

Dynamic Devices' Lynx With Promega Maxwell® HT simplyRNA Kit: Custom Application Data Sheet



The Promega Maxwell® HT simplyRNA Kit, Custom and Dynamic Devices Lynx system deliver an automated, efficient solution for RNA extraction from challenging samples like whole blood and bone marrow. This integration ensures high RNA yield and purity, minimizes manual effort, and is ideal for high-throughput workflows, supporting applications like RT-qPCR, sequencing, and gene expression analysis.

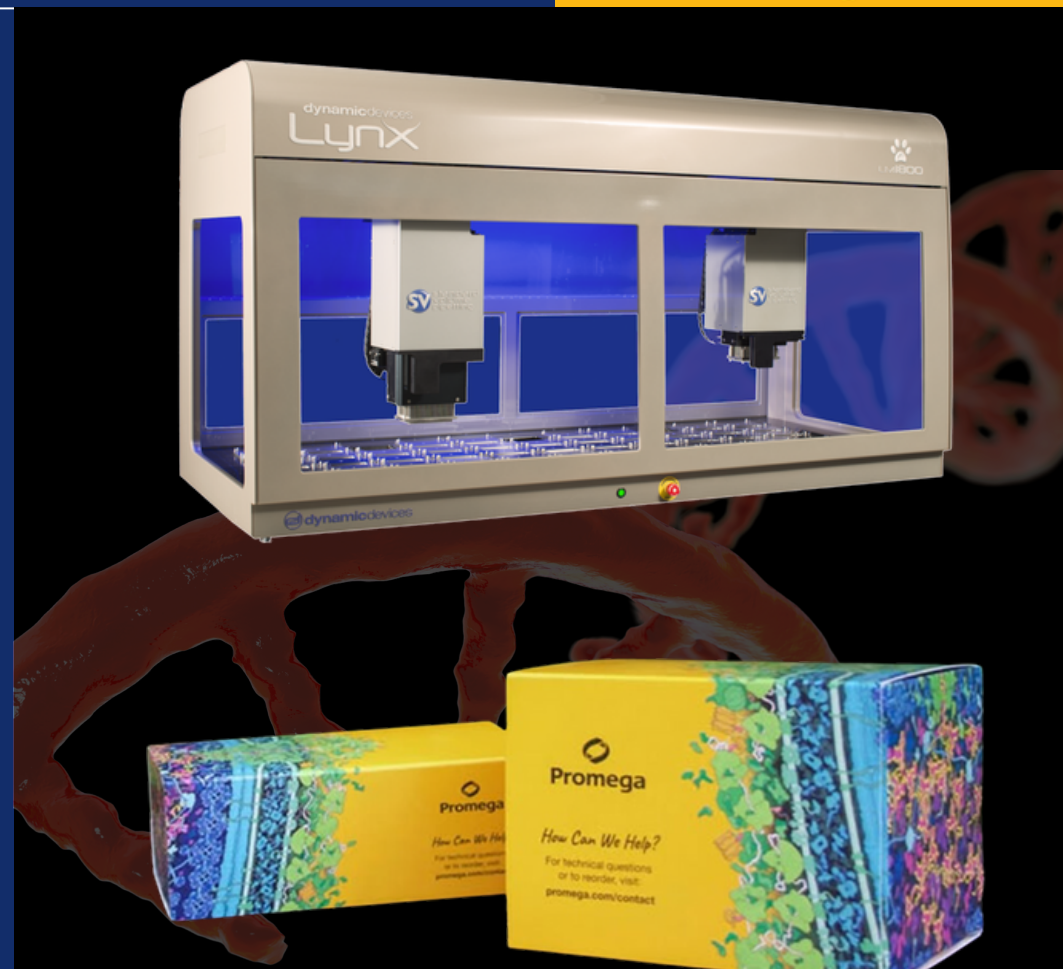


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AUTOMATED Whole Blood and Bone Marrow RNA EXTRACTION



Using Lynx by Dynamic Devices
& Promega's Maxwell® HT simplyRNA Kit, Custom

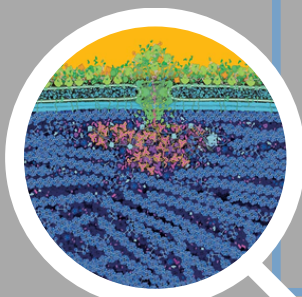
LYNX KEY BENEFITS

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 a cost-effective multi-application solution! By combining the 1 mL 96 pipetting core with the 96 MagRod core, we achieve efficient RNA extractions with reliable results.



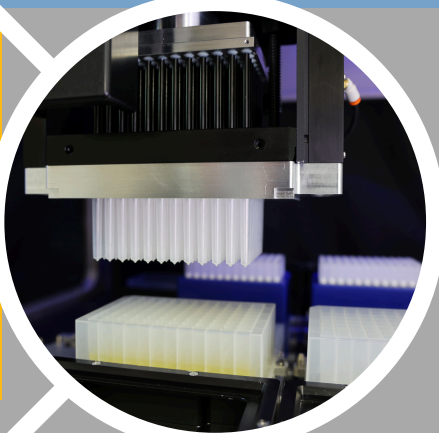
Challenging Sample Handling:

Handling Challenging Samples: The Lynx system excels with viscous samples like bone marrow and whole blood by combining tip mixing and 96 MagRods for thorough, efficient mixing. With the ability to process samples normalized to 20 million cells, far beyond the standard 2 million, it ensures reliable results even with the most difficult inputs.



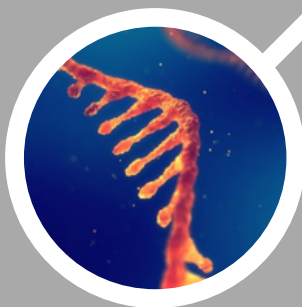
Long Walkaway Time:

The MCPA enables simultaneous lysis, plate preparation, and extraction in a single run, streamlining processes and maximizing efficiency. With the MCPA, run your methods end-to-end without user intervention, saving hours in your workflow.



Increased throughput:

Stackable workflows enable parallel processing of multiple plates—prep or run peripherals while one plate completes lysis and another undergoes extraction. This seamless concurrency boosts throughput, saves time, and ensures reliable, walkaway automation with uncompromised results.



METHOD OVERVIEW

Kit: Maxwell® HT simplyRNA Kit, Custom by Promega

Automation Tools: Lynx system with 96 MagRods, 96SV [1 mL] Pipetting Tool, iMagZ

24 samples tested: Normalized to ~20 million cell count

- Whole Blood samples: 15
- Bone Marrow samples: 2
- Not Provided: 7

Prep & Lysis

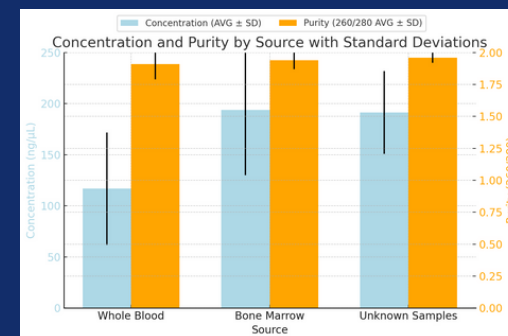
1. Load 96 pipetting tool & add lysis buffer to sample
2. Tip mix and orbital shake
3. Add wash buffers and elution buffer to corresponding plates while incubation of lysate is occurring

Binding & Elution

1. Add binding buffer to lysates
2. Tip mix and shake throughout
3. Place on iMagZ
4. Remove excess supernatant
5. Swap to 96 MagRods & perform extraction
6. Collect Eluate

24 samples were collected from different donors, which accounts for the high standard deviation.

Automated extraction yields were comparable to yields obtained using competitive automation



Source	Count	Sample Input Volume (AVG ± SD)	Concentration (ng/μL AVG ± SD)	260/280 (AVG ± SD)
Whole Blood	15	3494 ± 932	116.8 ± 55.0	1.91 ± 0.12
Bone Marrow	2	500 ± 0	193.7 ± 63.6	1.94 ± 0.07
Unknown Samples (Normalized to whole blood count)	7	3192 ± 767	191.3 ± 40.5	1.96 ± 0.04

CONCLUSIONS

The integration of the Promega Maxwell® HT simplyRNA Kit, Custom with the Dynamic Devices Lynx system is a game-changer for labs handling challenging sample types. With its advanced automation, flexible workflows, and compatibility with Promega's RNA chemistry, this setup delivers reliable, high-quality results for high-throughput RNA extraction protocols from sample to eluate in less than 2.5 hours.