

## 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 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. Alternatively you can choose an assisted 2ml collection option that combines with the funnel 2 highly absorbent swabs to assist in the collection process. Clear, legible markings on the GeneFix™ collection tubes indicate the correct volume of Saliva to be delivered, prior to removing the funnel and re-sealing the tube with the screw cap, 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 being suitable for auto de-capping machines.

### Product information

**GFX devices packaged in 2, 12 and 50 units for collecting either 1 or 2mls of saliva**

Each GeneFix™ device includes a collection tube with integrated 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 lysis step

#### Lysis Step

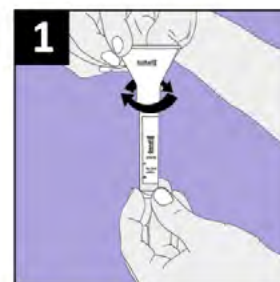
GeneFix™ Collector samples integrate directly with DNA kits containing Proteinase K for Cell Lysis. We also offer a fully tested Proteinase K to pre-treat the saliva samples if the preferred isolation method does not incorporate a Proteinase K lysis step.



### 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.

## Saliva- Prep DNA Isolation Kits

The GeneFix™ Saliva-Prep DNA Isolation kits have been designed specifically for use with Stabilised Saliva collected primarily from GeneFix™ Collectors and also from many other saliva collection devices. The isolation protocol itself is based around a precipitation chemistry that has a number of key advantages around being rapid, very easy to use, and with extremely high yields without sacrificing on purity. It also has other significant advantages being Ethanol and Solvent free, and importantly does not tend to co-precipitate RNA with the DNA resulting in ultra low RNA contamination of the final DNA samples. Processing choices are flexible for volumes up to 2ml of saliva. There is also scope for processing even larger saliva volumes.

DNA yields are exceptional and greatly in excess of 100µg with typical A260/280 values above 1.7 and with A260/230 typically in excess of 1.5. In our experiments these ratios compare extremely favourably against similar, and other ethanol precipitation type chemistries.

The Saliva-Prep'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

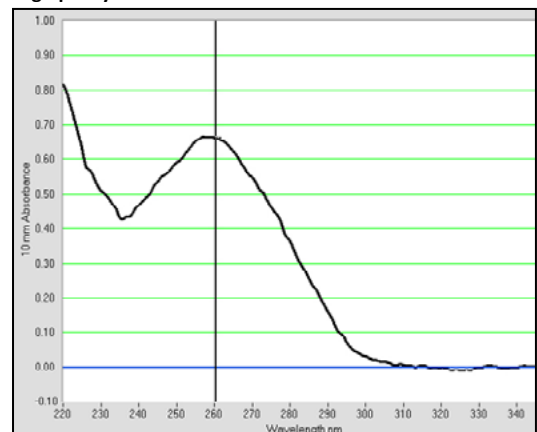
(Each kit contains all chemicals required to process the stated number of saliva samples, including a Proteinase K lysis step and resuspension buffer for the final DNA sample.)



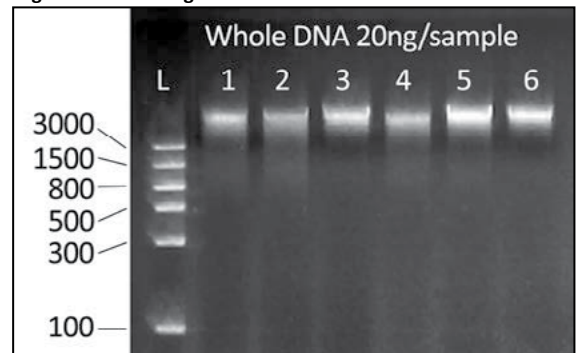
## Features

- ✓ 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.

Typical nanodrop scan from GSP purified saliva DNA showing high purity DNA



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



## 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 should be used where your volume requirement is 0.5ml to 1ml maximum of raw stabilised saliva and the Midi kit for processing the whole 2ml of raw stabilised saliva from a GeneFix™ collector, in one batch.

We have also design optimised into the protocol other major advantages around reduced and significant yield losses, fewer handling steps and optional ethanol precipitation to increase sample concentration if required. The Midi column is fairly unique in its ability to process 2ml of Saliva in one batch. The column design is universal to existing vacuum manifolds and other robotic instruments making it an optional, and potentially, a direct switch for many existing manual and HT applications. The DNA produced from both systems is of outstanding purity - more than suitable for the most demanding of downstream processing applications.

## Features

- ✓ Fully Process Optimised for GeneFix™ Saliva Collectors
- ✓ High Purity Genomic DNA
- ✓ DNA free from trace PCR inhibitors
- ✓ Designed for both Manual and HT applications
- ✓ Ideal for demanding downstream applications
- ✓ Universal cartridge design
- ✓ Fewer handling steps than other cartridge methods
- ✓ Compatible with other saliva collection devices

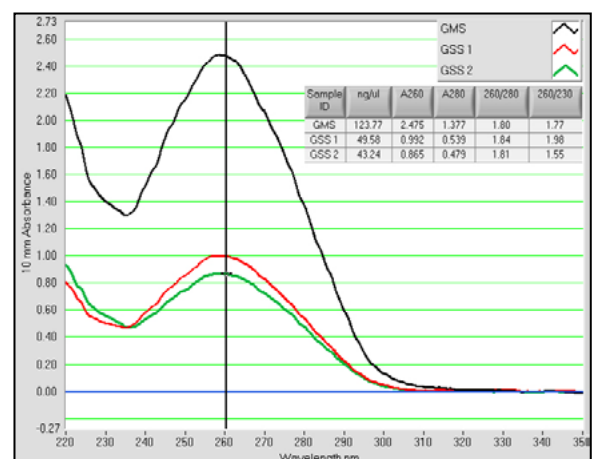


## Ordering Information

**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.)



Nanodrop scans from a 2ml saliva sample processed through a GMS column and 2 x 0.5ml saliva samples processed through GSS columns, showing very high purity DNA with >1.8 A260/280 and >1.5 A260/230.

## Download GeneFix™ Technical Application Notes from [www.isohelex.com](http://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.

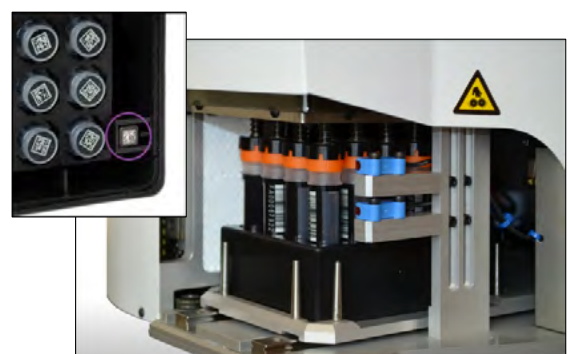
Saliva DNA isolation from GeneFix™ Saliva Collectors using GeneFix™ Saliva-Prep DNA Kit Cat. No: GSP-48/GSP-12/GSP-2

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



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## GeneFix™ Ordering Information

Cat No	Description
<b>GeneFix™ DNA Saliva Collector</b>	
<b>GFX-01/02</b>	2 x GFX Saliva Collectors to collect 1ml saliva samples: Funnel, Tube Pre-filled Stabilisation buffer, Cap and Instructions.
<b>GFX-01/12</b>	12 x GFX Saliva Collectors to collect 1ml saliva samples: Funnel, Tube Pre-filled with Stabilisation buffer, Cap and Instructions.
<b>GFX-01/50</b>	50 x GFX Saliva Collectors to collect 1ml saliva samples: Funnel, Tube Pre-filled with Stabilisation buffer, Cap and Instructions.
<b>GFX-02/02</b>	2 x GFX Saliva Collectors to collect 2ml saliva samples: Funnel, Tube Pre-filled with Stabilisation buffer, Cap and Instructions.
<b>GFX-02/12</b>	12 x GFX Saliva Collectors to collect 2ml saliva samples: Funnel, Tube Pre-filled with Stabilisation buffer, Cap and Instructions.
<b>GFX-02/50</b>	50 x GFX Saliva Collectors to collect 2ml saliva samples: Funnel, Tube Pre-filled with Stabilisation buffer, Cap and Instructions.
<b>GFXA-02/02</b>	2 x GFXA -02 Assisted Saliva Collectors: Funnel, Tube Pre-filled with Stabilisation buffer, Cap, 2 swabs and Instructions.
<b>GFXA-02/12</b>	12 x GFXA -02 Assisted Saliva Collectors: Funnel, Tube Pre-filled with Stabilisation buffer, Cap, 2 swabs and Instructions.
<b>GFXA-02/50</b>	50 x GFXA -02 Assisted Saliva Collectors: Funnel, Tube Pre-filled with Stabilisation buffer, Cap, 2 swabs and Instructions.
<b>FDXA-02/48</b>	48 x FDXA -02 Assisted Saliva Collectors: Funnel, Tube Pre-filled with Stabilisation buffer, Cap, 2 swabs and Instructions.
<b>FDX collectors</b>	FDX Saliva Collectors with FluidX bar coded tubes, available in 2, 12 or 48 units – please enquire for further information.
<b>GeneFix™ DNA Saliva Collector with GSP DNA Isolation Kit</b>	
<b>GFX-02/02/GSP</b>	2 x GFX Saliva Collectors with GSP Saliva-Prep Isolation kit
<b>GFX-02/12/GSP</b>	12 x GFX Saliva Collectors with GSP Saliva-Prep Isolation kit
<b>GFX-02/50/GSP</b>	50 x GFX Saliva Collectors with GSP Saliva-Prep Isolation kit
<b>FDX-02/48/GSP</b>	48 x FDX Saliva Collectors to collect 2ml saliva samples with GSP Saliva-Prep Isolation kit
<b>GeneFix™ DNA Isolation Kits</b>	
<b>GSP-02</b>	Full DNA Isolation kit (precipitation type) to process 2 x 2 ml or 4 x 1 ml of saliva
<b>GSP-12</b>	Full DNA Isolation kit (precipitation type) to process 12 x 2 ml or 24 x 1 ml of saliva
<b>GSP-50</b>	Full DNA Isolation kit (precipitation type) to process 50 x 2 ml or 100 x 1ml of saliva
<b>GSS-05</b>	Column (small) based DNA Isolation kit processes 5 x 0.5ml+ of saliva
<b>GSS-50</b>	Column (small) based DNA Isolation kit processes 50 x 0.5ml+ of saliva
<b>GMS-02</b>	Column (Midi) based DNA Isolation kit processes 2 x 2 ml of saliva
<b>GMS-12</b>	Column (Midi) based DNA Isolation kit processes 12 x 2 ml of saliva
<b>GMS-48</b>	Column (Midi) based DNA Isolation kit processes 48 x 2 ml of saliva

## 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](http://www.isohelex.com)

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