



# Samplete type **i-sep® DL** DNA separation

**World's first spin columns to selectively separate DNA fractions during differential lysis**

**Bio type®**  
Diagnostic GmbH

Samplete type **i-sep® DL** are developed for multistage DNA extraction procedures to provide purified DNA lysates of highest quality. The proprietary self-sealing filter material allows the stepwise release and separation of DNA. Based on the established spin-column design, the novel DNA extraction system allows for the first time a differential lysis in the same device. No extra sample carrier transfer or extra pipetting steps are necessary to process challenging forensic specimens such as epithelium and sperm traces on textile:

- Stepwise lysis and separation in the same device without extra pipetting steps
- Closed system that minimizes the risk of cross-contaminations and mix-ups
- Option of an immunological test using the identical sample
- No manual transfer of the substrate
- Quantitative recovery of lysate
- Improved process flow
- No pellet recovery
- Reduced risk of contamination
- Compatible to any consecutive DNA isolation, both manual and automated

## **Product description**

The quantity and quality of genomic DNA extracted from any sample can greatly impact the success of the downstream analysis and the overall quality of the final result. This is particular the case for field specimens which might be limited in quantity, may be environmentally exposed, and may require purification from difficult substrates containing PCR inhibitors. A particular challenging case is the differential lysis to separate epithelium cells from sperm.

Samplete type **i-sep® DL** are based on the established mini spin-column format containing a unique self-sealing filter compartment which prevents flow-through of different kinds of liquid without any centrifugal force. Sample lysis is carried out in the same column and lysis buffers are quantitatively transferred with no extra handling steps.

Solutions are retained within the column even during heat incubation and moderate shaking. Upon centrifugation, the solution passes the column into the collection tube.

This process can be repeated several times and makes Samplete type **i-sep® DL** perfectly suitable for differential lysis of mixed specimens.

## **Specifications**

Recommended filling volume: 50 - 500 µl

Maximal recommended centrifugation force: 13.400 rpm

Temperature stability: up to 60°C

Ethylene oxide sterilised to guarantee an RNA, DNA, RNase and DNase free product.

## **Instruction for use**

Samplete type **i-sep® DL** are developed for multistage DNA extraction procedures. The proprietary self-sealing filter material allows the stepwise release and separation of DNA. The novel spin-column system is ideally suitable for DNA extraction procedures involving differential lysis. Furthermore, the system allows for the first time an immunological pre-test using the identical sample. The usability of Samplete type **i-sep® DL** is exemplarily described using a differential lysis of a mixture of epithelia and sperms including a pre-test for semen (e.g. prostate-specific antigen PSA).

1. Place a Samplete type **i-sep® DL** into a 2 ml collection tube.
2. Place the specimen into the Samplete type **i-sep®** filter compartment.
3. Add the extraction buffer used in the immunological test and close the lid.
4. Incubate the sample on the bench for 1 hour.

5. Centrifuge the sample at 5.000 rpm for 1 min to remove all liquid. The eluate can be used for the immunological test. If the test is positive, place the filter unit into a new collection tube (optional).
6. Add the epithelium cell specific lysis buffer and close the lid.
7. Incubate the samples in an appropriate manner.
8. Centrifuge the sample at 5.000 rpm for 1 min to remove all liquid. The eluate contains the epithelia DNA for further processing as the sperms remaining in the filter unit.
9. Repeat steps 6-8 if necessary to ensure the epithelium cells are effectively removed.
10. Place the filter unit into a new collection tube (provided).
11. Add the second sperm specific lysis buffer and incubate appropriate.
12. Centrifuge at 5.000 rpm for 1 min. Remove the Sampletype **i-sep® DL** filter from the collection tube and discard it. The eluate contains the sperm DNA and can be used for further nucleic acid purification.

#### **Product use limitations**

Sampletype **i-sep® DL** are developed, designed and sold for research purpose only.

#### **Quality control**

All products undergo an intensive quality assurance process at Biotype Diagnostic GmbH. The Biotype diagnostic GmbH is accredited under DIN EN ISO 9001:2015. In accordance with our ISO-certified Quality Management System, each lot of Sampletype **i-sep® DL** is permanently controlled in order to ensure unrestricted usability and consistent product quality. Please contact us if you have any questions regarding quality assurance.

#### **Product warranty**

The Biotype Diagnostic GmbH guarantees the performance of all products in the manner described in our product literature. The purchaser must determine the suitability of the product for its particular use. Should any product fail to perform satisfactorily due to any reason other than misuse, the Biotype Diagnostic GmbH will replace it free of charge. We reserve the right to change, alter, or modify any product to enhance its performance and design. Please inquire for more information. A copy of our terms and conditions can be found on the back of your invoice.

#### **Technical assistance**

The Biotype Diagnostic GmbH provides a high quality technical support. Our support is staffed by experienced scientists with extensive practical and theoretical expertise in sample and assay technologies and the use of our products. If you have any questions or experience any difficulties regarding the Sampletype **i-sep® DL**, please do not hesitate to contact us.

Our customers are a major source of information regarding advanced or specialized uses of our products. This information is helpful to other scientists as well as to our team. We therefore encourage you to contact us if you have any suggestions about product performance or new applications and techniques. For technical assistance and more information, please see our website [www.biotype.de](http://www.biotype.de), send us an email [support@biotype.de](mailto:support@biotype.de) or give us a call +49 (0)351 8838 400.

#### **Order details:**

Sampletype **i-sep® DL** (250) - Order number 60-00101-0250

Related products: Sampletype **i-sep® DL-MB Buffer**, Sampletype **i-sep® DL-MB Complete Set**, Sampletype **i-sep® SQ** and Sampletype **i-sep® Collection Tubes**

For more information about our quantitative DNA extraction systems, please do not hesitate to contact us.