# iSWAB<sup>™</sup>-DNA Technology

# Non-Invasive Device for Collection and Stabilization of DNA

The iSWAB<sup>™</sup>-DNA-1200 and iSWAB<sup>™</sup>-DNA-250 collection device consists of a collection tube that is pre-filled with 1 mL, and 600 µL, respectively, of the nontoxic iSWAB<sup>™</sup>-DNA buffer and fitted with a proprietary insert. The insert is designed to optimize the release of specimens collected with swabs into the gentle lytic buffer, creating a minimal footprint and allowing for swab-free transport of specimens. Self-collection or assisted collection can be achieved in less than 5 minutes and is suitable for all population segments including infants, toddlers, and elderlies. iSWAB<sup>™</sup>-DNA is pre- barcoded for a traceability and storage and is easy to process via manual and automated applications. The device is human gDNA and PCR inhibitor free and collected samples are stable at room temperature (15-30 °C) for 60 days.



### APPLICATIONS

| GENETIC ANALYSIS Epigenetics   Epidemiology   Forensics |
|---|
| VETERINARY TESTING Genotyping   Breeding   Speciation   |
| ASSAYS PCR   Sequencing   Genotyping   Gene Expression  |

- ✓ **SWAB-FREE SAMPLE TRANSPORT** Decrease processing time without compromising sample integrity.
- HIGH DNA YIELD Up to 30μg (iSWAB-DNA-1200) and up to 15μg (iSWAB-DNA-250) of double-stranded, long-fragment DNA for use in applications including microarray and NGS.
- ✓ LOW BACTERIAL CONTAMINATION <3% bacterial genomic DNA contamination in sample collection.
- ✓ **ROOM-TEMPERATURE STABLE** Eliminates cold chain requirements, reducing storage and transport costs.
- ✓ SELF-COLLECTION OR ASSISTED COLLECTION IN <5 MINUTES Suitable for all population segments including infants, toddlers, and elderly people.</p>
- ✓ TRACEABLE AND RELIABLE CHAIN OF CUSTODY LIMS-compatible unique barcodes included on each collection device for efficient traceability and storage purposes.
- ✓ **SCALABLE AND EASY TO PROCESS** Manual and automation friendly sample processing.

#### ✓ CERTIFIED FREE OF HUMAN gDNA AND PCR INHIBITORS

| Catalog No.    | Description                                    | Stabilizing Buffer Volume  |
|----------------|--|--|
| iSWAB-DNA-1200 | iSWAB-DNA Collection Kit,                      | 1.0mL  |
| iSWAB-DNA-250  | iSWAB-DNA Collection Kit ,                     | 600µL  |
| ISD-T-1200-R   | iSWAB-DNA Collection Device Rack,              | 1.0mL x 50 units   |
| ISD-T-250-R    | iSWAB-DNA Collection Device Rack,              | 600μL x 50 units   |
| ISD-T-1200     | iSWAB-DNA Collection Device Bag,               | 1.0mL x 500 units  |
| ISD-T-250      | iSWAB-DNA Collection Device Bag,               | 600μL x 500 units  |
| mawi           | Mawi DNA Technologies LLC<br>www.MawiDNA.com   | <b>EC REP</b> CEpartner4U <b>www.cepartner4u.com</b><br>Esdoornlaan 13   3951 DB   Maarn   The Netherlands |
|                | 1252 Quarry Lane, Suite A Pleasanton, CA 94566 |  |

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#### **COLLECT • STABILIZE • CONCENTRATE • TRANSPORT • EXTRACT • STORE**

all in a single tube!

#### **HIGH GENOMIC DNA YIELD**

Comparison of Average gDNA Yields Isolated from Different Collection Methods



Comparison of Average Bacterial Genomic DNA Contamination Detected in Different Collection Methods





Primers specific for the 16S ribosomal RNA gene were used as a simple method to obtain relative quantification of bacterial DNA.

## COMPARISON CHART

| Attributes                           | iSWAB-DNA-250 | iSWAB-DNA-1200 | Blood        | Saliva    | Regular Swab | Mouth Wash |
|--------------------------------------|---------------|----------------|--------------|-----------|--------------|------------|
| Sample Volume                        | 600 uL        | 1 mL           | 1 mL         | 2 mL      | Dry          | 2 mL       |
| Swab Needs to Travel with Sample     | No            | No             | N/A          | N/A       | Yes          | N/A        |
| Collection Time                      | < 5 min       | < 5 min        | 5-10 min     | 20-30 min | 1 min/swab   | 5 min      |
| Median Human DNA Yield               | 5-17 μg       | 10-30 µg       | 20-30 μg     | 10-30 µg  | 1-2 µg       | 10-30 µg   |
| Molecular Weight of DNA              | > 23 kb       | > 23 kb        | > 23 kb      | > 23 kb   | < 23 kb      | > 23 kb    |
| Bacterial DNA Content                | < 3%          | < 3%           | < 1%         | Up to 40% | Up to 90%    | Up to 60%  |
| Storage and Transport                | RT            | RT             | Cold Storage | RT        | RT           | RT         |
| Stability                            | Months        | Months         | Months       | Months    | Days         | Weeks      |
| Capability to Concentrate Sample     | Yes           | Yes            | N/A          | N/A       | No           | N/A        |
| Suitable for All Population Segments | Yes           | Yes            | Yes          | No        | Yes          | No         |
| Automation Friendly                  | Yes           | Yes            | Yes          | Somewhat  | No           | No         |
| Number of Extraction Steps           | 5             | 5              | 7-10         | 6         | 10           | 6          |
| Liquid Sample                        | Yes           | Yes            | Yes          | Yes       | No           | Yes        |
| Barcoded                             | Included      | Included       | Included     | Custom    | Custom       | Custom     |
| Return Transport Packaging Provided  | Yes           | Yes            | No           | No        | No           | No         |
| Long-term Storage Real Estate        | Small         | Small          | Large        | Medium    | N/A          | Medium     |

#### iSWAB-DNA Collected Samples are Stable at Room-Temperature



**COMPATIBLE WITH:** Investigator Quantiplex Kit (Qiagen, Cat. # 387016) | Promega PowerPlex 16 HS System (Promega, Cat. # DC2101) | EZ1 Advanced XL DNA Investigator Flip-Cap Card (Qiagen, Cat. # 9019933) | TaqMan Open Array Genotyping assays and many others. | Listed assays were validated for Mawi DNA via 3rd party lab. Contact us if assay being used is not listed.

# mawi

Mawi DNA Technologies LLC www.MawiDNA.com

#### EC REP CEpartner4U www.cepartner4u.com

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