Mawi DNA Technologies: A Story of a Father and his Daughter

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Mawi DNA is committed to assisting companies in the Biotech industry.
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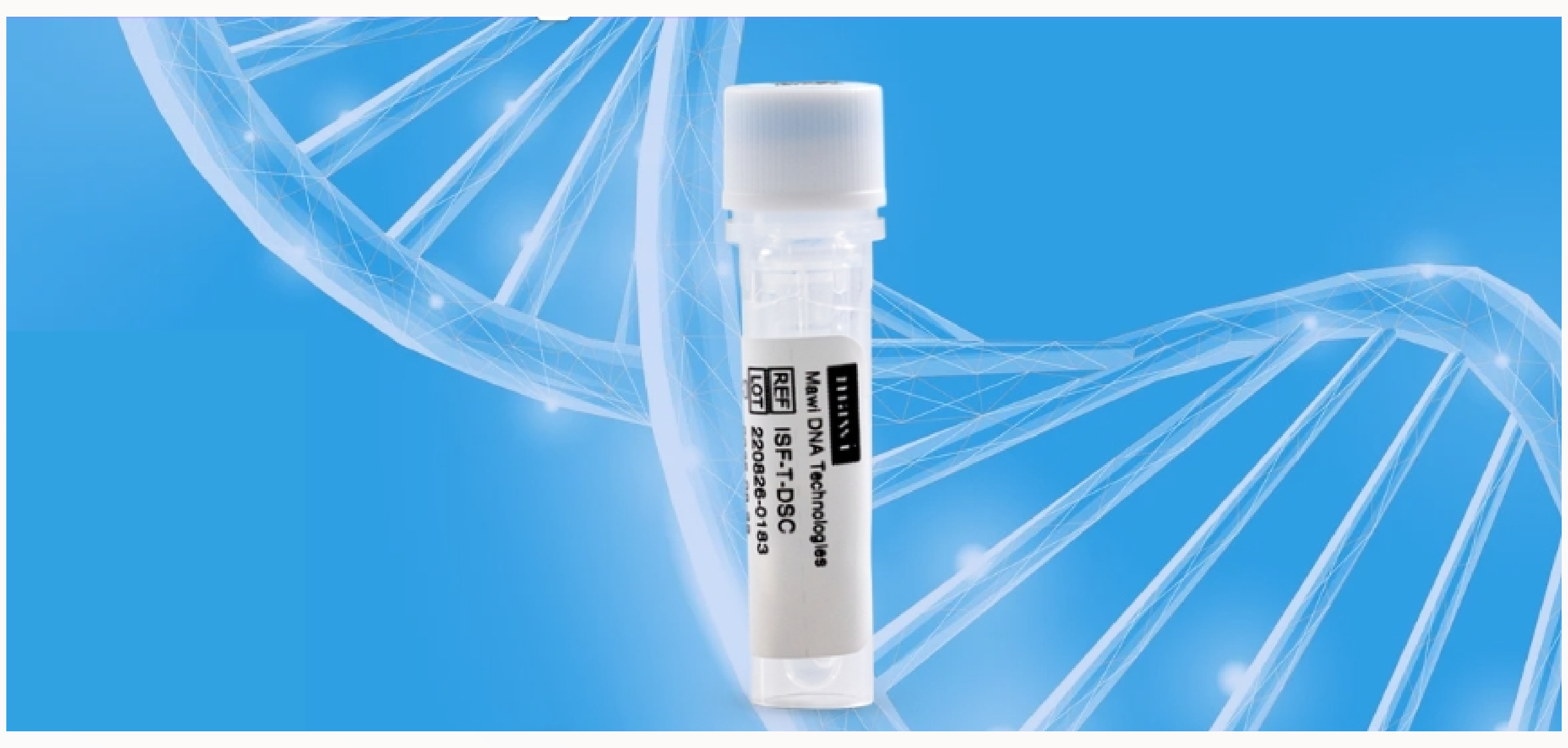

The story of Mawi DNA Technologies begins with a blood sample. The company itself was launched in late 2013 but the idea was born many years earlier, when Dr. Bassam El Fahmawi's first child was born. Soon after birth his daughter unfortunately contracted meningitis, requiring many blood samples to be drawn for diagnosis and treatment. Eventually her tiny veins were in danger of collapsing from repeated attempts to obtain blood. Fearing for her life, it was at this moment that Dr. Bassam vowed to invent the non-invasive sample collection technology now know as iSWAB, to spare other parents and their children of the emotional and physical trauma he and his daughter had just endured.

Based upon his academic training in Microbiology and previous experience owning and running a lab, Dr. Bassam already knew existing non-invasive sample collection methods such as swabs and saliva had several drawbacks. Swabs gave poor quality DNA and were a challenge to automate, and saliva was difficult to provide by all population segments and family members. In addition neither method did anything to control the bacterial DNA content inherently present in all oral samples which often skews results and can be difficult to account for especially with more sophisticated applications such as Whole Genome Seqencing (WGS).

As his career progressed, Dr. Bassam carefully and intentionally built his toolbox of skills and knowledge in order to make iSWAB a reality. After almost 10 years in conception and development, iSWAB-DNA was finally commercialized in 2014. Fast forward to 2024, and the features Dr. Bassam built into this product are more relevant than ever.

- iSWAB-DNA is the ONLY human/mammalian DNA sample collection product on the market that actively prevents bacterial DNA from contaminating the sample.
- The mechanism of action of the proprietary stabilizing buffer used in iSWAB-DNA allows for the release of high-quality, long fragment, double stranded DNA, averaging around 40 kb.
- Collected samples are stable for several years at room temperature enabling sample collection from anywhere in the world, both developed and rural.

iSWAB Samples Have Gained Acceptance as a Suitable Replacement for Blood in Many Applications

The low bacterial DNA content in iSWAB samples means blood is no longer the only acceptable sample type for efficient Whole Genome Sequencing. iSWAB-DNA is rapidly gaining acceptance and recognition as the only NON-INVASIVE sample collection method suitable for this application. Currently, our customers are able to achieve a 96%+ success rate in WGS, which dramatically streamlines operations and reduces costs.

The high-quality human genomic DNA stabilized in iSWAB has become the gold standard for epigenetic studies, due to the preservation of intact methyl groups.

Customers doing microarray and PCR based genotyping report less than 5% lifetime sample failure rate, along with reduced Quantity Not Sufficient results.

What our Customers are Saying

We choose the iSWAB-DNA-1200 kit for at-home specimen collection for its ease of use, specimen traceability, and reliable results. We also appreciate Mawi going the extra mile with customer service.

Leslie Rozeboom
Research Services Senior Professional – Biorepository
University of Colorado
Anschutz Medical Campus

We have evaluated many swabs for Whole Genome Sequencing and we found the Mawi DNA device superior due to the consistencyand reproducibility of DNA yield and quality in addition the ease of use for client and ease of use for automating the process.

Kamal Obbad
CEO and Co-Founder
Nebula Genomics

We have been using the Mawi iSWAB-Discovery collection kit for several years now and have been impressed with not only the DNA yield but also the quality of DNA that we get. This made a big difference with our downstream applications including real-Time PCR and Next Generation Sequencing (NGS) in terms of overall run performance and reducing the quantity not sufficient (QNS) rate. In addition to great products, Mawi DNA has outstanding customer support and great response time.

Reem Atta
COO
Helix Laboratory Partners

Our Certifications

REGISTERED MHRA Regulating Medicines and Medical Devices IVD CE ISO 9001:2016 ISO 13485:2014

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PRODUCT LISTING

iSWAB®-DNA-1200 is designed for use with 4 swabs, for a total yield of 10-30µg hgDNA. Ideal for applications requiring large amounts of DNA such as biobanking of germline samples

Catalog Number	Product Description
ISWAB-DNA-1200	iSWAB®-DNA-1200 Human DNA Collection Kit. Supplied will components required for sample collection including 4 swabs in a resealable box.
ISD-T-1200-R	iSWAB®-DNA-1200 Human DNA Collection Tube Rack. 50 tubes supplied in a re-usable plastic rack, swabs not included.
ISD-T-1200	iSWAB®-DNA-1200 Human DNA Collection Tube Bag, 500 tubes supplied in a bulk bag, swabs not included.

iSWAB®-DNA-250 is designed for use with 2 swabs, for a total yield of 5-15µg hgDNA. Ideal for applications requiring moderate amounts of DNA such as WGS

Catalog Number	Product Description
ISWAB-DNA-250	iSWAB®-DNA-250 Human DNA Collection Kit. Supplied will components required for sample collection including 2 swabs in a resealable box.
ISD-T-250-R	iSWAB®-DNA-250 Human DNA Collection Tube Rack. 50 tubes supplied in a re-usable plastic rack, swabs not included.
ISD-T-250	iSWAB®-DNA-250 Human DNA Collection Tube Bag, 500 tubes supplied in a bulk bag, swabs not included.

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iSWAB®-Discovery is designed for use with 1 swab, for a total yield of 2-7µg hgDNA. Ideal for microarray or PCR based genotyping for Consumer Genomics

Catalog Number	Product Description
ISWAB-DSC	iSWAB®-Discovery Human DNA Collection Kit. Supplied will components required for sample collection including 1 swab in a resealable box.
ISF-T-DSC-R	iSWAB®-Discovery Human DNA Collection Tube Rack. 50 tubes supplied in a re-usable plastic rack, swabs not included.
ISF-T-DSC	iSWAB®-Discovery Human DNA Collection Tube Bag, 500 tubes supplied in a bulk bag, swabs not included.

Mawi's Mission

ENABLING UNIVERSAL ROOM TEMPERATURE BIO-SAMPLE COLLECTION, STABILIZATION, & TRANSPORT

Mawi DNA Technologies' mission is to maintain biological sample integrity from anywhere in the world at room temperature, enabling true sample diversity across any geography or population segment. Our products fill a need for making sample collection from humans or animals simple and accessible to anyone regardless of physical status, age, or location. Our room temperature stable technologies are ideal for home based or self-collection in not only developed but also rural areas where transportation and cold chain infrastructure resources are limited. We are proud to say that Mawi is a 100% USA based company. All products are manufactured, assembled, and shipped from our Northern California headquarters. In addition, all product components and raw materials are sourced from US-based suppliers.

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FEATURES

Cost Effective

- Our pricing is designed to deliver the highest return on investments while providing the unparalleled sample quality. Discounting available for bulk purchase or supply agreement arrangements.

Multiple Formats

- iSWAB-DNA products are available in multiple formats: 1) Complete, turn-key single sample collection kits; 2) 50-tube racks ideal for field based sample collection; and 3) Bags of 500 tubes for bulk testing or kitting applications.

Customization

- Elements of our labeling can be customized to better suit customer preferences including custom barcode sequences, or minor changes to label layout. Depending on complexity, some options can be done at no additional cost. Please inquire for further information.

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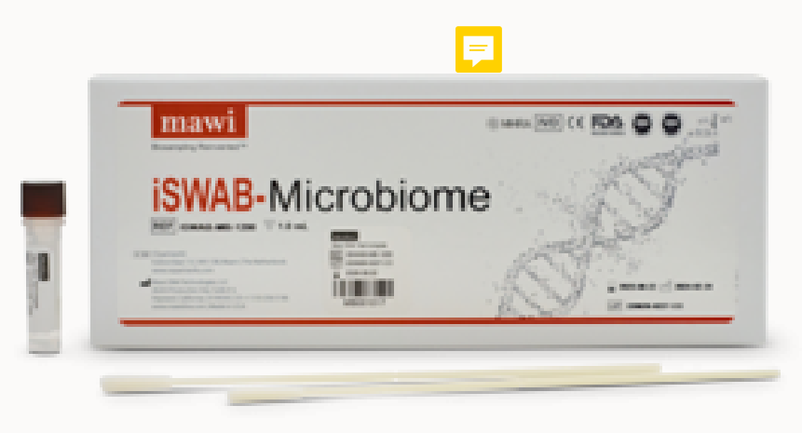
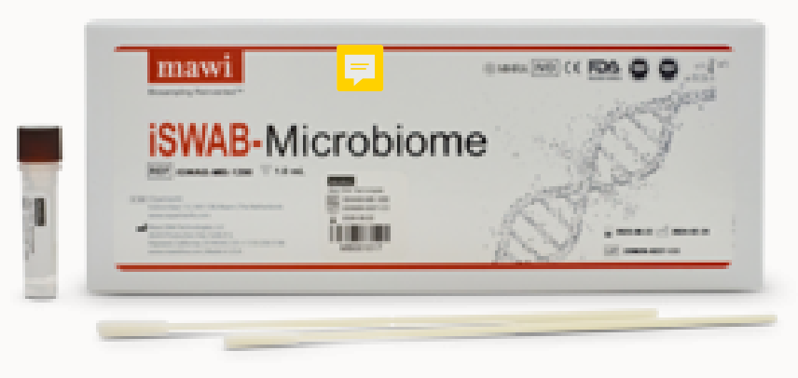
RELATED PRODUCTS

iSWAB™-Animal Collection Kit for collection and stabilization of animal DNA samples



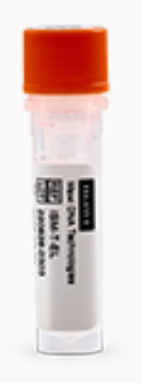
SEE PRODUCT

iSWAB™-ID Collection Kit for collection and stabilization of forensic evidentiary DNA samples



SEE PRODUCT

iSWAB™-RNA v2 Collection Kit for collection and stabilization of human RNA samples



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Mawi DNA Technologies LLC
26203 Production Ave, Suite #3
Hayward, CA 94545
Telephone: 510-256-5186
Toll-Free: 855-DNA-SWAB