

Saliva DNA Collection and Isolation

The GeneFix™ range of DNA products have been designed to simply maximise the yields and purity of DNA collected and stabilised from Saliva. Isohelix has over the years built a leading reputation for designing and manufacturing DNA sampling and purification products, built around their unique High Yielding DNA Buccal Swabs together with their associated kits to stabilise and isolate your DNA. The new GeneFix™ products use many shared chemistries and knowledge designs from our existing swab DNA isolation kits, and where technically appropriate these have been re-configured or method developed to optimise their use solely on saliva stabilised either from the GeneFix™ collectors or other saliva collection devices. The resulting DNA collected through GeneFix™, as with the Isohelix Buccal DNA, can be used in the most demanding downstream processes.

DNA Saliva Collectors and Assisted Collectors

GeneFix™ is a new easy to use and economical DNA saliva collection device, designed specifically to store and stabilise long term DNA for 1 or 2 ml Saliva samples. The collection tube is pre-filled with a fully tested and chemically optimised stabilisation buffer. The simple screw-on funnel enables the saliva sample to be delivered directly and quickly into the buffer.

Clear, legible markings on the GeneFix™ collection tubes indicate the correct volume of Saliva to be delivered, prior to removing and sealing the tube, the unique funnel design prevents spillages and flow back even when accidentally knocked over. The collection tubes will withstand defined physical pressures that have been specified for leak proof sample transport and are designed for either manual or more automated application with printed bar codes and caps options being suitable for auto de-capping machines.

GeneFix™ Assisted DNA Saliva Collectors are especially useful where donors find it difficult to delivery saliva, such as children. The assisted kits contains the standard GeneFix components and 2 absorbent swabs to assist the saliva collection, the swab is simply squeezed against the inside of funnel to release the saliva into the 1ml of stabilized buffer. Expected DNA yields are on average around 25µg and would be purified with exactly the same format and results as the standard GeneFix™ collectors.

Product information

GFX devices in 2, 12 and 50 units for either 1ml or 2ml of saliva

Each GeneFix™ device includes a collection tube with stabilisation buffer, optional swabs, funnel and instructions
See back page for Ordering Information

Accessories

Choice of collection tubes for manual or automated applications
Pre-printed bar codes
Additional Proteinase K for the Lysis step

Lysis Step

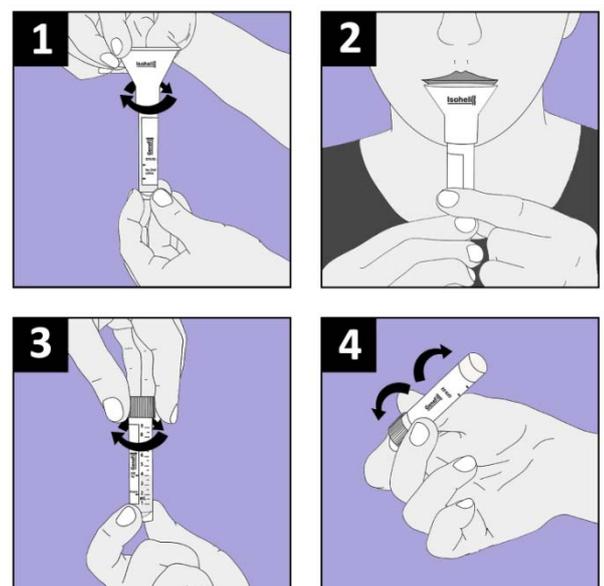
GeneFix™ samples integrate directly with DNA kits containing Proteinase K for Cell Lysis, or PK can be added manually for pre-treatment



Key Benefits

- ✓ Easy to Use with Pre-Filled Stabilisation buffer.
- ✓ Unique funnel design prevents buffer spillages.
- ✓ DNA Stabilised for 60 months+ at Room Temp*.
- ✓ DNA yields maintained for 60+ months*.
- ✓ Total DNA yields in excess of 100µg from 2ml saliva.
- ✓ Seamlessly integrates with 3 GeneFix™ Isolation kits.
- ✓ Saliva-Prep kit delivers ultra low RNA contamination.
- ✓ The devices are compatible with Manual and HT kits.
- ✓ Fully tested on most downstream applications.
- ✓ Specified 95kPa for leak proof mailing and return.
- ✓ Widely supported with Technical DNA data.

* In ongoing and continued rigorous testing.



GeneFix™ Saliva DNA Isolation Kits

From the very outset we developed a number of different isolation kits based around alternative chemistries, to optimise the key requirements of purity, yield and ease of use. Each individual isolation method has been specifically designed to maximise one key outcome that is of most importance to a particular application or researcher. By offering a number of choices, this allows the users to select a kit that is most suitable to their downstream process which in turn improves the results that they can expect from their application or test.

New Advanced Saliva-Prep ② DNA Isolation Kits

The New Advanced GeneFix™ Saliva-Prep ② DNA Isolation kits have been designed to provide significant technical improvements for purity over our original Saliva Prep Kits. The Saliva Prep ② is designed for use with Stabilized Saliva collected primarily from GeneFix™ Collectors, as well as from many other saliva collection devices. The isolation protocol itself is based around a new design precipitation chemistry that has a number of additional key advantages: being rapid, very easy to use, and with high yields and most importantly producing extremely high purities.

It also has other significant advantages, being Ethanol and Solvent free, and virtually zero co-precipitation of RNA with the DNA, thereby resulting in ultra low RNA contamination in the final DNA samples. The processing choices are widely flexible to allow for varying volumes from a few 100µl up to 2ml of saliva and even larger if required

The DNA yields are exceptional and greatly in excess of 100µg with typical A260/280 values of around 1.8 and with A260/230 typically in also excess of 1.8. In our experiments these ratios compare extremely favourably against similar, and other alternative precipitation type chemistries.

Saliva-Prep ②'s practical advantages make it the method of choice for a rapid and efficient isolation method that is easy to use and offers outstanding yields.

Ordering information

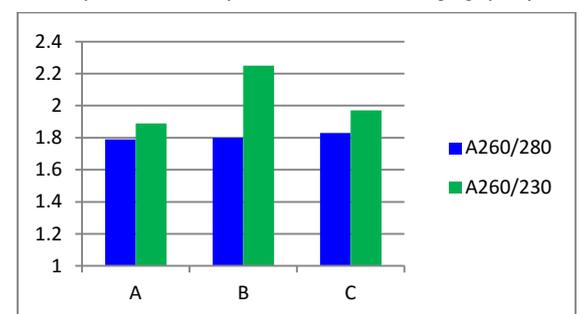
GSP-12 to process 12 x 2ml or 24 x 1 ml of stabilised Saliva
GSP-50 to process 50 x 2ml or 100 x 1ml of stabilised Saliva



Features

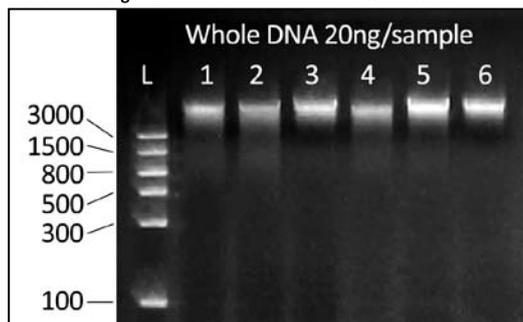
- ✓ High Yields > 100µg DNA from 2ml of raw Saliva
- ✓ Economic, easy to use and extremely robust
- ✓ High Purity suitable for virtually all applications
- ✓ Fully Optimised for use with Stabilised Saliva
- ✓ No Solvents, Columns or Filtration requirements
- ✓ Delivers virtually RNA-free samples
- ✓ Rapid Handling Times
- ✓ Easily adjustable for varying sample volumes.

Nanodrop data from GSPN purified saliva DNA showing high purity DNA



Sample	Qubit dsDNA BR Sample Concentration	Nanodrop	
		A260/280	A280/230
A	67.8 µg/ml	1.79	1.89
B	184 µg/ml	1.80	2.25
C	125 µg/ml	1.83	1.97

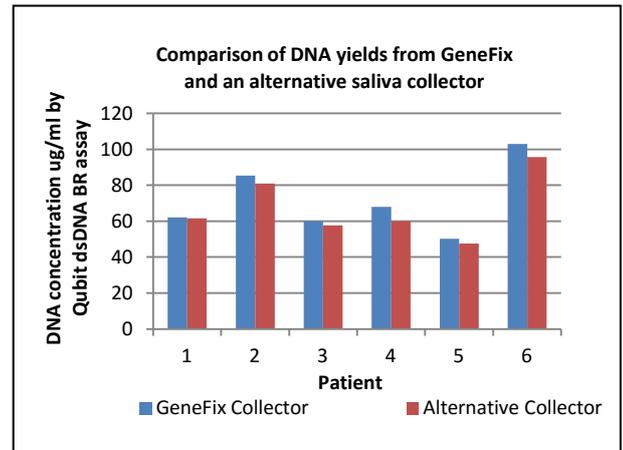
Agarose gel of GSPN purified saliva DNA showing intact, clean high molecular weight DNA with minimal RNA contamination



GeneFix™ Saliva - Manual or Automated

GeneFix Saliva collectors have been designed to maximise purity without compromising on yields, the total DNA yields when compared against other saliva collectors compare extremely favourably and in many cases show higher yield data (see graph). Another significant benefit of the GeneFix stabilisation buffer is that it will not only integrate seamlessly into our own various chemistries but also directly into most other standard and commercial chemistries at their Proteinase K incubation step.

As an automated collector we have several tube options that will integrate and fit many robotic machines using a wide range of chemistries. The tube choices offer 1-D and 2-D bar coding with common code functions and sealing caps that can be auto de-capped, and designed within available industry standard racking systems.



Saliva Mini/Midi DNA Isolation kits

These silica column based kits produce the highest DNA purities (A260/280 greater than 1.8 and A260/230 greater than 1.5) and cover efficiently the processing of both small and large volumes in a one batch protocol. The Mini column kit processes 0.5ml to 1ml maximum of stabilized saliva and the Midi kit for 2ml of stabilized saliva from a GeneFix™ collector. Both Isolation kits are compatible with most vacuum manifolds and other robotic instruments yet produce outstanding purities.

Features

- ✓ Fully Process Optimised for GeneFix™ Saliva Collectors
- ✓ High Purity Genomic DNA and free of PCR inhibitors
- ✓ Universal Cartridge for Manual and HT applications
- ✓ Ideal for demanding downstream applications
- ✓ Fewer handling steps than other cartridge method



Ordering Information

GSS-05 Mini column kit for 5 x 1ml of Stabilised Saliva
GSS-50 Mini column kit for 50 x 1ml of Stabilised Saliva

GMS-02 Midi column kit for 2 x 2ml of Stabilised Saliva
GMS-12 Midi column kit for 12 x 2ml of Stabilised Saliva
GMS-48 Midi column kit for 48 x 2ml of Stabilised Saliva

(Each kit contains all the required columns, collection tubes and reagents together with instructions.)

Download GeneFix™ Technical Application Notes from www.isohelex.com

Performance of Saliva DNA, stabilised in Isohelix GeneFix™ collectors, and isolated by Chemagen or Isohelix GeneFix™ Saliva DNA kits, on MLPA assays.

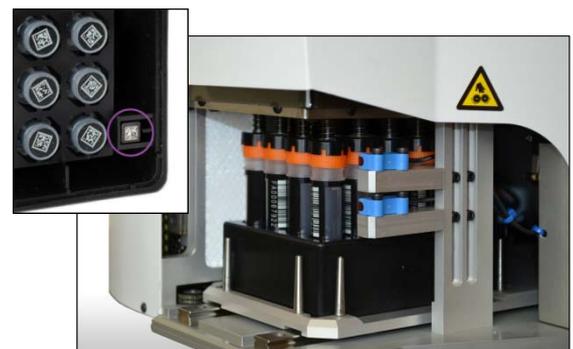
Saliva DNA isolation from GeneFix™ Saliva Collectors using GeneFix™ Saliva-Prep DNA Kit Cat. No: GSP-48/GSP-12/GSP-2

Saliva DNA isolation from GeneFix™ Saliva Collectors using GeneFix™ Saliva DNA Midi Kit Cat. No: GMS-12

Saliva DNA isolation from GeneFix™ Saliva Collectors using GeneFix™ Saliva DNA Mini Kit Cat. No: GSS-50

Performance of Saliva DNA collected in GeneFix™ Saliva Collectors and isolated with GeneFix Saliva DNA kits, genotyped on the Illumina HumanOmniExpress – 12 v1.1 BeadChip

GeneFix™ is High Throughput compatible



GeneFix™ Ordering Information

Cat No	Description
GeneFix™ DNA Saliva Collector	
GFX-01/02	2 x GFX Saliva Collectors to collect 1ml saliva samples: Funnel, Tube Pre-filled Stabilisation buffer, Cap and Instructions.
GFX-01/12	12 x GFX Saliva Collectors to collect 1ml saliva samples: Funnel, Tube Pre-filled with Stabilisation buffer, Cap and Instructions.
GFX-01/50	50 x GFX Saliva Collectors to collect 1ml saliva samples: Funnel, Tube Pre-filled with Stabilisation buffer, Cap and Instructions.
GFX-02/02	2 x GFX Saliva Collectors to collect 2ml saliva samples: Funnel, Tube Pre-filled with Stabilisation buffer, Cap and Instructions.
GFX-02/12	12 x GFX Saliva Collectors to collect 2ml saliva samples: Funnel, Tube Pre-filled with Stabilisation buffer, Cap and Instructions.
GFX-02/50	50 x GFX Saliva Collectors to collect 2ml saliva samples: Funnel, Tube Pre-filled with Stabilisation buffer, Cap and Instructions.
GFXA-01/02	2 x GFXA Assisted Saliva Collectors: Funnel, Tube Pre-filled with Stabilisation buffer, Cap, 2 swabs and Instructions.
GFXA-01/12	12 x GFXA Assisted Saliva Collectors: Funnel, Tube Pre-filled with Stabilisation buffer, Cap, 2 swabs and Instructions.
GFXA-01/50	50 x GFXA Assisted Saliva Collectors: Funnel, Tube Pre-filled with Stabilisation buffer, Cap, 2 swabs and Instructions.
FDXA-01/48	48 x FDXA Assisted Saliva Collectors: Funnel, Tube Pre-filled with Stabilisation buffer, Cap, 2 swabs and Instructions.
FDX collectors	FDX Saliva Collectors with FluidX bar coded tubes, available in 2, 12 or 48 units – please enquire for further information.
GeneFix™ DNA Isolation Kits	
GSPN-02	Saliva-Prep ② Full DNA Isolation kit to process 2 x 2 ml or 4 x 1 ml of saliva
GSPN-12	Saliva-Prep ② Full DNA Isolation kit to process 12 x 2 ml or 24 x 1 ml of saliva
GSPN-50	Saliva-Prep ② Full DNA Isolation kit to process 50 x 2 ml or 100 x 1ml of saliva
SPRE-50	Saliva-Prep Xtra Re-Extraction kit to process 50 x 100µl or 12 x 400µl DNA samples
GSS-05	Column (small) based DNA Isolation kit processes 5 x 0.5ml+ of saliva
GSS-50	Column (small) based DNA Isolation kit processes 50 x 0.5ml+ of saliva
GMS-02	Column (Midi) based DNA Isolation kit processes 2 x 2 ml of saliva
GMS-12	Column (Midi) based DNA Isolation kit processes 12 x 2 ml of saliva
GMS-48	Column (Midi) based DNA Isolation kit processes 48 x 2 ml of saliva
GeneFix™ Accessories	
TP-50	50 Transport Packs with absorbent pads for shipping saliva samples
BC/3A/50	50 x 3 triplicate Pre-Printed barcodes 25mm x 10mm, printed on cryogenic labels
PK/11	11mg Lyophilised Proteinase K – fully tested with instructions
GFS-01/100	100 foam tipped swabs for assisted collection, wrapped and ethylene oxide treated
GeneFix™ DNA Saliva Collectors can also be combined with GSS and GMS kits	

Isohelix DNA Buccal Swabs with Stabilisation and Isolation Kits

Isohelix DNA Buccal Swabs maximise yields of the highest quality genomic DNA, by using an improved matrix design, without compromising its rapid DNA release properties. Each batch is ethylene oxide treated and routinely tested for human DNA contaminants.

The Isohelix DNA Stabilisation and Isolation kits are designed to enhance the sample's long term stability and DNA purity levels, being compatible with the most critical downstream processing applications.



Isohelix DNA Buccal Swabs various formats compatible to both Manual or HT downstream applications.

DNA Stabilisation Physical and chemicals kits producing up to 5+ years stability at room temperature.

DNA Purification Kits for Buccal Swabs with superior purities, in simple and easy to use formats.

Brochures, Instructions and Application Notes available at www.isohelex.com

Research Use Only – applies to certain territories

Isohelix is a division of Cell Projects

For swab or DNA isolation queries email: info@isohelex.com www.isohelex.com
Molecular Biology Solutions www.cellprojects.com

GeneFix™ Saliva Collectors CE

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