

Sylphium

molecular ecology



Specially
for aquatic
eDNA
sampling

20x
more eDNA
fragments

eDNA Dual Filter Capsule

Easy to use | High yield | No contaminations | In capsule preservation



Visit our website for more information and pricing

www.sylphium.com

eDNA Dual Filter Capsule

- Easy to use: Easy (sub)sampling without pooling
- High yield: Large membrane surface and optimal pore size for eDNA filtration
- No contamination: Enclosed filter membranes and in-capsule conservation
- Clean eDNA isolates: In-capsule removal of PCR inhibitors during filtration and extraction

This single-use eDNA filter capsule is specially designed for on-site filtration of large samples from natural water with a negligible risk of cross-contamination. The enclosed filter membranes have an optimal pore size for environmental DNA (eDNA) filtration to collect eDNA without rapid clogging. The filter capsule has a compact design containing two separate membranes that provide a huge membrane surface. The eDNA Dual Filter Capsule can be closed with "luer lock caps" after use and is suitable for in-capsule lysing and preserving at room temperature. During eDNA extraction from the capsule all solid residues, which are primary sources of PCR inhibitors, remain on the membrane. The eDNA Dual Filter Capsule meets all CEN/TC 230 – Water analysis – N 1229 requirements.

Large volumes and high eDNA yields

In comparison to commonly used filtering methods in eDNA studies, the eDNA Dual Filter Capsule is able to filter nearly 10 times more water and eDNA than a filter funnel and even 20 times more than a Sterivex™ filter (see Figure 1). This results in 10 and 20 times more eDNA, respectively (see Figure 2).

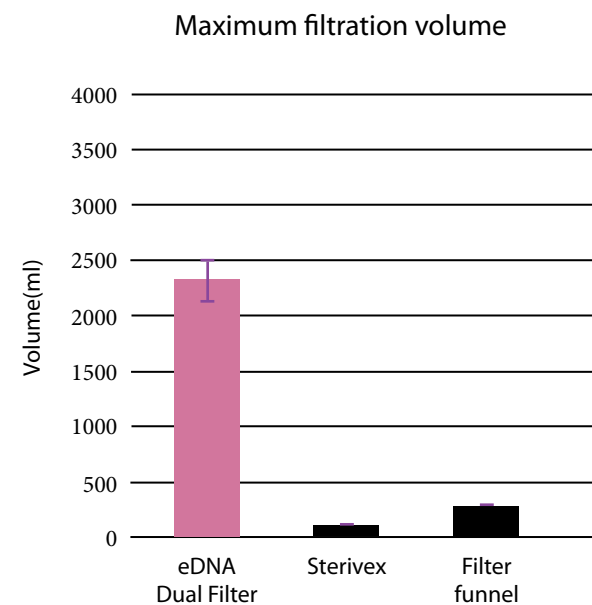


Fig. 1: Maximum filtration volumes obtained with an eDNA Dual Filter, Sterivex™ filter and a filter funnel. See the validation report for details about these filter experiments on sylphium.com

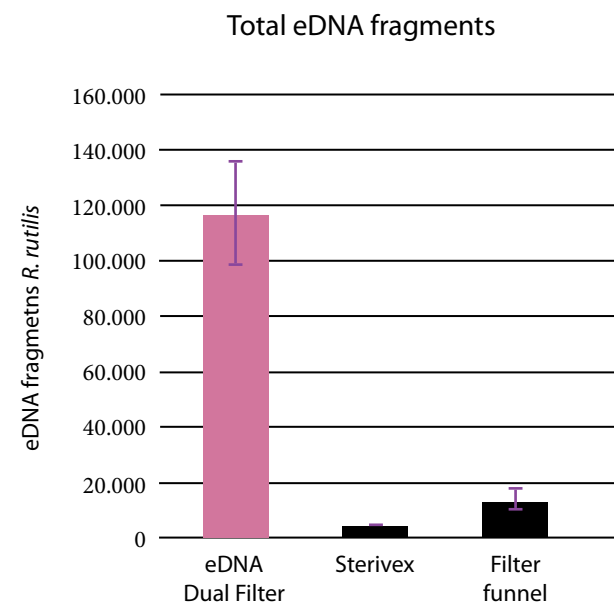
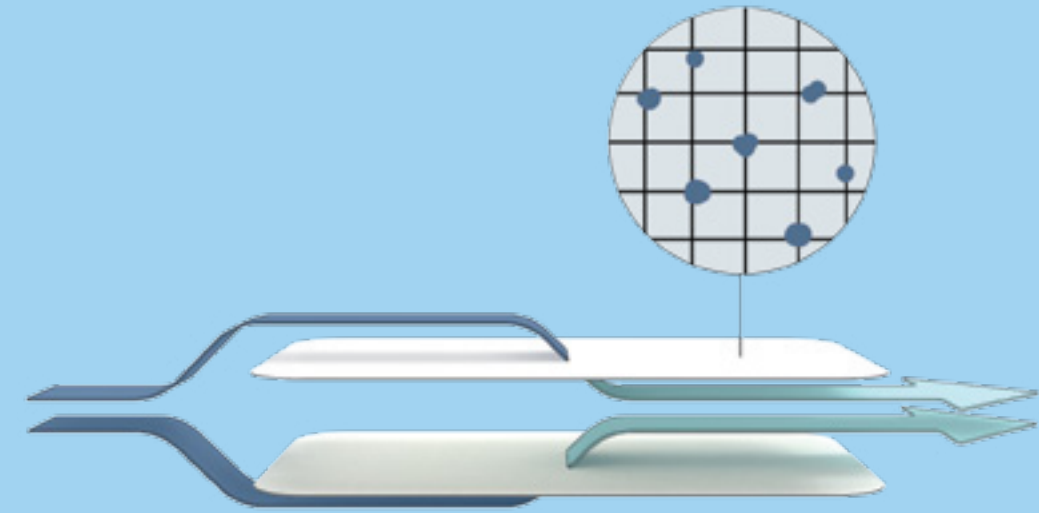
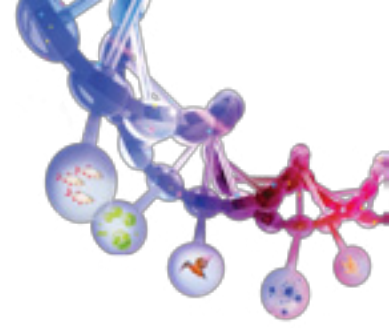


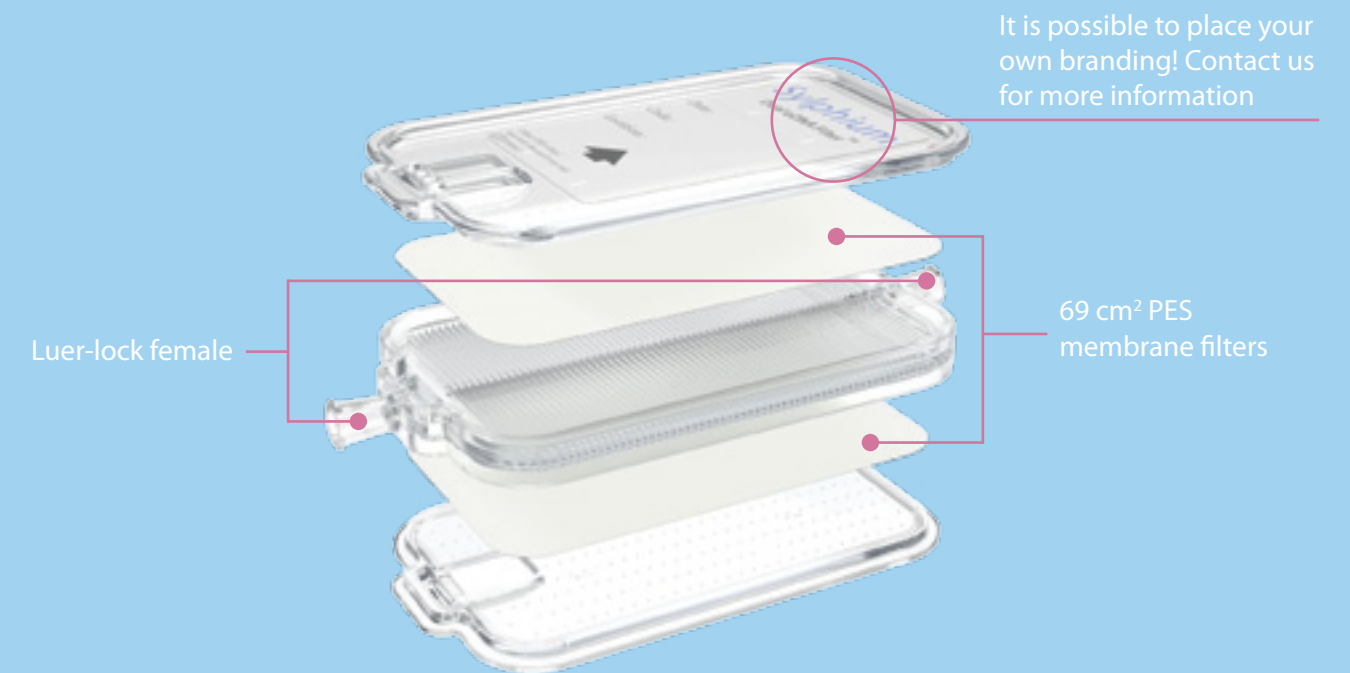
Fig. 2: Total eDNA fragments obtained with an eDNA Dual Filter, Sterivex™ filter and a filter funnel. See the validation report for details about these experiments on sylphium.com



Flow scheme of the eDNA Dual Filter Capsule. eDNA stays on the membrane filters, while water, PCR inhibitors and other components will flow through the membranes.

Specs

- Filter unit type: Closed capsule
- Effective Filter Area: 69 cm² (dual membrane system)
- Filter membrane: Hydrophilic Polyethersulfone (PES)
- Pore size: 0.8 μm (eDNA)
0.22 μm (bacteria)
- Max inlet pressure: 3.1 Bar (45psi)
- In and outlet fittings: Luer-lock female
- Size: 108 mm x 51 mm x 13 mm (L x W x H)
- Outer material: Non-toxic Acrylonitrile butadiene styrene (ABS)
- Sterilization method: Gamma irradiation



Exploded view of the eDNA Dual Filter Capsule



Examples of sampling with the eDNA Dual Filter Capsule:



eDNA Sampling Rod



eDNA Sampling Pump

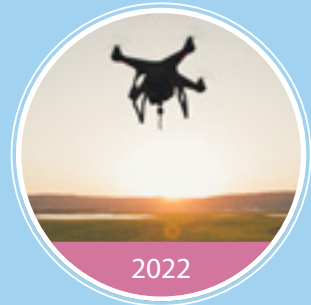
Watch the video on our website to see the filter in action!



www.sylphium.com



eDNA Sampling Rod with Pump



eDNA Sampling Drone

Sylphium Molecular Ecology (who we are)

Sylphium Molecular Ecology started in 2012 as a service lab for eDNA analysis to solve ecological questions. In addition performing full eDNA analyses for various organizations, we offer a wide range of tools that allow customers to perform eDNA analyses in their own laboratory. We offer total solutions for eDNA tests with complete kits and sampling equipment.

- Complete samplings kits
- Equipment for sampling
- eDNA isolation kits
- eDNA analysis kits (qPCR) with all necessary components
- Species specific eDNA analysis (as a service)
- eDNA Metabarcoding (as a service)
- Consultancy