

A PORTABLE APPARATUS FOR SEPARATION OF BIOLOGICAL MOLECULES

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About the Technology: A portable gel electrophoresis.

Technology ID:

ICMR/EoI/PM/21/Electrophoresis
Apparatus/2026

Lead Inventor: Dr. Paramasivan Rajaiah

Institute: ICMR-NATIONAL INSTITUTE OF
VECTOR CONTROL RESEARCH

Technology Domain: Medical Device

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EoI Deadline: 25th Aug 2026

Need and utility of the Technology from Public health perspective:

By providing an affordable, portable, and easy-to-use protein gel electrophoresis system, the technology supports decentralized biomedical research, diagnostics, and capacity building in public health laboratories and resource-limited settings.

Technology Readiness level (TRL):

TRL-4: Validated at in house laboratory



Validation Status and Study Outcome:

- Inhouse Validation –Complete
- Efficacy Outcome: Testing confirmed reliable and effective biomolecule separation comparable to conventional electrophoresis systems.

Market Potential: Strong demand exists for low-cost, portable electrophoresis systems to expand access to molecular analysis in public health.

Unmet need: Lack of affordable, portable, and low-maintenance electrophoresis systems suitable for use in decentralized and resource-constrained laboratories.

Publication: NA

IP Filing: YES - Patent Application – No. 202211008794 (19.02.2022)