



# sbeadex Lightning Livestock DNA Kit

## Simple and high-speed DNA purification from livestock samples

The new [sbeadex™ Lightning Livestock DNA Kit](#) is designed to streamline high-throughput (HTP) DNA extraction from a wide range of livestock samples. This is achieved through a novel binding mechanism that enables simultaneous DNA binding and washing, resulting in a simplified 3-step protocol (excluding lysis) that takes just 5 minutes and eliminates the need for ethanol or chaotropic salt washes.

The kit helps breeders overcome bottlenecks in sample processing by reducing reagent costs and enabling scalable automation

to process diverse sample types with one unified purification workflow. Unlike traditional approaches that require dedicated kits for tissue, tissue sampling units (TSUs), hair, or swabs, the sbeadex Lightning Kit combines the advantages of tailored and optimised lysis protocols, all feeding into the same fast purification and automation protocol. This enables the purification of high-quality DNA ready for PCR, microarrays, and NGS applications such as KASP™ genotyping, Amp-Seq One or Flex-Seq™, while ensuring maximum efficiency and reduced turnaround times.

### Traditional DNA purification



### New sbeadex Lightning Livestock DNA Kit

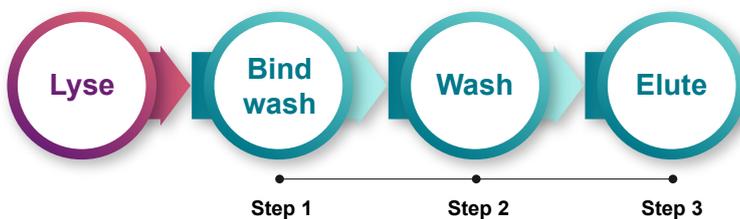


Figure 1. The shortened sbeadex Lightning workflow. The upper workflow represents a typical magnetic bead-based DNA purification protocol. The lower workflow illustrates the innovative sbeadex Lightning protocol.

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### DNA concentration and purity with sbeadex Lightning Livestock DNA Kit versus leading competitors

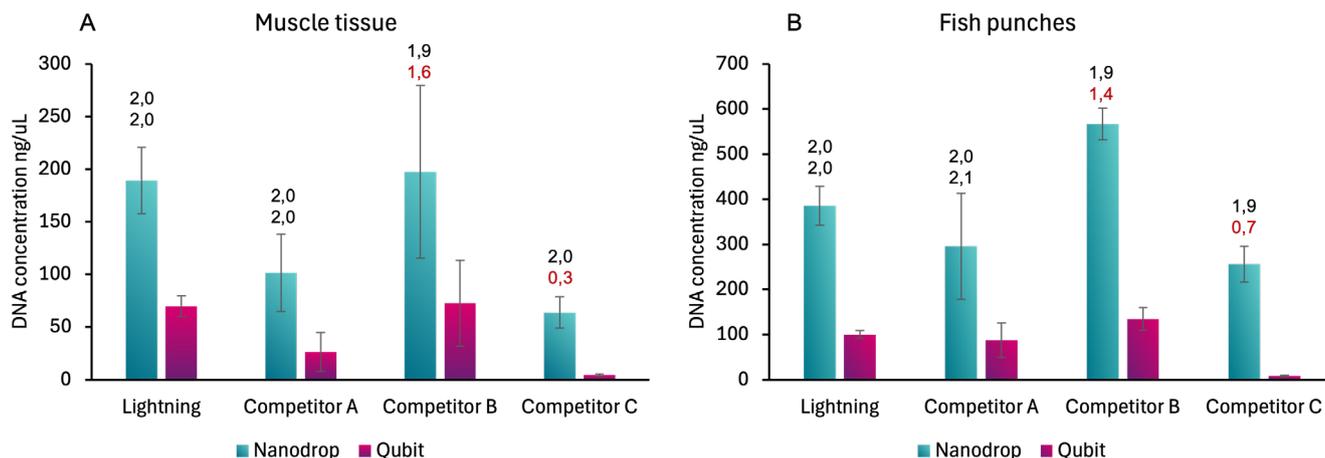


Figure 2. Mean DNA concentration and purity measurements achieved following purification of muscle tissue (A) and fish samples (B) using the sbeadex Lightning Livestock DNA Kit and three competitor kits. DNA concentration was quantified via fluorescence measurements using the Qubit and DNA purity measurements estimated via mean absorbance ratios. Upper numbers =  $A_{260/280}$  and lower numbers =  $A_{260/230}$ . For the Lightning kit, Competitor A and Competitor B elution volumes of 100  $\mu$ L were used, whereas an elution volume of 400  $\mu$ L was used for Competitor C. Each bar represents average DNA concentration (n=3 extractions per material). Error bars represent standard deviation.

sbeadex Lightning 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 (see figure 3).

### Ordering information

Components	Number of purifications	Part code
sbeadex Lightning Livestock Kit (10)	10	<a href="#">Request trial kits via the webpage</a>
sbeadex Lightning Livestock Kit (96)	96	<a href="#">NAP40-037-01</a>
sbeadex Lightning Livestock Kit (960)	960	<a href="#">NAP40-037-02</a>
sbeadex Lightning Livestock Kit (10,000)	10,000	<a href="#">NAP40-037-03</a>

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### Environmental impact and efficiency compared to competitors

	 <b>Liquid waste</b>	 <b>Plastic waste</b>	 <b>Purification time (excl. lysis)</b>	 <b>Protocol steps</b>
<b>sbeadex Lightning Livestock DNA Kit</b>	 <b>1.03 mL</b>	 <b>10.8 g</b>	 <b>5 min</b>	 <b>4 steps</b>
<b>Competitor A</b>	 <b>2.20 mL</b>	 <b>19.94 g</b>	 <b>33 min</b>	 <b>8 steps</b>
<b>Competitor B</b>	 <b>3.35 mL</b>	 <b>16.15 g</b>	 <b>43 min</b>	 <b>7 steps</b>
<b>Competitor C</b>	 <b>2.71 mL</b>	 <b>14.93 g</b>	 <b>34 min</b>	 <b>6 steps</b>

Figure 3. Summary of the key savings for the sbeadex Lightning Livestock DNA Kit compared to market-leading competitors. This schematic illustrates the savings in purification time, protocol steps, plastic consumables and liquid waste per sample. The purification time per sample (minutes) refers to the DNA purification starting after the lysis step. Number of protocol steps exclude lysis. Liquid waste (mL) excludes elution volume.

[Learn more about the sbeadex Lightning livestock DNA Kit and request your trial kit](#)



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