

DIGITAL TMA





The tissue microarray (TMA) technique brings revolutionary changes in high-throughput diagnosis by being able to handle up to several hundred samples in one block or in one slide. With the TMA technique you can save a considerable amount of time, reagents, and slide storage while achieving more standardized laboratory conditions. Tissue microarrays can make working with and evaluation of IHC, FISH and other staining protocols faster and easier.

3DHISTECH's tissue microarray product range covers every step of the digital TMA workflow.

You need

Standardized solutions

Whether it is tissue microarray block building, slide staining and scanning or digital image analysis, you can be sure 3DHISTECH products provide the best quality.

High quality slide creation

The semi-automatic precision microtome, the floating bath, the slide warmer and the brand-new stainer machine have been developed especially for tissue microarray blocks and slides.

High quality and fast scanning

The Pannoramic digital slide scanners have won the 2012 International Scanner Contest in the following categories: Scanning speed at 20x and at 40x resolution, Image quality at 40x resolution, Image analysis, Green IT. The same optical path is used in all Pannoramic scanners, delivering the best quality images to your screen in minutes!

Image evaluation tools

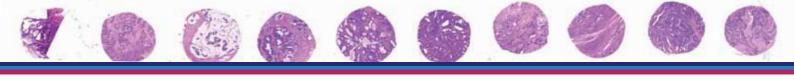
3DHISTECH's automated TMA software module is designed for high-throughput tissue microarray evaluation. Coupled with the advanced image analysis software portfolio, it makes TMA scoring comfortable and fast.

Database handling

More stains, more tissues, more patiens mean more data and you need to channel this huge amount of information into easily managable projects.

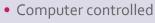
The TMA workflow tool from 3DHISTECH offers a flexible and standardized way to deal with these challenges.





Tissue preparation

Tissue microarray hardware



- 4 core sizes: 0.6, 1, 1.5, 2 mm
- More than 400 samples in one block
- Donor block imaging
- Barcode reading
- Digital slide use
- NEW! PCR export
- XLS export



TMA Master

- 5 block capacity
- Small footprint

TMA Grand Master

- 72 block capacity
- Simultaneous loading, imaging, punching and drilling

Sectioning

Semi-automatic precision microtome



Standard unit for paraffin sections and research-, plastic- and industrial applications. The semi-automatic unit offers various advantages against manual microtomes.

Staining



TMA Stainer: 5 slide capacity IHC stainer





Floating Bath and Slide Warmer

Imaging

Pannoramic digital slide scanners

- Brightfield and fluorescent scanning
- High quality 1CCD or 3CCD scan camera
- More than 1 cm²/min brightfield scanning speed at 45x



Pannoramic DESK

- Single slide
- Brightfield scanning



Pannoramic MIDI

- 12 slides
- Brightfield and up to 9-channel fluorescent scanning



Pannoramic SCAN

- 150 slides
- Brightfield and upt to 9-channel fluorescent scanning



Pannoramic 250 FLASH

- 250 slides
- Brightfield and up to 9-channel fluorescent scanning

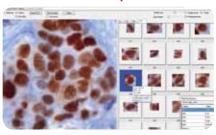
Workflow tools

TMA



- For high throughput tissue microarray analysis
- Project based: multi-user, multi-slide
- Flexible gallery
- Uses measurement data from the image quantification applications (HistoQuant, NuclearQuant, MembraneQuant, DensitoQuant, FISHQuant)
- Works with Excel database created by the TMA Master or the TMA Grand Master

Measurement Report



- Histogram, scatter plot, gallery visualization of measurement data
- Classification gallery for NuclearQuant, MembraneQuant, FISHQuant: relocalization and rescoring ability
- CSV export

TMA workflow

- 1. Selection of pathological cases from the archive, and creation of H&E sections
- 2. Slide scanning with a Pannoramic digital slide scanner
- 3. Digital slide viewing and sample designation with Pannoramic Viewer
- 4. TMA block creation with TMA Master or TMA Grand Master
- 5. Sectioning of TMA blocks with 3DHISTECH Microtome
- 6. Punching from donor block into recipient block (and optionally, to PCR) and saving of Excel database
- 7. Melting of paraffin TMA sections to bond them onto the glass slide with 3DHISTECH Slide Warmer
- 8. Staining of TMA slides with TMAStainer
- 9. TMA slide scanning with a Pannoramic digital slide scanner
- 10. Evaluation of the TMA project and saving data into a database file

Production and development by

