

# sbeadex Lightning: rapid plant and livestock nucleic acid purification

## Simple and high-speed nucleic acid purification from plant and livestock samples

It is often challenging to isolate sufficient yields of highly pure, high-quality nucleic acids from plant and livestock samples that is universally applicable in common downstream assays such as PCR or NGS. Scientists typically require a straightforward manual protocol, with the option to automate the workflow to save time and costs.

[sbeadex™ Lightning](#) utilises a revolutionary, magnetic bead-based nucleic acid purification chemistry to meet all these requirements – providing an innovative solution that combines exceptional speed and simplicity (3 protocol steps, typically 5 minutes\*) with highest nucleic acid quality standards. Moreover, it saves not only time and labour but also other cost factors associated with plastic consumables, waste disposal, shipping and storage. By significantly reducing liquid and hazardous waste as well as plastic consumption and energy for transportation and instrumentation (and thus CO<sub>2</sub> emissions), sbeadex Lightning is more environmentally friendly than other comparable kits in the market.

## sbeadex Lightning for plant and livestock samples

The new sbeadex Lightning kits have been developed to facilitate rapid and simple isolation of high-quality reliable nucleic acids from different plant (e.g. leaves, seeds, roots) and animal (e.g. tissue, hair) sample materials (please see our website for a complete list of tested samples). The sbeadex Lightning protocol is automatable using common magnetic liquid handling robotics including Biosearch Technologies' oKtopure™ instrument, the KingFisher™ Flex (ThermoFisher Scientific) or the Hamilton Microlab STAR system (Hamilton Robotics).

\*sample-type dependent

## The sbeadex Lightning high-speed nucleic acid purification solution

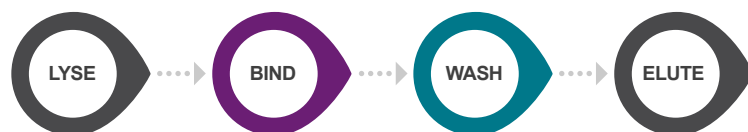
- High-quality nucleic acid preparations for common downstream applications such as PCR or NGS
- Highest speed and sample throughput with simple manual and automated protocols
- Compatible with common automation platforms
- Water-wash step prevents potential enzyme inhibitors such as ethanol in final eluate
- Significant time and cost savings: labour, consumables, shipping, storage, waste disposal
- Environmentally conscious: reduction of (hazardous) waste, packaging materials, plastic and energy consumption
- Sophisticated, flexible kit format: Core kits that are supplemented with individual components for optimal performance (sample-specific protocols available)

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## Nucleic acid preparation protocol

sbeadex Lightning uses superparamagnetic microparticles and a novel one-step binding mechanism to bind and purify nucleic acids. Combined with a single water washing step, this unique process removes impurities and potential inhibitors of enzymatic reactions very effectively, preparing nucleic acids for use in common downstream applications such as PCR and NGS. The very simple purification workflow involves only 3 steps and typically requires just 5 minutes from lysate to nucleic acid eluate while delivering high yields of pure nucleic acid.



## Ordering information

The sbeadex Lightning chemistry comes as a modular system to enable you to compile an optimal kit tailored to your specific needs. The technology involves a core kit, either Kit A or Kit B, consisting of binding buffer, sbeadex particle suspension and elution buffer. In addition there is a range of individual components (e.g. lysis buffers, Protease K solution, debris capture beads) that can be purchased separately. Please see our [webshop](#) for more details.

	Catalogue number	Number of purifications per kit (based on starting volume of 200 µL lysate)
<b>sbeadex Lightning Nucleic Acid Purification Core Kit A*</b>	<b>NAP40-030-01</b>	100
	<b>NAP40-030-02</b>	1000
	<b>NAP40-030-03</b>	10000
<b>sbeadex Lightning Nucleic Acid Purification Core Kit B*</b>	<b>NAP40-031-01</b>	100
	<b>NAP40-031-02</b>	1000
	<b>NAP40-031-03</b>	10000
<b>sbeadex Lightning Nucleic Acid Purification Starter Kit**</b>	<a href="#">NAP40-032-00</a>	20

\* Core Kit A and B;

Core Kit A with Binding buffer LP is suitable for the majority of sample types and recommended for most plant samples.

Core Kit B with Binding buffer LU is suitable for some specific sample types, particularly mammalian tissue.

\*\* sbeadex Lightning Nucleic Acid Purification Starter Kit contains all required reagents to establish the optimal conditions for lysis and purification, i.e. the two different 'Lightning' binding buffers, sbeadex magnetic particles, elution buffer, six different lysis buffers, Protease K solution and debris capture beads.

**Note:** Reagents that are required (lysis buffers) or optional (e.g. Protease K solution, debris capture beads) for the optimised purification protocols are available separately. Please see our [webshop](#) where you can also find the sample specific protocols for download.

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