

# PUREBIND SWAB DNA ISOLATION KIT

#### INTRODUCTION

The PureBind Swab DNA Isolation Kit provides a simple, highly reproducible and automation-ready route to microgram quantities of high molecular weight genomic and mitochondrial DNA from buccal swab samples. The systems utilizes magnetic bead technology, enabling efficient, consistent, and scalable extraction of genomic DNA. The extracted genomic DNA is free from protein and other contaminants, making it suitable for a variety of downstream applications, such as PCR, Real-time PCR, NGS sequencing, enzymatic digestion, or molecular cloning.

#### **HIGHLIGHTS**

- High yields of quality DNA compared to other magnetic beadbased methods
- Automation-friendly with proven adaptability to open-ended magnetic particle processors and liquid handlers
- **Eco-friendly** with no costly columns required and minimal use of plastics.
- **Compatible** with various commercially available swab collection systems.

# DOWNSTREAM APPLICATIONS

- PCR
- Real-time PCR
- NGS Sequencing
- DNA Methylation Analysis
- Enzymatic Digestion
- Molecular cloning

### High Integrity and Quality DNA

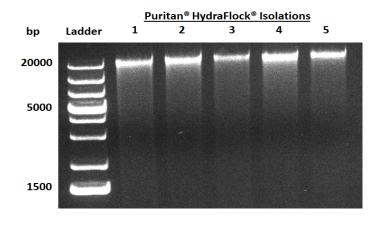


Figure 1. Example of reproducibility and minimal shearing and degradation using the PureBind Swab DNA Isolation Kit

The PureBind Swab DNA Isolation Kit isolates intact DNA from buccal cells collected with Puritan HydraFlock Swabs and delivers reproducible and consistent results with minimal DNA shearing and degradation.

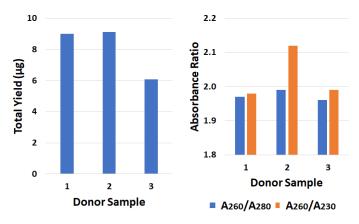


Figure 2. Example of quality DNA isolated using the PureBind Swab DNA Isolation Kit

The PureBind Swab DNA Isolation Kit provides high quality DNA with high purity that is suitable for downstream applications, such as PCR and enzymatic digestion.

#### Simple and Quick Workflow

## To sample add Digestion Buffer and Proteinase K. Mix sample and then incubate at room temperature for 2 mins. Step 2. Add Lysis Buffer and mix. Then incubate at 56°C for 20 mins. Step 3. Transfer supernatant to a clean tube. Add Beads and Isopropanol. Then incubate on a rotating mixer for 3 mins at room temperature. Step 5. Collect beads on a magnet and discard the supernatant. Step 6. Wash beads twice with Wash Buffer 1 and Wash Buffer 2. Step 7. Air dry beads for 5 mins. Step 8. Add Elution Buffer and resuspend beads to elute purified DNA, Transfer supernatant to a new tube.

#### Compatible with Next-Gen Seq Platforms

DNA Source	Relative Library Yield	Relative > Q30%	Relative Usable Reads	Relative Passing QC Amplicons
PureBind	0.92 ± 0.13	0.99 ± 0.01	0.93 ± 0.11	1.01 ± 0.02
Roche	1	1	1	1

Figure 3. Example of NGS library preparation with DNA isolated using the PureBind Swab DNA Isolation Kit

The PureBind Swab DNA Isolation Kit produces high quality DNA suitable for next generation sequencing (e.g. Illumina NextSeq550) and a range of other downstream applications.

#### **Higher Yields than Other Competitors**

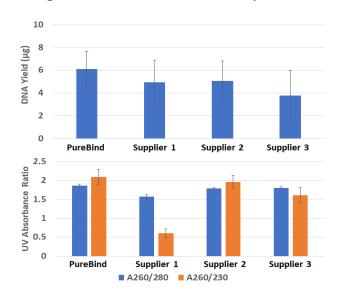


Figure 4. Higher DNA yields than leading competitors from healthy human swab samples using the Puritan HydraFlock Swab System

The PureBind Swab DNA Isolation Kit significantly outperforms other magnetic bead-based swab DNA isolation kits in total yield and purity of isolated DNA.

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