

AUTOMATED 10 mL cfDNA EXTRACTION

Using Lynx by Dynamic Devices &
Omega Bio-Tek's Mag-Bind cfDNA Kit



LYNX PLATFORM

With the multi-core pipetting arm (MCPA), swap cores seamlessly during your method without manual intervention. Consolidate the functions of many systems into one for cost-effective multi-application! By combining the 5 mL 24 pipetting core with the 24XL MagRod core, achieve convenient cfDNA extraction with reliable results.



Large volume handling

The only liquid handling platform offering a 5 mL 24 pipetting head and a 24XL magnetic rod head. Compatible with Omega Bio-tek's 25 mL/well large plate.



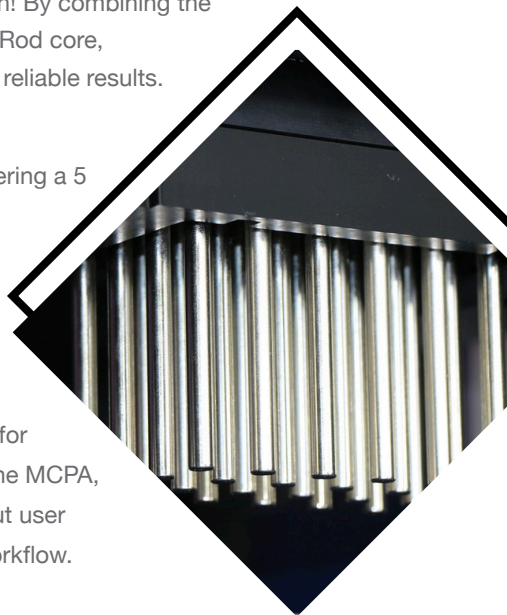
Long walkaway time

Swap cores on-the-fly with no need for third party device integration. With the MCPA, run your methods end-to-end without user intervention, saving hours in your workflow.



Increased throughput

Reliable, walkaway operation saves time and enables an uninterrupted workflow, making extraction convenient without sacrificing yield or quality.



cfDNA EXTRACTION

What makes extracting cfDNA difficult?

cfDNA is fragmented and short (~170 base pairs) with a short half-life of 16-150 minutes. It's also found in low concentrations, often requiring large sample input volumes to isolate sufficient cfDNA for downstream analysis.

Dynamic Devices and Omega Bio-tek have developed a novel, automated 10 mL cfDNA purification solution capable of processing plasma samples up to 10 mL with no sample splitting. Besides streamlining cfDNA extraction, no sample splitting helps prevent excess labware usage, ensuring your workflows are more sustainable.

METHOD OVERVIEW

Prep & Lysis

1. Load 24 pipetting tool & add lysis buffer to sample
2. Tip mix & incubate
3. Add wash buffer & elution buffer

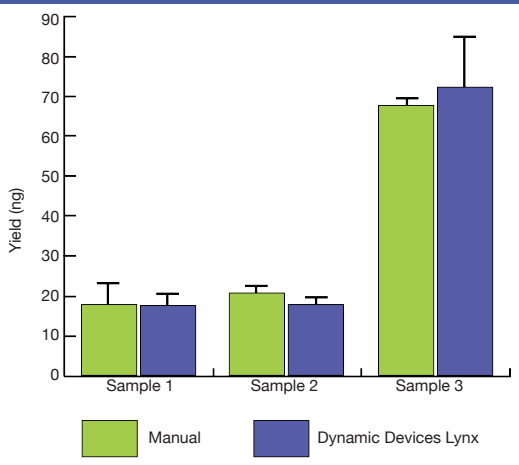
Binding & Elution

1. Add binding buffer to sample
2. Tip mix
3. Place on magnet
4. Remove excess supernatant
5. Swap to 24XL MagRods & perform extraction
6. Collect Eluate

Automated extraction yields were comparable to yields obtained using manual extraction protocol.

Expected ΔCt : 1.5

Manual cfDNA extractions exhibited $\Delta Ct < 1.5$, indicating inhibition. Automated cfDNA extractions using the Lynx exhibited $\Delta Ct \sim 1.5$, indicating no inhibition.



Sample	Manual			Dynamic Devices Lynx		
	2 μ L	6 μ L	ΔCt	2 μ L	6 μ L	ΔCt
1	29.12 \pm 0.33	28.27 \pm 0.38	0.85	29.28 \pm 0.48	27.73 \pm 0.50	1.55
2	29.51 \pm 0.28	28.27 \pm 0.10	1.24	29.64 \pm 0.17	28.22 \pm 0.16	1.42
3	28.39 \pm 0.30	27.73 \pm 0.37	0.67	28.52 \pm 0.25	26.96 \pm 0.14	1.56

Conclusions

Dynamic Devices and Omega Bio-tek have collaborated to create a robust, straightforward method for high-volume cfDNA purification (up to 10 mL). cfDNA purified with this automated workflow is shown to have equivalent or better yield and purity than cfDNA purified from manual techniques.

EXTRACT WITH CONFIDENCE



dynamicdevices

We would love to connect with you and discuss
how to revolutionize your liquid automation.

Reach out to our team so we can bring
your dreams to life!



Phone

Office : (833) 469-6887

Web & Email

Email : sales@dynamicdevices.com

Web : www.dynamicdevices.com

LinkedIn : www.linkedin.com/company/dynamic-devices

Address

8 Lewis Circle
Wilmington, DE 19804

41715 N. 41st Drive
Phoenix (Anthem), AZ 85086