



**IAB**  
Institute of Applied  
Biotechnologies

# Nucleic acid isolation from FFPE samples

Nucleic acid extraction is a critical step in molecular biology workflows. In FFPE samples which are often used for tissue storage in oncology research, nucleic acid is usually degraded or fragmented. IAB offers a complete workflow for extraction of higher quality DNA and RNA using the Ionic Purification System with purification kits by Bionano. This system utilizes isotachopheresis to increase yields of nucleic acids from FFPE samples and to prevent further damage during the isolation process.



The IAB team has years of experience with difficult samples based on successfully executed service projects and close cooperation with customers. To isolate samples from FFPE blocks and other low quality input samples, we turn to our Ionic Purification System which utilizes isotachopheresis to isolate DNA and RNA.

- No organic solvents
- No harsh, high-salt buffers
- No system programming
- No beads or repetitive washing
- No hands-on mixing, separation, sample transfers, or buffer exchanges
- No pumps, valves, or other moving parts

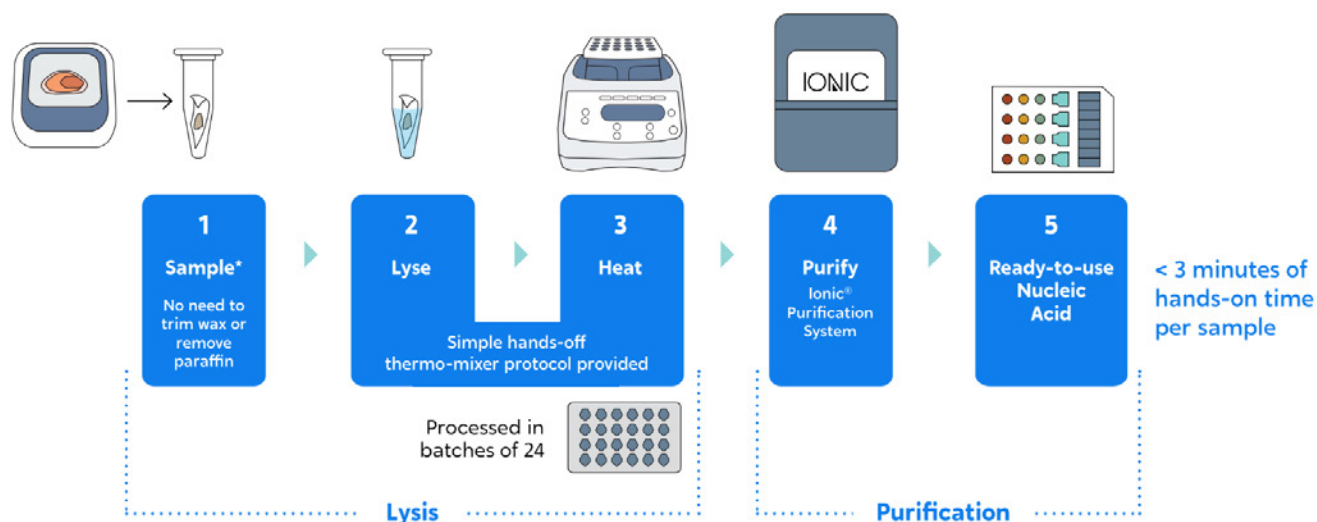
## Method

Isotachopheresis (ITP) separates and concentrates charged molecules in solution solely based on their electrophoretic mobility. Biological samples are gently lysed and added to the Ionic® Fluidic Chip. An electric field is then applied to the chip and the nucleic acid is isolated in its natural, native form. The nucleic acid is not denatured or dehydrated, and there's no binding to, or stripping from, fixed surfaces. The result is a higher yield of pure nucleic acid that is less fragmented and free from bead or wash buffer contamination.

Our workflow enables you to improve your NGS data quality, because samples isolated with Ionic show more uniform coverage and less bias. Furthermore, if desired, we can simultaneously extract both RNA and DNA from FFPE.

# Ready to start a project?

Thanks to the Ionic system in our service laboratory, we are ready to accept your samples. IAB can help if you have troubles with low-quality sample DNA or RNA isolation, such as from FFPE blocks. Do not hesitate to consult our product specialist.



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At the Forefront  
of Digital Genomics

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