

iSWAB™ - DNA

Non-invasive device for collection and stabilization of long-fragment, double-stranded DNA



Patented internal sample concentration & stabilization technology

The iSWAB-DNA device allows for the collection and stabilization of DNA at the point of collection without the need for swab inclusion. Typical yields of between 10-30µg (iSWAB-DNA-1200) of DNA with <1% bacterial contamination can be achieved. The gentle collection and lysis chemistry of the alcohol-free iSWAB buffer allows for recovery of double-stranded, large fragment DNA similar to the genomic DNA generated from blood, making it suitable for complex genomics downstream arrays such as microarrays and Next Generation Sequencing. Other non-invasive collection methods often utilize alcohol and can produce short DNA fragments limiting their usability to basic genotyping applications.

Applications include:

- Genetic Analysis: Epigenetics, Epidemiology, and Forensics.
- Veterinary Testing: Genotyping, Breeding, Speciation

Features & Benefits

- **Collect - Stabilize - Concentrate - Transport - Extract - Store: All in a Single Tube**
- **Swab-free sample transport:** Decrease sample processing time without compromising sample integrity
- **Up to 30µg (iSWAB-DNA-1200) of double stranded, long fragment DNA for downstream applications including microarray and NGS**
- **Achieve less than 1% bacterial genomic DNA contamination:** Low bacterial genomic DNA contamination in sample collection
- **Room temperature stable:** Reduce sample storage and transport costs by eliminating cold chain requirements
- **Self collection or assisted collection in less than 5 minutes:** Suitable for all population segments including infants, toddlers, and elderly
- **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
- **Human gDNA and PCR inhibitor free certified**

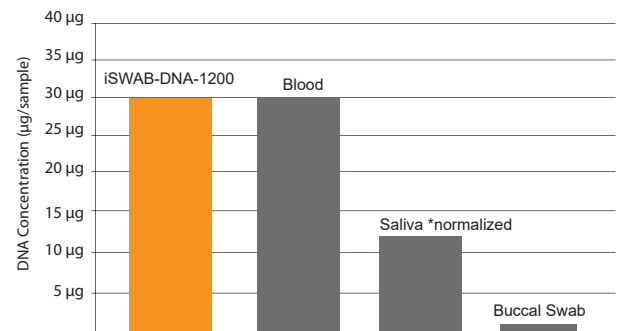


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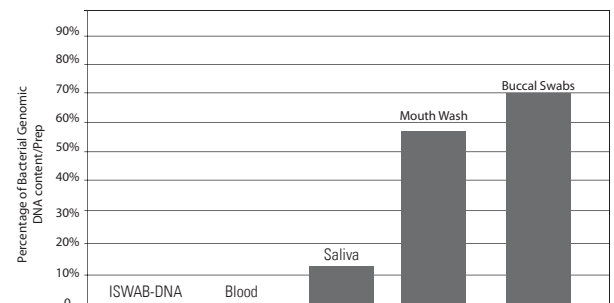
High Genomic DNA Yield

Comparison of Average gDNA Yields Isolated from Different Collection Methods



Low Bacterial Contamination (< 1%)

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.

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Applications:

- Genetic Research
- Forensics Research
- Veterinary Research
- Epidemiology

Assays:

- PCR
- Sequencing
- Genotyping
- Gene Expression

iSWAB-DNA stacked against invasive and other non-invasive collection methods

Attributes	iSWAB-DNA-1200	Blood	Saliva	Regular Swab	Mouth Wash
Sample volume	1 mL	1 mL	2 mL	Dry	2 mL
Swab needs to travel with sample	No	NA	NA	Yes	NA
Collection Time	< 5 min	5-10 min	20-30 min	1 min/swab	5 min
Median human DNA yield	15-30 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
Bacterial DNA Content	< 1%	< 1%	up to 40%	up to 90%	up to 60%
Storage and Transport	RT	Cold Storage	RT	RT	RT
Stability	Months	Months	Months	Days	Weeks
Capability to concentrate sample	Yes	NA	NA	No	NA
Suitable for all population segments	Yes	Yes	No	Yes	No
Automation friendly	Yes	Yes	Some what	No	No
Number of extraction steps	5	7-10	6	10	6
Liquid Sample	Yes	Yes	Yes	No	Yes
Barcoded	Included	Included	Custom	Custom	Custom
Return transport packaging provided	Included	No	No	No	No
Long term storage real estate	Small	Large	Medium	NA	Medium

Part No.	Product	# of swabs	Collection Volume	Expected DNA Yield
ISWAB-DNA-1200	iSWAB-DNA Collection Kit, 1.0 ml	4 swabs	1.0 ml	10 - 30 µg
ISWAB-DNA-250	iSWAB-DNA Collection Kit, 600 µl	2 swabs	600 µl	5 - 15 µg
ISWAB-DSC	iSWAB-Discovery Collection Kit, 400 µl	1 swab	400 µl	2 - 7 µg

ISD-T-1200-R	iSWAB-DNA Collection Tube Rack, 1.0 ml x 50
ISD-T-250-R	iSWAB-DNA Collection Tube Rack, 600 µl x 50
ISD-T-DSC-R	iSWAB-DNA Collection Tube Rack, 400 µl x 50



Biosampling Reinvented™



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