Arrayit TissueMax™ Automated Tissue Microarrays provide the market’s finest solution for high-speed automated preparation of tissue microarrays from many patients including 5 µm positional accuracy, 1, 2 and 3 mm tip sizes, two CCD cameras, LED illumination, 10 donor blocks, two recipient blocks, and touch screen computer control. Tissues microarrays (TMAs) possess signification advantages over traditional histological approaches including the analysis of many patient samples simultaneously, complete automation, conservation of precious tissue samples, improved internal experimental control, reduced consumption of antibodies and other reagents, and wide applicability to many molecular techniques including mRNA and protein expression analysis, immunohistochemistry, in situ hybridization, FISH and in situ PCR.

Click [here](#) to view the TissueMax™ technical video.
TissueMax™ Automated Tissue Microarrayer Specifications and Features

- Automated Tissue Microarrays
- Analysis of many patient tissue samples simultaneously
- Conserves tumors, biopses and other precious biological samples
- Conserves antibodies and other expensive reagents
- Improves assay precision through sample and patient multi-plexing
- Applicable to mRNA and protein expression analysis
- Miniaturize and automate immunohistochemistry, in situ hybridization, FISH, and in situ PCR
- High-speed preparation of tissue microarray blocks
- Maintains tissue integrity during embedding
- Up to 300 tissues slices per donor block
- Standardized block configuration simply image analysis
- Prepare up to 240 tissue cores per hour
- Core placement success rate >99%
- Tissue preparation cycle time of 15-18 secs
- Positional accuracy of 5 µm at donor blocks
- Fully automated 5 axis computer control
- Rotary punch tip control
- Three punch tip sizes of 1, 2 and 3 mm
- Donor block capacity of 10 blocks
- Recipient block capacity of 2 blocks
- Recipient blocks contain 120 x 1 mm wells (10 x 12), 60 x 2 mm wells (6 x 10) and 30 x 3 mm wells (5 x 6)
- Number of CCD cameras: Two, full color
- CCD camera chips: 1,280 x 1,024 pixels
- CCD camera pixel size: 2.2 x 2.2 µm
- Camera resolution: 5 µm at recipient block and 30 µm at donor block
- Number of LED illumination modules: Two
- Complete line of recipient blocks and consumables available
- Personal computer control with Intel Dual Core 2.2 GHz, 1 GB RAM and 160 GB HD
- Computer operating system and software: Windows XP PRO and Microsoft Excel
- Computer monitor: touch screen LCD with 15" and 1,024 x 768 pixel display
- Voltage requirements: 100-120 VAC or 200-240 VAC
- Power requirements: 1 kilowatt, 10 amps at 110 volts or 5 amps at 220 volts
- Nominal frequency: 50-60 Hertz
- Maximum allowable voltage fluctuation: ±10%
- TissueMax™ instrument weight: 148 kg (325 lbs)
- TissueMax™ Personal instrument weight: 80 kg (176 lbs)
- TissueMax™ instrument dimensions (W x D x H): 95 x 70 x 61 cm (37 x 28 x 24”)
- TissueMax™ Personal instrument dimensions (W x D x H): 75 x 60 x 60 cm (30 x 24 x 24”)
- Operational temperature range: 10-35°C (50-95°F)
- Transportation and storage temperature range: 5-55°C (41-131°F)
- Maximum operational humidity: 80% RH
- Indoor use only
- Standard approvals: UL, CE and ISO
Figure 1. TissueMax™ Automated Tissue Microarrayer (Cat. TMM) instrument featuring the most advanced automation technology for the preparation of tissue cores for tissue microarrays. TMM uses an integrated computer and flat panel display to control the instrument operations.

Figure 2. TissueMax™ Personal Automated Tissue Microarrayer (Cat. TMMP) instrument featuring the most advanced automation technology for the preparation of tissue cores for tissue microarrays in a compact instrument footprint. TMMP uses a personal computer and screen (included) to control the instrument operations.
Figure 3. TissueMax™ Automated Tissue Microarrayer removing a tissue core from the tissue donor block. TissueMax™ has a 10 donor block and 2 recipient block capacity, and a 240 core per hour fully automated manufacturing throughput.

Figure 4. TissueMax™ Automated Tissue Microarrayer placing a tissue core into a tissue recipient block. TissueMax™ has a 10 donor block and 2 recipient block capacity, and a 240 core per hour fully automated manufacturing throughput.
Figure 5. TissueMax™ Automated Tissue Microarrayer tissue core recipient block, containing 30 x 3 mm core punches arranged in a 5 x 6 array.

Figure 6. TissueMax™ Automated Tissue Microarrayer rotary tissue core sampler containing 1 mm, 2 mm, and 3 mm diameter core punches arranged on a high precision, computer-controlled rotary arm.

Figure 7. Tissue core recipient blocks for the TissueMax™ Automated Tissue Microarrayer with 1 mm diameter wells in a 120 well 10 x 12 array (left), 2 mm diameter wells in a 60 well 6 x 10 array (center), and 3 mm wells in a 30 well 5 x 6 array (right). Recipient blocks containing the tissue cores are fitted onto an Arrayit Microtome for sectioning.
Figure 8. Arrayit TissueMax™ Semi-Automatic Rotary Microtome (Cat. MTM) is a companion instrument for our TissueMax™ Tissue Microarrays for research and clinical laboratories. The Arrayit Microtome combines tissue sectioning efficiency with a compact footprint and ergonomic design to provide high quality tissue sections from TissueMax™ recipient blocks. A motorized precision feed system ensures fast, safe and smooth recipient block sectioning and a solid base provides optimum stability during use. The integrated precision hand wheel is lockable in 360 degrees and the vertical guide is equipped with cross-roller bearings to prevent operational backlash. An integrated switch panel contains a multi-functional LCD display and precision stepper motors guide coarse recipient block movements by 500 µm and fine recipient block movements from 1-25 µm. Horizontal and vertical recipient movements are 30 mm and 64 mm, respectively. The recipient block clamp is rotatable in 360 degrees and a quick release system provides convenience and ease-of-use.

Table 1. Arrayit TissueMax™ Semi-Automatic Rotary Microtome Technical Specifications

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tissue section thickness</td>
<td>1-99 µm</td>
</tr>
<tr>
<td>Tissue sectioning resolution</td>
<td>1 µm</td>
</tr>
<tr>
<td>Tissue trimming thickness</td>
<td>5-500 µm</td>
</tr>
<tr>
<td>Tissue trimming resolution</td>
<td>5 µm</td>
</tr>
<tr>
<td>Instrument operating temperature</td>
<td>+5 to +40°C</td>
</tr>
<tr>
<td>Instrument storage temperature</td>
<td>-20°C to +50°C</td>
</tr>
<tr>
<td>Instrument dimensions (L x W x H)</td>
<td>53 x 38 x 28 cm (21” x 15” x 11”)</td>
</tr>
<tr>
<td>Instrument weight</td>
<td>26 kg (57 lbs)</td>
</tr>
<tr>
<td>Power supply</td>
<td>110-220 Volts and 50-60 Hz</td>
</tr>
</tbody>
</table>
Figure 9. TissueMax™ Automated Tissue Microarrayer (Cat. TMM) instrument shown in the Arrayit Corporation manufacturing facility (Sunnyvale, CA).
## Ordering Information

<table>
<thead>
<tr>
<th>Product</th>
<th>Description</th>
<th>Cat ID</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>TissueMax™ Automated Tissue Microarrayer</strong></td>
<td>Arrayit TissueMax™ Automated Tissue Microarrays provide the market’s finest solution for high-speed automated preparation of tissue microarrays from many patients including 5 µm positional accuracy, 1, 2 and 3 mm tip sizes, two CCD cameras, LED illumination, 10 donor blocks, two recipient blocks, and touch screen computer control. Tissues microarrays (TMAs) possess signification advantages over traditional histological approaches including the analysis of many patient samples simultaneously, complete automation, conservation of precious tissue samples, improved internal experimental control, reduced consumption of antibodies and other reagents, and wide applicability to many molecular techniques including mRNA and protein expression analysis, immunohistochemistry, <em>in situ</em> hybridization, FISH and <em>in situ</em> PCR.</td>
<td>TMM</td>
</tr>
<tr>
<td><strong>TissueMax™ Automated Personal Tissue Microarrayer</strong></td>
<td>Arrayit TissueMax™ Automated Personal Tissue Microarrays provide the market’s finest solution for high-speed automated preparation of tissue microarrays from many patients including 5 µm positional accuracy, 1, 2 and 3 mm tip sizes, two CCD cameras, LED illumination, 10 donor blocks, two recipient blocks, BioBlue Personal Computer and 23” LED flat panel display. Tissues microarrays (TMAs) possess signification advantages over traditional histological approaches including the analysis of many patient samples simultaneously, complete automation, conservation of precious tissue samples, improved internal experimental control, reduced consumption of antibodies and other reagents, and wide applicability to many molecular techniques including mRNA and protein expression analysis, immunohistochemistry, <em>in situ</em> hybridization, FISH and <em>in situ</em> PCR.</td>
<td>TMMP</td>
</tr>
<tr>
<td><strong>TissueMax™ Semi-Automated Rotary Microtome</strong></td>
<td>Arrayit TissueMax™ Semi-Automatic Rotary Microtome combines tissue sectioning efficiency and a compact footprint and ergonomic design to provide high quality tissue sections from recipient blocks. A motorized precision feed system ensures fast, safe and smooth recipient block sectioning and a solid base provides optimum stability during use. The integrated precision hand wheel is lockable in 360 degrees and the vertical guide prevents operational backlash. An integrated switch panel contains a multi-functional LCD display and precision stepper motors guide coarse recipient block movements by 500 µm and fine recipient block movements from 1-25 µm. The section thickness range is 1-99 µm and the trimming section thickness range is 5-500 µm.</td>
<td>MTM</td>
</tr>
<tr>
<td><strong>One Year Warranty for TMM</strong></td>
<td>TissueMax™ Automated Tissue Microarrayer One Year Warranties provide comprehensive coverage for normal use and wear of all TMM instrument parts and components except the tissue punch tips. Excess wear and misuse may incur additional repair costs.</td>
<td>TMW1</td>
</tr>
<tr>
<td><strong>Two Year Warranty for TMM</strong></td>
<td>TissueMax™ Automated Tissue Microarrayer Two Year Warranties provide comprehensive coverage for normal use and wear of all TMM instrument parts and components except the tissue punch tips. Excess wear and misuse may incur additional repair costs.</td>
<td>TMW2</td>
</tr>
<tr>
<td><strong>Three Year Warranty for TMM</strong></td>
<td>TissueMax™ Automated Tissue Microarrayer Three Year Warranties provide comprehensive coverage for normal use and wear of all TMM instrument parts and components except the tissue punch tips. Excess wear and misuse may incur additional repair costs.</td>
<td>TMW3</td>
</tr>
<tr>
<td><strong>TissueMax™ recipient blocks, 120 wells</strong></td>
<td>TissueMax™ recipient blocks, 1 mm well diameter, 10 x 12 well pattern, 120 wells per block, 10 blocks per package.</td>
<td>TMX120</td>
</tr>
<tr>
<td><strong>TissueMax™ recipient blocks, 60 wells</strong></td>
<td>TissueMax™ recipient blocks, 2 mm well diameter, 6 x 10 well pattern, 60 wells per block, 10 blocks per package.</td>
<td>TMX60</td>
</tr>
<tr>
<td><strong>TissueMax™ recipient blocks, 30 wells</strong></td>
<td>TissueMax™ recipient blocks, 3 mm well diameter, 5 x 6 well pattern, 30 wells per block, 10 blocks per package.</td>
<td>TMX30</td>
</tr>
</tbody>
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