

## Sampletype **i-sep**® - Frequently Ask Questions

### May I use 2 ml collection tubes of other manufacturers?

No, to guarantee best performance original Sampletype **i-sep**® collection tubes have to be used. Two reasons; first reason is the proprietary de-airing mechanism of the lid. Using a standard lid can build up pressure in the filter column and harm the membrane properties irreversibly. Secondly, the link between collection tube and lid is too short on a conventional 2 ml tube and has to be disconnected, which increases the risk mixing up the lids and extra risk of contamination.

### Are Sampletype **i-sep**® spin columns free of DNA?

All Sampletype **i-sep**® products are sterilized using ethylene oxide. All products are free of human DNA, DNase, RNase and PCR inhibitors.

### What does “DNA-free” mean?

Sampletype **i-sep**® products are treated with ethylene oxide (EO). EO divides DNA strands into many small pieces. The small DNA pieces are unable to produce a human DNA profile. Without such EO treatment, any DNA which might have contaminated the Sampletype products during manufacturing could otherwise be amplified in an analytical lab to produce a human profile.

### I got no or poor DNA yield, the DNA quality was unexpected poor. What went wrong?

#### *Incomplete lysis of sample*

- Sample not thoroughly homogenized and mixed with lysis buffer / proteinase K. The mixture has to be shaken continuously. Alternatively, prolong incubation time with proteinase K.

#### *Suboptimal elution of DNA from the column*

- Elution efficiency can be increased applying a washing step with warmed up lysis buffer (56°C) directly onto the center of the membrane and incubate for 2 min before centrifugation.

### Does Biotype Diagnostic provide the reagents to perform the sample lysis?

No, the Sampletype **i-sep**® products are all-purpose. Every customer can implement our DNA extraction systems without changing the present lysis reagents. The method has to be optimized regarding length of lysis. Special attention should be paid to the efficient separation of epithelium DNA prior to the second lysis step.

### What are the benefits of the Sampletype **i-sep**®?

Sampletype **i-sep**® SQ and DL, based on the established mini spin-column format, feature a patented filter systems, which allow users to perform lysis and effective lysate removal in a single tube assembly. There is no transfer of the substrate to another tube (no sterile tweezers are needed) thus minimising hands on time and reducing the risk of cross contamination and sample transposition events. These benefits allow cost savings to be made in the lab due to time savings and a lower sample failure rate when compared to the conventional sample preparation.

## What distinguishes the SQ version from the DL version?

The sealing effect of the SQ version is for single use only. In other words, once centrifuged the effect is irreversibly lost. In difference, the DL version contains a unique self-sealing filter compartment which prevents flow-through of different kinds of liquid without any centrifugal force. This process is reversible and can be repeated several times. Thus allows to collect several DNA fractions in the same all-in-one system and makes Sampletype **i-sep**® DL perfectly suitable for differential lysis of mixed specimens.

## What is important to carry out an optimal differential lysis

A particular challenging case is the differential lysis to separate epithelium cells from sperm. The success depends on the complete separation of epithelium DNA during the first lysis step. Please ensure during the method optimization using Sampletype **i-sep**® DL technology, that...

- All epithelium cells are completely lysed during the first lysis step
- All epithelium DNA is completely removed from the specimen

Recommended parameters to optimize the procedure are:

- Increase the length of the first lysis step (ensure the sperm cells are not already harmed)
- Increase of temperature during lysis
- Usage of preheated lysis buffer
- Additional washing steps using the first lysis buffer to ensure all epithelium DNA is removed completely

## What are the advantages of DNA preparation using Sampletype **i-sep**® spin columns compared to conventional methods?

- Improved yield, reproducibility, and overall purity of isolated DNA
- Improved process flow
- No manual transfer of the substrate
- No extra pipetting steps
- No pellet
- Lysis and separation in the same device
- Quantitative recovery of lysate
- Closed system that minimizes the risk of cross-contaminations and mix-ups
- fewer follow-up costs due to high success rates in DNA analysis
- Compatible to any consecutive DNA isolation, both manual and automated

## Which quality guarantees can I expect?

All products undergo an intensive quality assurance process at Biotype Diagnostic GmbH. The Biotype Diagnostic GmbH is certified under DIN EN *ISO 9001:2008*. In accordance with our ISO-certified Quality Management System, each lot of Sampletype **i-sep**® is permanently controlled in order to ensure unrestricted usability and consistent product quality. Please contact us if you have any questions regarding quality assurance.