's authenticity directly with confidence, ensuring only genuine products reached consumers. Meanwhile, NaturalCloud^{M} provided supply chain insights, helping the brand track unauthorized product movements and identify counterfeit hotspots.

With Natural Trace, the company regained control over its supply chain, protecting its intellectual property, securing consumer trust, and maintaining its market leadership.





NATURAL TRACE

Singapore based biotechnology company founded in June 2021
International team with expertise in life sciences, food safety and bioinformatics
Production site is ISO 22000- & ISO 45001-certified and is a Singapore Food Agency and FDA licensed facility





"Most Innovative Service or Digital Solution Supporting the F&B Industry"











PARTNERS







FIND OUT HOW

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NUTRACEUTICAL TRACEABILITY

SUPPLY CHAIN FRAUD PREVENTION TECHNOLOGY





