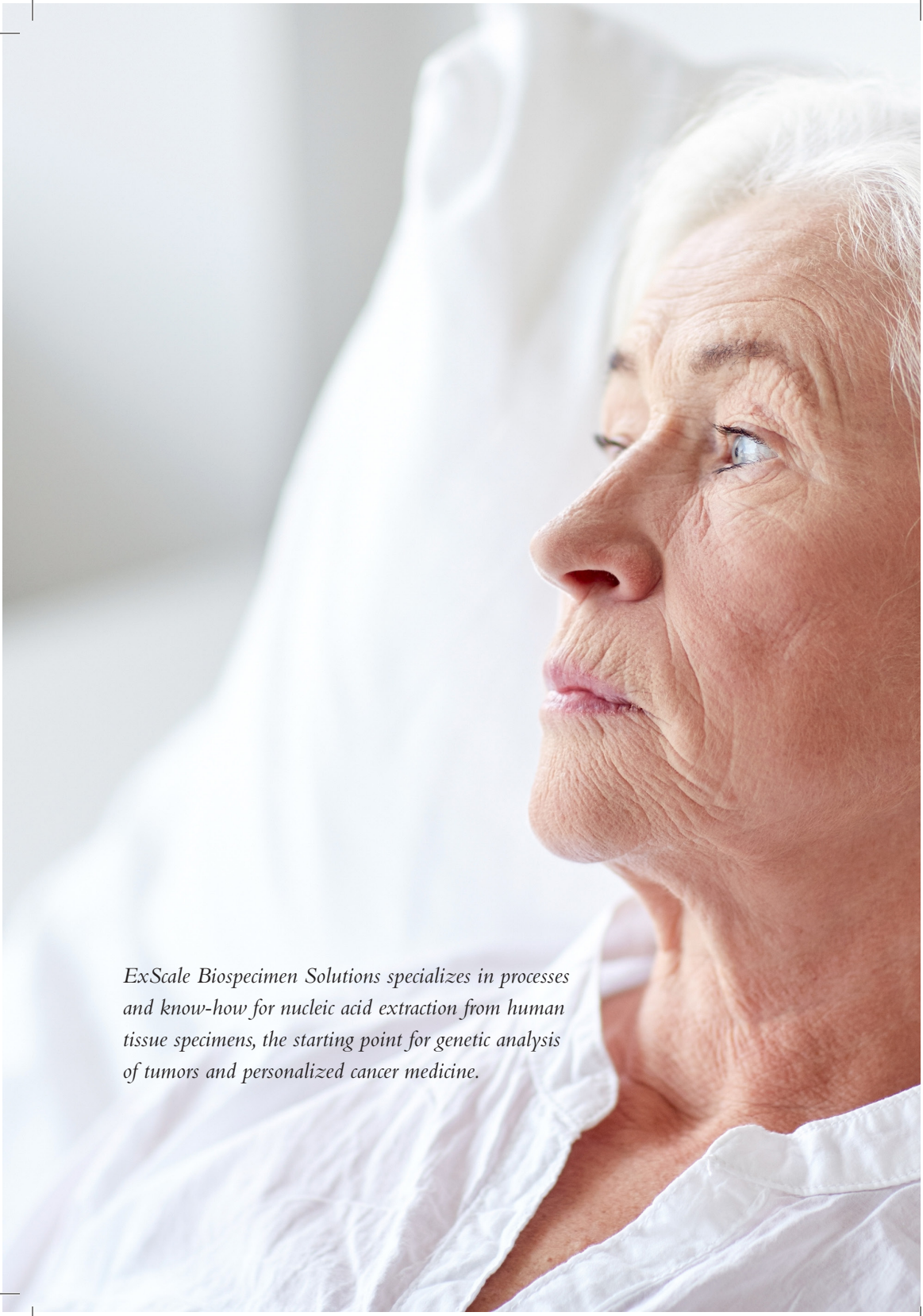

ExScale®
BIOSPECIMEN SOLUTIONS
NGEx®
Next Generation Extraction technology
The only TRULY fully automated extraction solution.
No manual reagent handling.
No split samples: Sequential extraction of both DNA and RNA in a single workflow from the same tissue specimen.
CE marked for IVD.
Xylene-free deparaffinization.
High quality sequential extraction of both DNA and RNA from the same tissue specimen. Fast.



ExScale Biospecimen Solutions specializes in processes and know-how for nucleic acid extraction from human tissue specimens, the starting point for genetic analysis of tumors and personalized cancer medicine.

Next Generation Extraction technology - NGEx® maximizes the information from your FFPE tissue samples

Exscale's NGEx technology is the basis for a range of products comprised of CE/IVD labelled reagent kits and software for the extraction of nucleic acids from tissue specimens on liquid handling platforms. With the deparaffinization and lysis steps performed inside the instrument for all the protocols, the system is fully automated, displays high reproducibility and produces reliable and consistent results.

Serial extraction of both DNA and RNA in a single workflow

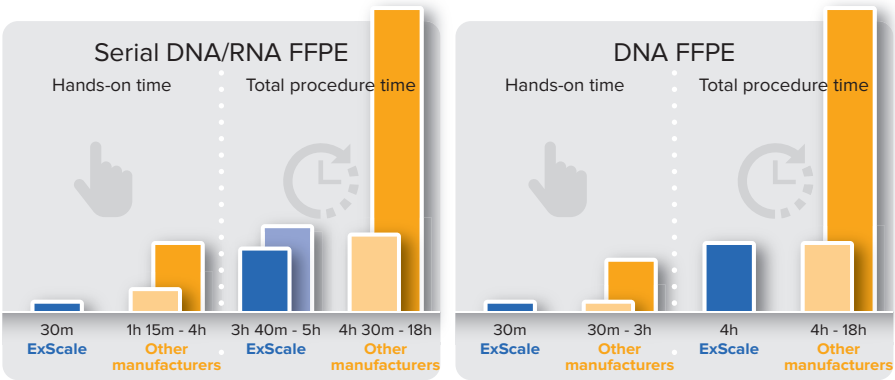
The sequential extraction of both DNA and RNA in a single workflow is unique to NGEx technology. In contrast to all available procedures, which require splitting of the biological sample, the lysate, or the purified total nucleic acids for the extraction of DNA and RNA, ExScale's FFPE DNA/RNA Purification system will extract both the DNA and RNA sequentially. This overcomes problems with incomparable genomic and transcriptomic data and sample loss due to sample splitting, which in worst case will reduce the overall yield of DNA and RNA to a level that is too low for downstream molecular analysis.

The quick facts

- Best-in-class turnaround times with substantial time and cost savings
- The only solution with TRULY fully automated walk-away protocols
- Sequential extraction of both DNA and RNA in a single workflow from the same tissue specimen
- Reliable comparisons of genomic and transcriptomic data
- Deparaffinization and lysis steps are part of the automated protocol
- Increased productivity and quality with reproducible results
- Reduced risk for cross-contamination and manual handling errors
- Increased recovery of information using only small amounts of precious patient material
- CE marked for IVD
- User-friendly products
- Simple and convenient set up with pre-filled reagent cartridges
- Xylene-free deparaffinization
- Bench-top robotic system

Best-in-class turnaround times

The system can extract up to 12 samples in less than 4.5 hours (DNA and RNA) and with less than 30 minutes hands-on time for both sample handling and system set-up, ExScale can provide customers with best-in-class turnaround times.



Time saving chart, 12 samples. Data on file.

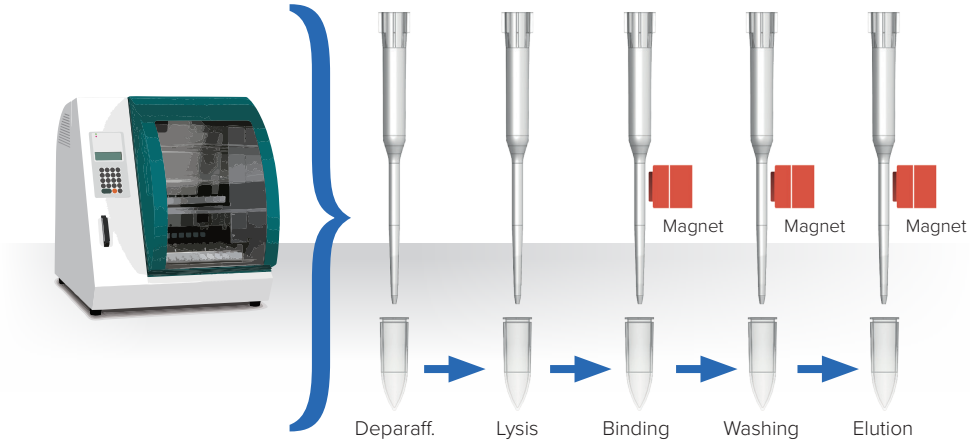
Increased productivity and quality with TRULY fully automated extraction protocols

Compared to other commercially available extraction protocols, ExScale's protocols are fully automated with the deparaffinization and lysis steps included in the protocols and performed inside the instrument. The reduced manual handling of samples increases productivity and quality of the process and ensures reproducible results. This is what we call TRULY fully automated extraction protocols.

Sequential extraction of DNA and RNA in a single workflow – increased information using minimum tissue samples

ExScale's proprietary protocol allows the co-purification of DNA and RNA from the very same biological sample in a serial workflow. This process allows for increased recovery of information from small and valuable tissues and biopsies, ensuring comparable genomic and transcriptomic data which we believe is of high importance when analyzing data from tumor specimens given the high level of regional heterogeneity. To allow extraction from a wide range of tissue types, the protocol also offers a choice of two different lysis times depending on sample characteristics .

TRULY fully automated
- all protocols are performed inside the instrument



Optimized protocol workflow

The extraction procedure consists of only 5 steps:

1. **deparaffinization** using a non-toxic solvent,
2. sample **lysis** and protein digestion,
3. **binding** of released nucleic acids to silica-coated particles,
4. **washing** of nucleic acid-bound particles and
5. **elution** of nucleic acids.

No manual reagent handling

Each sample is purified in a pre-filled and sealed reagent cartridge for fast and convenient set-up and increased reproducibility. No manual reagent handling means increased productivity and quality of the process and reduced risk for cross-contamination and manual handling errors. With our simple and convenient pre-filled reagent cartridges you can set-up and walk away.

Xylene-free deparaffinization

The automated protocol includes a xylene-free deparaffinization step using a non-toxic clearing agent, which is advantageous for both lab personnel and environment.

ExScale NGEx FFPE Product Portfolio

ExScale's nucleic acid extraction protocols use novel lysis buffer solutions and magnetic separation of DNA and RNA-bound bead particles enabling DNA and RNA standalone or proprietary serial extraction of both DNA and RNA from the same tissue. ExScale's purification kits consist of plastic-ware, reagents packed into prefilled cartridges and a deparaffinization reagent. A selection of products are CE marked according to IVD (in-vitro diagnostic use), to certify high product quality.

PURIFICATION KITS

FFPE DNA/RNA

FFPE DNA/RNA Purification Kit (48 reactions)
(Cat # ES-K110210FP and ES-K110210FP-C)
The FFPE DNA/RNA Purification Kit is optimized to allow the sequential purification of genomic DNA and total RNA from the same FFPE tissue sample. DNA and total RNA are of suitable quality for next generation sequencing, real time RT-PCR, PCR and other downstream application, with a total run time of 3 hours 10 min (short lysis) or 4 hours 30 mins (long lysis).

FFPE DNA

FFPE DNA Purification Kit (48 reactions)
(Cat # ES-K110FP and ES-K110FP-C)
The FFPE DNA Purification Kit is optimized for rapid and efficient purification of genomic DNA from FFPE tissue samples. Purified DNA is of high yield and quality and is suitable for use in next generation sequencing, real time RT-PCR, PCR and other downstream application.
The protocol requires a total run time of 3 hours 40 mins.

FFPE total RNA

FFPE RNA Purification Kit (48 reactions)
(Cat # ES-K210FP)
The FFPE RNA Purification Kit is optimized for rapid and efficient release of total RNA from FFPE tissue samples without compromising the integrity. Purified RNA is suitable for use in next generation sequencing, real time RT-PCR, PCR and other downstream application with a total run time of 2 hours 15 mins.

FFPE HD-RNA

FFPE HD-RNA Purification Kit (48 reactions)
(Cat # ES-K210HDFP)
The FFPE HD-RNA Purification Kit contains a proprietary lysis buffer that allows a rapid and efficient enrichment of mature RNA from FFPE tissue samples. Purified mature RNA is of optimal quality for next generation sequencing, real time RT-PCR, PCR and other downstream applications.
The protocol requires a total run time of 2 hours 15 mins.

Software and extraction robot

ExScale's purification technology utilizes a convenient bench-top Magtration® System magLEAD 12GC robot (Precision System Science Co.,Ltd.) with the ability to simultaneously process up to 12 samples. The platform utilizes a Magtration® Technology that enables separation and re-suspension of magnetic beads within a disposable tip, reducing the risk for cross contamination between samples.

For more information, see our website
exscalebio.com

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