

# sbeadex Lightning buffer recommendations for plant samples

Species	Tissue type	Lysis buffer		Optimal sbeadex Lightning Core Kit		Additional reagents required		
		Recommended for highest yield	Recommended for highest purity	Core Kit A (Binding buffer LP)	Core Kit B (Binding buffer LU)	Protease K Solution (2 µL per mL lysis buffer)	Debris capture beads (40 µL per mL of lysis buffer)	
Plant samples	Apple	Leaf	<b>LI &gt; H</b>	<b>PN</b>	✓	•	✓	✓
	Banana	Leaf	<b>PN &gt; PVP &gt; LI &gt; H</b>	<b>PN</b>	✓	•	✓	✓
	Barley	Seed	<b>PN &gt; BL</b>	<b>PN &gt; UR</b>	✓	✓	✓	✓
	Blackberry	Leaf	<b>UR</b>	<b>UR</b>	•	✓	✓	✓
	Canola	Leaf	<b>UR &gt; PN &gt; LI</b>	<b>UR &gt; PN</b>	✓	•	✓	✓
		Seed	<b>LI &gt; UR</b>	<b>LI &gt; UR</b>	✓	•	✓	✓
	Carrot	Leaf	<b>UR &gt; PN &gt; PVP</b>	<b>UR &gt; PN &gt; PVP</b>	✓	•	✓	✓
	Corn	Leaf	<b>BL &gt; LBH</b>	<b>PN &gt; UR</b>	•	✓	✓	✓
		Seed	<b>UR &gt; LI &gt; H &gt; BL</b>	<b>PN</b>	✓	•	✓	✓
	Cucumber	Leaf	<b>LI &gt; PVP</b>	<b>LI &gt; VP</b>	✓	•	✓	✓
		Seed	<b>LI</b>	<b>H</b>	✓	•	✓	✓
	Currant	Leaf	<b>PVP &gt; PN</b>	<b>PVP &gt; PN</b>	✓	•	✓	✓
	Hop	Leaf	<b>LI &gt; UR</b>	<b>UR &gt; PN &gt; PVP &gt; LI</b>	✓	•	✓	✓
	Lentil	Seed	<b>LI &gt; PVP</b>	<b>LI &gt; PVP</b>	✓	•	✓	✓
	Oat	Leaf	<b>LI &gt; H &gt; UR &gt; BL &gt; PN &gt; PVP</b>	<b>H &gt; UR &gt; PN &gt; PVP</b>	✓	•	✓	✓
		Seed	<b>LI &gt; H &gt; BL</b>	<b>LI &gt; BL &gt; H</b>	✓	✓	✓	✓
	Pea	Seed	<b>LI &gt; PVP</b>	<b>LI &gt; PVP &gt; PN</b>	✓	•	✓	✓
	Potato	Leaf	<b>UR &gt; PN</b>	<b>UR &gt; PN</b>	✓	•	✓	✓
		Leaf	<b>UR &gt; BL &gt; LI</b>	<b>UR &gt; PN &gt; PVP &gt; LI</b>	✓	•	✓	✓
	Rice	Seed	<b>BL &gt; LI &gt; H</b>	<b>LI &gt; H &gt; UR</b>	✓	•	✓	✓
	Sorghum	Seed	<b>BL &gt; UR &gt; LI &gt; PN</b>	<b>PN &gt; UR &gt; LI</b>	✓	✓	✓	✓
	Soy	Leaf	<b>LI &gt; H &gt; BL &gt; UR</b>	<b>PN &gt; UR</b>	✓	•	✓	✓
		Seed	<b>LI &gt; H &gt; BL</b>	<b>LI</b>	•	✓	✓	✓
	Sugar beet	Leaf	<b>UR &gt; LI &gt; BL</b>	<b>UR &gt; LI &gt; H &gt; PN</b>	✓	•	✓	✓
	Sunflower	Leaf	<b>UR &gt; PN</b>	<b>UR &gt; PN</b>	✓	•	✓	✓
	Tomato	Leaf	<b>UR &gt; LI</b>	<b>UR &gt; LI &gt; H &gt; PN</b>	✓	•	✓	✓
		Seed	<b>UR &gt; PVP</b>	<b>UR &gt; PVP</b>	✓	•	✓	✓
	Wheat	Leaf	<b>LI &gt; UR</b>	<b>LI &gt; UR</b>	✓	•	✓	✓
Seed		<b>UR &gt; LI</b>	<b>PN</b>	✓	•	✓	✓	

**Table 1. Lysis buffer performance for plant tissue samples.**

LGC Biosearch Technologies have tested a range of plant species with [sbeadex Lightning chemistry](#) to determine the optimal lysis buffer for DNA yield and for DNA purity. Lysis buffers tested with each plant sample type were PN, PVP, BL, H, UR and LI. The table details the optimal lysis buffer for each sample type (in bold). All alternative lysis buffers are then listed for either yield or purity in descending order of suitability. The most appropriate sbeadex Lightning core kit for each sample type is also detailed. Note that buffers and core kits listed a particular sample type are based on our in-house testing; it is possible that with sample variation (e.g. younger leaves, alternative input volume), different results may be obtained.

Biosearch Technologies have provided this information as guidance but strongly recommend that you use the [sbeadex Lightning Nucleic Acid Purification Starter Kit](#) to ensure the optimal nucleic acid purification conditions for your specific sample type and downstream application.

For more detailed information regarding this data, or for any other technical queries regarding sbeadex Lightning, please contact our technical support team: [techsupport@lgcgroup.com](mailto:techsupport@lgcgroup.com).

# sbeadex Lightning buffer recommendations for livestock samples

	Species	Tissue type	Lysis buffer		Optimal sbeadex Lightning Core Kit		Additional reagents required 10 µL Protease K Solution (20 mg/mL) per 100 µL lysis buffer
			Recommended for yield	Optimal for purity	Core Kit A (Binding buffer LP)	Core Kit B (Binding buffer LU)	
Livestock samples	Bovine	Muscle tissue	LI	LI	✓	•	✓
		Hair	H	LI	✓	•	✓
		Ear punch (in preservative solution) <sup>1</sup>	Elution Buffer PN	-	•	✓	✓
	Chicken	Muscle tissue	LI	LI	✓	•	✓
	Fish	Tissue	LI	LI	•	✓	✓

**Table 2. Lysis buffer performance for livestock tissue samples.**

Biosearch Technologies have tested a range of livestock species with [sbeadex Lightning chemistry](#) to determine the optimal lysis buffer for DNA yield and for DNA purity. Not all sbeadex Lightning lysis buffers were tested with all sample types due to known incompatibilities with sample preservation solutions. The table details the optimal lysis buffer for each sample type. Incompatibility of lysis buffers with livestock sample types is highly dependent on sample type; the buffers listed as optimal for yield and for purity are recommended for these sample types. The most appropriate sbeadex Lightning core kit for each sample type is also detailed in the table.

Biosearch Technologies have provided this information as guidance but strongly recommend that you use the [sbeadex Lightning Nucleic Acid Purification Starter Kit](#) to ensure the optimal nucleic acid purification conditions for your specific sample type and downstream application.

For more detailed information regarding this data, or for any other technical queries regarding sbeadex Lightning, please contact our technical support team: [techsupport@lgcgroup.com](mailto:techsupport@lgcgroup.com).

<sup>1</sup>If working with Allflex Tissue Sampling Units (TSUs) or Caisley DNA Tags the standard protocol needs to be slightly adapted to achieve desired DNA yield. Please refer to the protocol suggestions in the [sbeadex Lightning protocol](#).