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Excellence in Histopathology Product Catalogue

- * Premade Recipient Block
- * Manual Tissue Microarrayer
- * Automated Tissue Microarrayers
- * Recipient Block Mold Kit
- * Paraffin Block Trimmer
- * WILLCARE Insulin Pump

 **UNITMA**

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 **UNITMA**
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Introduction

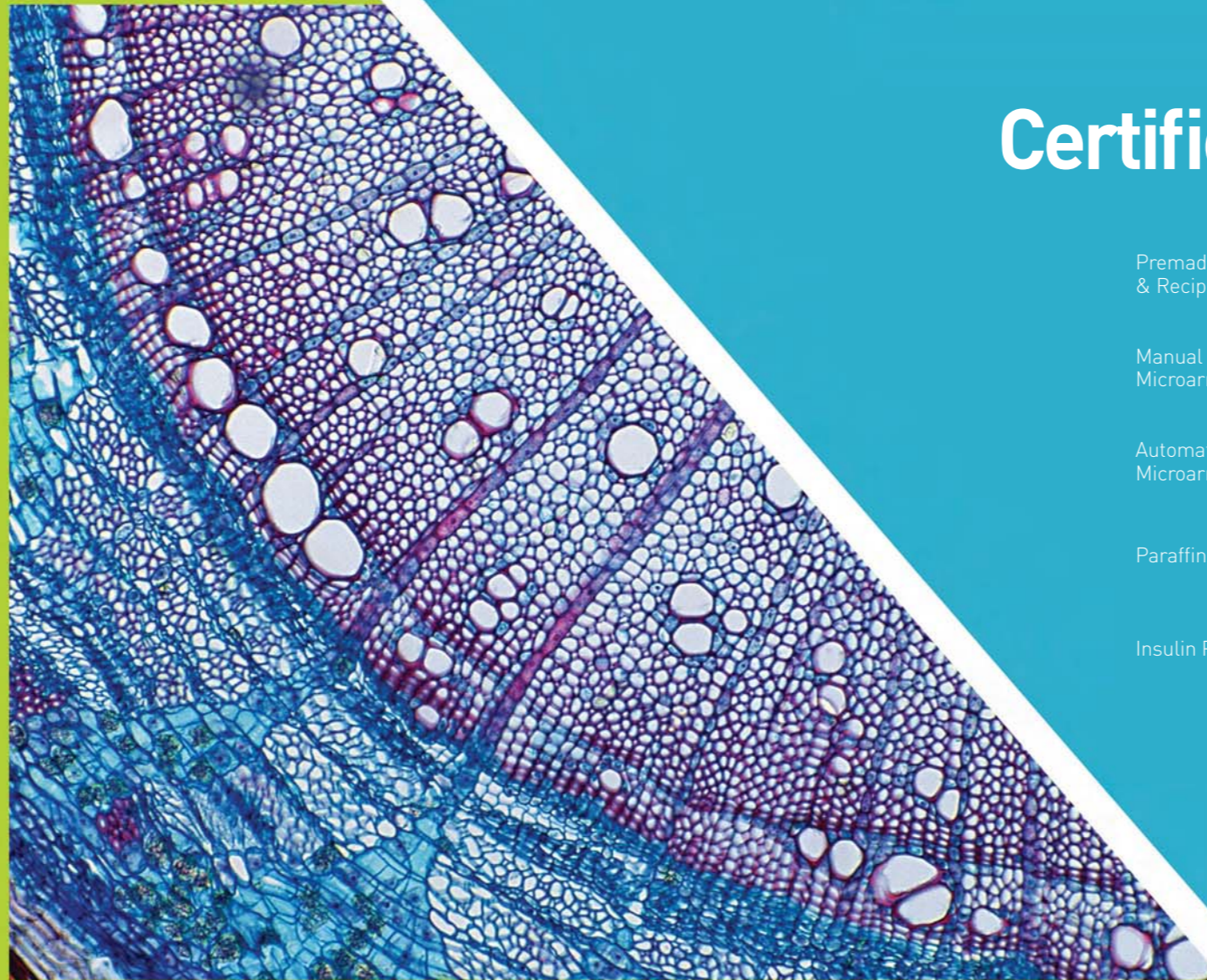
Unitma Co., Ltd. based in Seoul, Korea has developed the premade recipient blocks with the paraffin plus special materials since 2002. With applying the premade recipient blocks, Unitma could offer the users to save the considerable time and labor cost in preparation of the desired recipient blocks manually prior to starting TMA work.

Based on the core technology, Unitma developed the manual tissue microarray called Quick Ray and has been supplying the manual kit with the premade recipient blocks to worldwide customers.

Furthermore, Unitma launched the fully automated tissue microarrays (Quick Ray Master) in 2010, and is possible to offer the best solution for the digital histology.

Recently Unitma also launched the paraffin block trimmer which can trim the paraffin residues around the paraffin blocks without any damages to the sample tissues and without any injuries during the trimming work by the conventional way.

Today, Unitma is continuously developing new technologies to change the existing research environment in the labs.



Certification

Premade Recipient Block & Recipient Block Builder

ISO CE

Manual Tissue Microarray

ISO CE

Automated Tissue Microarray

ISO CE FCC UL

Paraffin Block Trimmer

ISO CE FCC

Insulin Pump

ISO CE GMP FDA



Premade Recipient Block



Manual Tissue Microarray



Automated Tissue Microarray UATM 272-A



Automated Tissue Microarray UATM 272-B



Recipient Block Mold Kit



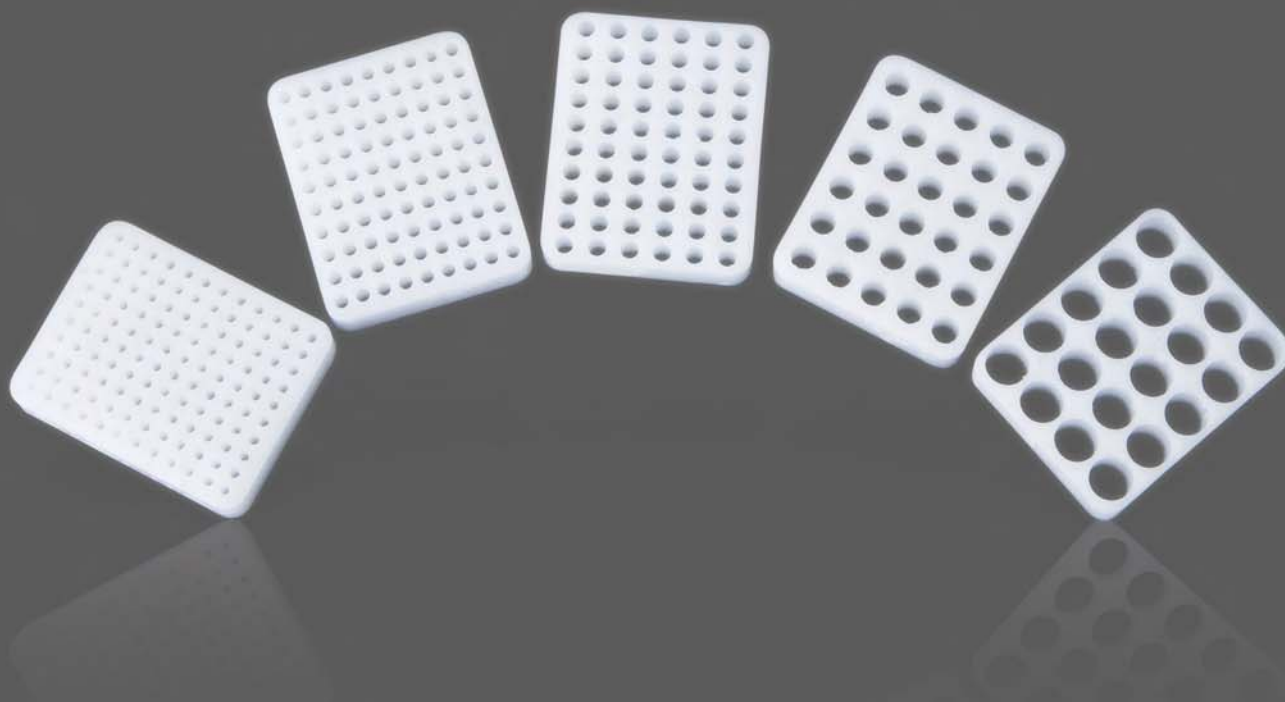
Paraffin Block Trimmer



WILLCARE Insulin Pump

 UNITMA

Premade Recipient Block



Overview

UNITMA provides the premade recipient blocks patented in global, to save the valuable time and cost in creating the recipient blocks additionally before starting TMA work. The recipient block is made of special materials that melt when heated at 70°C for 30~60 minutes. The blocks have evenly spaced round wells arranged in a square matrix.

Currently, five different sized blocks are available :

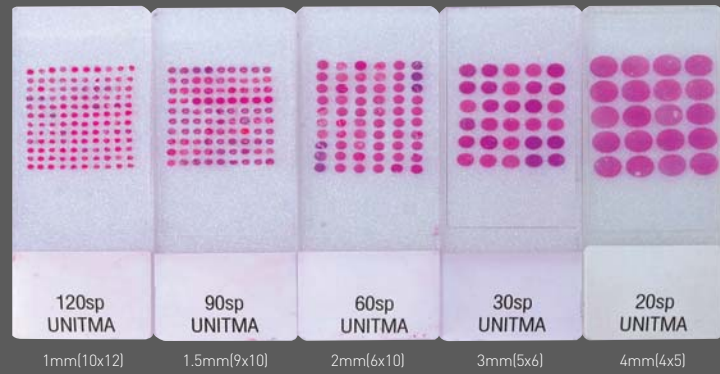
- 120 holes of 1mm in diameter
- 90 holes of 1.5mm in diameter
- 60 holes of 2mm in diameter
- 30 holes of 3mm in diameter
- 20 holes of 5mm in diameter

Features

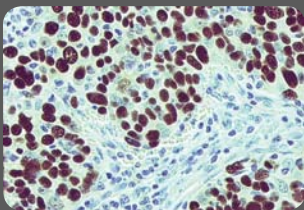
- * TMA success rate up to 99%
- * Maintains tissue integrity during embedding
- * Up to 300 tissues slices per recipient block
- * High durability during microarraying
- * Standardized block configuration for the simple image analysis
- * Saving the additional time and cost in preparation of recipient blocks



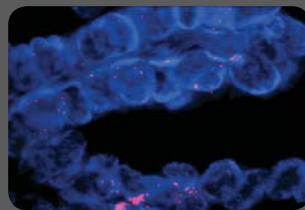
Blocks and slides



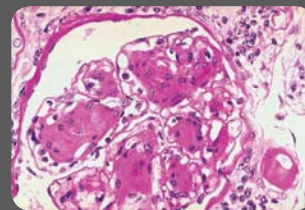
Application



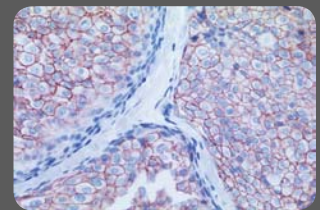
In Situ Hybridization



FISH



Special stain



Immunohistochemistry

Specification

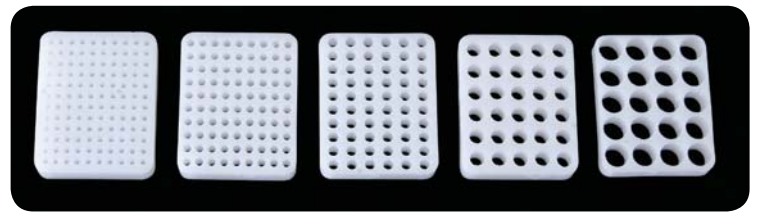
Product name		Premade Recipient Block	
Model Number	Core size	Weight	Number of cores
UB06-1	1 mm	3.2g	120 (10 x 12) holes
UB06-1.5	1.5 mm	2.8g	90 (9 x 10) holes
UB06-2	2 mm	2.5g	60 (6 x 10) holes
UB06-3	3 mm	2.5g	30 (5 x 6) holes
UB06-5	5 mm	1.8g	20 (4 x 5) holes
Dimension	24 x 30 x 5.5 mm		
Color and odor	White, odorless		
Physical state and appearance	Solid		
Storage temperature	Room temperature		
Operating temperature	5°C ~35°C		
Composition	Paraffin plus special materials		
Purpose of use	Research purpose only		
Certification	ISO, CE		

Manual Tissue Microarrayer

Quick Ray (UT06)



Changeable Tips



Recipient Blocks

Overview

The manual tissue microarrayer called Quick Ray is used for the researchers to extract the sample tissue from the donor blocks and insert the sample tissues into the premade recipient blocks for the research purpose at the lab.

A full set of manual tissue microarrayer consists of :

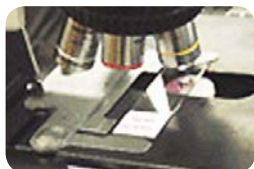
- 1 puncher body
- 5 premade recipient blocks (1, 1.5, 2, 3, 5mm)
- 5 puncher tips (1, 1.5, 2, 3, 5 mm)
- 1 tip guide for the 1mm recipient block
- 1 base mold
- Wooden case
- User manual

The patented recipient block is made of a special material that melts when heated at 70°C for 30 to 60 minutes until the block becomes transparent.

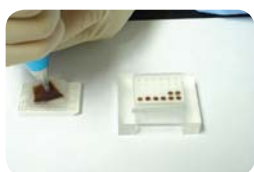
Features

- Portable and easy to handle
- Shortening the TMA work
- Smarter arrayer compared to conventional products
- Easy to carry and to make the array block anytime & anywhere
- Inexperienced pathologist can be easily familiar with the kit
- Simple procedure for creating the blocks
- Easy to create the various sized blocks by using the recipient blocks
- Save the time in preparation of the recipient blocks

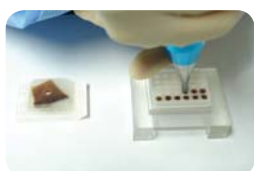
How to build



01 Place the reference slide and the donor block on the microscope stage, and mark the position with an oil pen, where you intend to extract the sample tissue.



02 Extract the marked tissue from the donor block by the Quick Ray



03 Deliver the extracted tissue into the corresponding holes of the recipient block supplied by UNIMTA

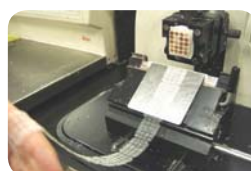


04 Put the completed recipient block into the base mold with the face to be sectioned down and place it in an oven at 70 degrees celsius for 30 to 60 minutes until the block is completely transparent, then take it out from the oven.



05 Place an embedding cassette on the top of transparent block and dispense liquid paraffin into the base mold until adequately covering the cassette.

06 Solidify the block in a cold plate



07 Sectioning by a microtome

08 Follow the next workflow

Specification

Product name	Manual Tissue Microarrayer (Quick Ray)
Model name	UT06
Instrument type	Manual Tissue Microarrayer
Components for a full set	<ul style="list-style-type: none"> • 1 puncher body • 5 premade recipient blocks (1, 1.5, 2, 3, 5mm) • 5 puncher tips (1, 1.5, 2, 3, 5 mm) • 1 tip guide for the 1mm recipient block • 1 base mold • Wooden case • User manual
Dimension	220 x 163 x 45 (mm)
Weight for a full set	0.83 kg
Storage temperature	Room temperature
Operating temperature	5°C ~35°C
Purpose of use	Research purpose only
Certifications	ISO, CE

Automated Tissue Microarrayer

Quick Ray Master (Model: UATM-272A)



Overview

Quick Ray Master is an automated tissue microarrayer running by the built-in PC.

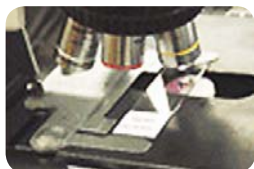
The instrument extracts the sample tissues from the donor blocks and delivers the extracted sample tissues into the correspondent hole of the premade recipient block automatically. And the researcher can access to the data file for the current TMA work by using the Tissue Array Report Program (TARP) developed by UNITMA.

The researchers can choose one of the 3 rotary type tips simply by using unique UNITMA software. The instrument can be connected to the external devices such as USB, monitors, printers and etc. The instrument provides economical efficiency in time, quality, and cost of tissue preparation by fully automating tissue microarraying process.

Features

- 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 recipient block
- Standardized block configuration simply image analysis
- Prepare up to 240 tissue cores per hour
- TMA success rate up to 99%
- Tissue array circle time 15secs
- Positional accuracy of 5 μ m at recipient blocks

How to build



01 Place the reference slide and the donor block on the microscope stage, and mark the position where you intend to extract the sample tissue with an oil pen.



02 Place donor blocks and recipient blocks on the block holders in the instruments.



03 Automated Tissue Microarrayer extracts the marked tissue from the donor block and delivers the extracted tissue into the correspondent holes of the premade recipient block (UB06).



04 Put the completed recipient block into the base mold with the face to be sectioned down and place it in an oven at 70 degrees celsius for about 30 to 60 minutes until the block is completely transparent, then take it out from the oven.



05 Place an embedding cassette on the top of transparent block and dispense liquid paraffin into the base mold until adequately covering the cassette.



06 Solidify the block in a cold plate.

07 Sectioning by a microtome.

08 Follow the next workflow.

Specification

Product name	Quick Ray Master
Model name	UATM-272 A
Instrument type	Automated Tissue Microarrayer
Punch type	Rotary puncher (1, 2, 3mm)
Power Supply	110V/220V selectable, 50-60Hz, 660W
Dimension	953 x 703 x 610mm (W x D x H)
Weight	148kg

Stage capacity	10 donor blocks, 2 recipient blocks
Speed	1cycle time : 15sec (Pick & Place)
Monitor	LCD monitor 12.1"(1024x768) with a touch screen
Camera resolution	1280 x 1024 pixels (2set)
Operating system	Unique UNITMA S/W by Microsoft Windows XP
Recipient block	Premade recipient block to be supplied by UNITMA
Certification	ISO, CE, UL, FCC

System components



Automated Tissue Microarrayer

Quick Ray Master (Model: UATM-272B)



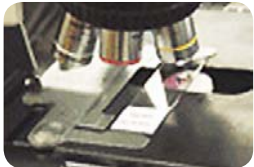
Overview

Quick Ray Master is an automated tissue microarrayer running by simply connecting to user's computer through USB port. The system extracts the sample tissues from the donor blocks and delivers the extracted sample tissues into the correspondent hole of the premade recipient block automatically. And the researcher can access the data file for the current TMA work by using the Tissue Array Report Program (TARP) developed by UNITMA. The 4 different sized tips are manually changeable to associate with the desired core size of the recipient blocks: 1mm, 1.5mm, 2mm, and 3mm. UATM-272B is smarter instrument compared to UATM-272A, and is designed for the users to be easily familiar with. The instrument provides economical efficiency in time, quality, and cost of tissue preparation by fully automating tissue microarraying process.

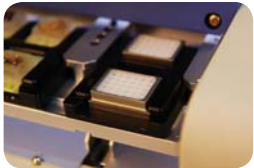
Features

- Analysis of many patient tissue samples simultaneously
- Conserves tumors, biopses and other precious biological samples
- Conserves antibodies and other expensive reagents
- Improves array 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 recipient block
- Standardized block configuration simply image analysis
- Prepare up to 240 tissue cores per hour
- TMA success rate up to 99%
- Tissue preparation cycle time of 15secs
- Positional accuracy of 5 μ m at recipient blocks

How to build



01 Place the reference slide and the donor block on the microscope stage, and mark the position where you intend to extract the sample tissue with an oil pen.



02 Place donor blocks and recipient blocks on the block holders in the instruments.



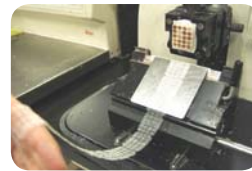
03 Automated Tissue Microarrayer extracts the marked tissue from the donor block and delivers the extracted tissue into the correspondent holes of the premade recipient block (UB06)



04 Put the completed recipient block into the base mold with the face to be sectioned down and place it in an oven at 70 degrees celsius for 30 to 60 minutes until the block is completely transparent, then take it out from the oven.



05 Place an embedding cassette on the top of transparent block and dispense liquid paraffin into the base mold until adequately covering the cassette.



06 Solidify the block in a cold plate.

07 Sectioning by a microtome.

08 Follow the next workflow.

Specification

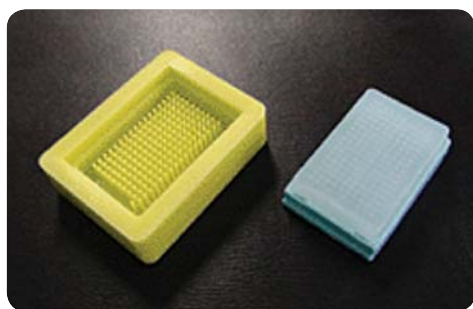
Product name	Quick Ray Master (Model : UATM-272B)
Instrument type	Automated Tissue Microarrayer
Tip type	Changeable Tips (1mm, 1.5mm, 2mm, and 3mm)
Power supply	100 to 120 VAC, 200 to 240 VAC / 50~60Hz
Dimension (W x D x H)	750 x 600 x 600(mm)
Weight	80kgs
Capacity	10 donor blocks and 2 recipient blocks
Speed	1cycle time : 15sec (Pick & Place)
Camera resolution	1600 x 1200 (2 Mega pixels)
Operating system	Unique UNITMA S/W by Microsoft Windows 7
Recipient block	Premade recipient block to be supplied by UNITMA
Operating temperature range	+10C to +35C
Transportation / Storage temperature range	+5C to +55C
Relative humidity	Max 80% non-condensing
Inner illumination	LED type(2 sets)
Certifications	ISO, CE, UL, FCC

Recipient Block Mold Kit

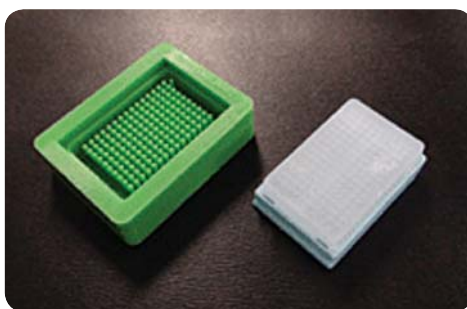


Overview

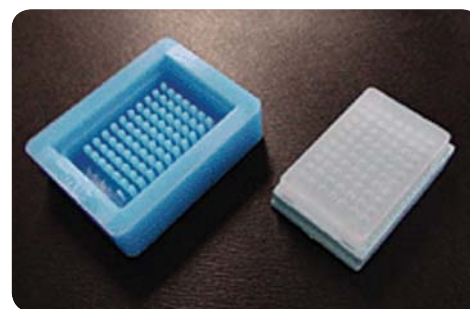
Recipient block mold kit is an alternative solution for the users to prepare the recipient block by themselves. The recipient block can be used to prosecute TMA works with the manual tissue microarrayer called Quick Ray. Furthermore, the researchers can prepare the hundreds of recipient blocks if the mold kits made from the silicon rubber, are stored and handled with care.



Core size : 1mm / 170 holes (10 x 17)



Core size : 1.5mm / 150 holes (10 x 15)



Core size : 2mm / 70 holes (7 x 10)



Core size : 3mm / 40 holes (5 x 8)



Core size : 5mm / 15 holes (3 x 5)

How to build

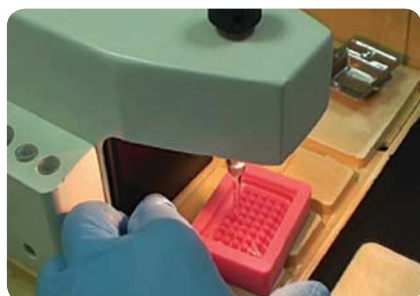


01 Place the Recipient block Mold kit in a dry oven for 30 minutes at 70-80°C to warm-up the mold kit.

* Note : This is strongly recommended for lasting the durability of the mold kit as well as preparing the good quality recipient block.



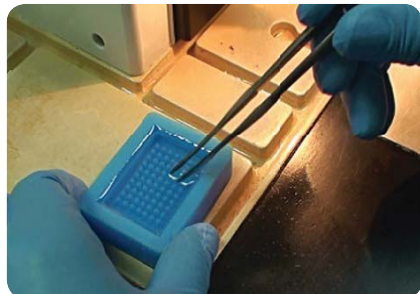
04 Dispense enough liquid paraffin into the embedding cassette



02 Dispense liquid paraffin (60-65°C) slowly into the mold kit until the top of core rods are fully submerged.



05 Solidify the embedding cassette and the mold kit at a normal room temperature or at about 4°C for 30-60 minutes. If solidified at the lower temperature, the block may have cracks in it.



A Paraffin dispense should be done so slowly that no bubbles are to be formulated among the core rods.

B When some bubbles are formulated, remove them with heated forceps.



06 Separate the mold kit from the embedding cassette slowly and carefully.



03 Place an embedding cassette on the mold kit.



07 Trim paraffin around the periphery of the recipient block.



Completed recipient blocks

Paraffin Block Trimmer

Quick Trim (UPBT-1011)



Overview

The Paraffin Block Trimmer (generally called Wax Trimmer, Paraffin Trimmer, Wax Remover, Paraffin Remover, Dewaxer, etc) is one of the histology equipments used for the histopathology. The Paraffin Block Trimmer enables the researchers to trim the paraffin blocks automatically. This instrument removes only paraffin residues around the paraffin blocks without damage to the tissue samples or the plastic cassette.

When users load the paraffin blocks on the tray of the instrument after the embedding process, the blocks moves to trim the paraffin residues into the trimming module and the trimmed block is discharged from the outlet of the instrument.

Eventually, this instrument also enables to reduce the manually trimming time and to prevent the users from any injuries caused by the conventional trimming tools.

Features

- Save the labor cost
- Protect researchers from any physical damages which may be caused by conventional trimming tools
- Max. 900 paraffin blocks can be trimmed in an hour
- Semipermanant life time of trimming modules
- Check the trimmed block quantity on the LCD Monitor
- LCD monitor shows the status of trimming process
- The various kinds of embedding cassettes acceptable

How to use

- 01** Check the power line connection . Turn on the main power switch located at the bottom of left side. Then "Stand by / Press START" will appear on the LCD display.
- 02** Press Start button to initialize the trimmer. Then "UNITMA CO., LTD. / Initializing..." will appear on LCD display shortly, followed by "Stand by / Pls load blocks".
- 03** Press Pause button and load paraffin blocks on the tray #2
- 04** Press Start to start trimming.
- 05** When the conveyor belt is moving, continue to load blocks on the tray #1 to trim other blocks. Then, "Running / Block count: xx" will appear in the LCD panel. Trimmed blocks will come out of the outlet on the front of the trimmer.
With the sensors in the tray #2, the trimmer can recognize the block and its direction. When there is no block on the tray #2, the trimmer will trim the previously loaded blocks and stop.
In order to continue trimming when the previously loaded blocks were trimmed completely and the trimmer stopped, pressPause and load a block on the tray #2, then press Start, and then, continue to load blocks only on the tray #1 afterward.
- 06** When the required blocks are finished, turn the main switch off.



Paraffin block before trimming



Paraffin block after trimming

Specification

Product name	Paraffin Block Trimmer (Quick Trim)
Model name	UPBT-1011
Nominal Power supply voltages	Switchable Voltage (100 to 240 V)
Nominal supply current	4.5 A @ 30V
Nominal frequency	50 / 60 Hz
Net weight	50kgs
Max Size (W x D x H)	725 x 325 x 470 mm
Operating temperature	+10°C to +35°C (50°F ~95°F)
Humidity during transportation/storage	Max. 80% non-condensing
Operating control SW	MICOM (PIC) type
Monitor	LCD panel (70 x 25mm), Dot Matrix type
Trimming capacity	Max. 900 blocks per hour
Operation environment	Indoor use only
Main voltage fluctuation	100V to 240V ±10%
Certification / Approval	CE / ISO / FCC

WillCare Insulin Pump



Diabetes mellitus

After a meal, sugars (mainly glucose) are absorbed into the bloodstream and Insulin is secreted by the pancreas. Most cells of the body have insulin receptors for cells to absorb sugar from the blood. When insulin is not secreted efficiently, cells of the body cannot access the energy contained in the glucose, and the levels of glucose in blood become higher than in normal individuals causing the onset of Diabetes. According to many health reports, as many as 20% or more of the total world population has some degree of high level of sugar in their blood.

Overview

WILLCARE is an insulin pump made with the best biotechnology in Korea. WILLCARE is a small programmable computerized medical device used for the administration of insulin also known as CSII (continuous subcutaneous insulin infusion) therapy in the treatment of Diabetes. The basic components of the device include: the pump itself, a disposable reservoir for insulin (syringe), and a disposable infusion set. WILLCARE is an alternative to multiple daily injections of insulin by insulin syringe pen and allows for intensive insulin therapy when used in conjunction with blood glucose monitoring and carbohydrate counting.

Features

- Extremely light weight 55g and world smallest size insulin pump.
- Reservoir capacity is 300U and basal insulin is delivered in every 3 minutes which enables the effective blood glucose control between meals.
- Therefore, it is possible to keep sound blood glucose curve.
- High Insulin absorption ratio because the pump is designed to deliver Bolus Insulin 1 unit slowly for 20 seconds.
- The interface of operation is programmed for simple and easy use, so it is very convenient and easy to use for the most diabetes.
- High reliability in the product.



Specification

Parameter	Specification
Product name	WILLCARE (Model : GX-1020)
Dimensions	(W)86 x (D)45 x (H)19 (mm)
Weight	55 g (with battery installed)
Insulin type	Rapid acting insulin
Date and time screen	12/24 h.
Unit of delivery	Basal 0.1 unit, Bolus 0.1 unit
Max insulin capacity	300units(3ml)
Max basal adjustment	24 (1h/24h)
Basal delivery interval	Every 3 minutes
Other Functions	<ul style="list-style-type: none"> •Limitation of Bolus and Basal delivery •Low battery notice •Low insulin notice •Syringe blockage notice • Wrong delivery notice
Memory	<ul style="list-style-type: none"> •Daily total set amount of Bolus and Basal •Daily total delivered amount of bolus and basal •Alarm history
Current insulin metering	Yes
Basal level and patterns	Ability to program to 24 basal levels. Three variants of basal patterns setting
Basal dose dosage limits	from 0.1 to 3 units / hour
Temporally basal level	from 30 minutes to 24 hours
Insertion inaccuracy, plunger shift inaccuracy	+/- 5%
Highlighting	Yes
Highlighting action time	9seconds
Alarm signals	sound
Alarm signal about the ending of insulin in the container	Automatic : 15units left
Battery	One battery3.6V DC(1/2AA) Lithium battrey
Display	•clock•battery charge display •container filling display
Water resistance	Water resistant (IPX 2)
Sleeping mode activation time	30 seconds
Storage temperature	-20°C ~ 50°C (-4°F ~ 122°F)
Operating temperature	-10°C ~ 40°C(14°F ~ 104°F)
Operating humidity	20% ~ 90%
Atmospheric pressure	700hPa ~ 1050hPa
Warranty	4 years