

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	Non-compatible	Core Kit A (Binding buffer LP)	Core Kit B (Binding buffer LU)	Non-compatible	Protease K Solution ²	Debris capture beads ²
Apple	Leaf	LI > H	PN	UR	✓		n/a	✓	✓
Banana	Leaf	PN > PVP > LI > H	PN	n/a	✓		n/a	✓	✓
Barley	Seed	PN > BL	PN > UR	n/a	✓	✓	n/a	✓	✓
Blackberry	Leaf	UR	UR	PN, PVP, BL, H, LI		✓	n/a	✓	✓
	Leaf	UR > PN > LI	UR > PN	BL	✓		n/a	✓	✓
Canola	Seed	LI > UR	LI > UR	n/a	✓		n/a	✓	✓
Carrot	Leaf	UR > PN > PVP	UR > PN > PVP	BL, H, LI	✓		LU (Core Kit B) ¹	✓	✓
	Leaf	BL > LBH	PN > UR	n/a		✓	n/a	✓	✓
Corn	Seed	UR > LI > H > BL	PN	n/a	✓		n/a	✓	✓
	Leaf	LI > PVP	LI > VP	n/a	✓		LU (Core Kit B) ¹	✓	✓
Cucumber	Seed	LI	H	PN, PVP, BL, UR	✓		LU (Core Kit B) ¹	✓	✓
Currant	Leaf	PVP > PN	PVP > PN	BL, H, UR, LI	✓		n/a	✓	✓
Hop	Leaf	LI > UR	UR > PN > PVP > LI	BL, H	✓		LU (Core Kit B) ¹	✓	✓
Lentil	Seed	LI > PVP	LI > PVP	BL, H	✓		n/a	✓	✓
	Leaf	LI > H > UR > BL > PN > PVP	H > UR > PN > PVP	n/a	✓		n/a	✓	✓
Oat	Seed	LI > H > BL	LI > BL > H	n/a	✓	✓	n/a	✓	✓
Pea	Seed	LI > PVP	LI > PVP > PN	BL, H, UR	✓		LU (Core Kit B) ¹	✓	✓
Potato	Leaf	UR > PN	UR > PN	BL	✓		LU (Core Kit B) ¹	✓	✓
	Leaf	UR > BL > LI	UR > PN > PVP > LI	n/a	✓		n/a	✓	✓
Rice	Seed	BL > LI > H	LI > H > UR	n/a	✓		n/a	✓	✓
Sorghum	Seed	BL > UR > LI > PN	PN > UR > LI	n/a	✓	✓	n/a	✓	✓
	Leaf	LI > H > BL > UR	PN > UR	n/a	✓		n/a	✓	✓
Soy	Seed	LI > H > BL	LI	PN, PVP		✓	n/a	✓	✓
Sugar beet	Leaf	UR > LI > BL	UR > LI > H > PN	n/a	✓		n/a	✓	✓
Sunflower	Leaf	UR > PN	UR > PN	PVP, BL, H, LI	✓		LU (Core Kit B) ¹	✓	✓
	Leaf	UR > LI	UR > LI > H > PN	n/a	✓		n/a	✓	✓
Tomato	Seed	UR > PVP	UR > PVP	BL, H, LI	✓		LU (Core Kit B) ¹	✓	✓
	Leaf	LI > UR	LI > UR	n/a	✓		LU (Core Kit B) ¹	✓	✓
Wheat	Seed	UR > LI	PN	n/a	✓		n/a	✓	✓

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, and non-compatible lysis buffers are listed separately. The most appropriate sbeadex Lightning core kit for each sample type is also detailed. Note that buffers and core kits listed as incompatible for 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@lqcgrou.com.

¹for some lysis buffers

²2 µL Protease K solution (20 mg/mL) per 1 mL of lysis buffer. 40 µL Debris capture beads per 1 mL of lysis buffer.

sbeadex Lightning buffer recommendations for livestock samples

	Species	Tissue type	Lysis buffer			Optimal sbeadex Lightning Core Kit			Additional reagents required	
			Recommended for yield	Optimal for purity	Non-compatible	Core Kit A (Binding buffer LP)	Core Kit B (Binding buffer LU)	Non-compatible	Protease K Solution ⁵	Debris capture beads ⁵
Livestock samples	Bovine	Muscle tissue	LI	LI	n/a	✓		n/a	✓	
		Hair	H	LI	n/a	✓		n/a	✓	
		Ear punch (in preservative solution)	PVP ¹	PVP ³	n/a	✓		n/a	✓	
	Chicken	Muscle tissue	LI	LI	n/a	✓		n/a	✓	
	Fish	Tissue	LI	LI	n/a ⁴		✓	n/a	✓	

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. If working with samples in Allflex buffer, or using Lysis buffer PVP, an additional wash step with Wash Buffer TN2 or PN2 is strongly recommended.

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.

³Wash with Wash buffer TN2 instead of water

⁴Lysis buffer BL not tested for this sample type

⁵10 µL Protease K solution per sample. 40 µL Debris capture beads per 1 mL of lysis buffer.