

ihc Slide Manager



Operation Manual

Before using this product, please read this manual carefully to learn about this product to safely operate within a laboratory environment.

Caution:

- Take precautions when handling this product as it may come into contact with biological specimens.
- Use caution when using this product in conjunction with slide warming devices to ensure that the temperature settings are appropriate for touch.



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1) ihc Slide Manager

The ihc Slide Manager is a consolidated work center designed to help users organize and manage up to nine slides for immunohistochemistry, immunocytochemistry, or ISH (FISH) testing. The ihc Slide Manager device is simple to use and is constructed out of electrophoretically painted die-cast aluminum to for easy cleaning and to help resist harsh chemicals. The Slide Manager and the base pan holds up to 300ml of fluids, e.g. wash buffer and other waste streams. Where desired, the ihc Slide Manager passes heat through to the surface from the ihc Slide Warmer or similar heated flat surface. The ihc Slide Manager units are shipped with a corresponding red Slide Manager Rack. The Slide Manager may be used with or without the Rack and with or without the ihc Slide Warmer.



2) ihc Slide Manager Safety

2.1 Handle the ihc Slide Manager with care as you would any device that can achieve high temperature and any device that might come in contact with biological specimens:

- Wear appropriate personal safety protection and personal protective equipment (PPE) while processing tissue slides.
- Observe the temperature of the slide warmer settings. Treat device as if it could be hot to the touch.
- Ensure that the slide warmer has had sufficient time to cool before removing the ihc Slide Manager from the slide warmer after use where temperature is over 44°C (~111°F).

2.2 Washing Tissues Using the ihc Slide Manager Pan and plastic 9-Position Slide Rack:

- Use care and properly dispose reagents following use. To minimize wastes that must be separated or managed with hazardous materials, it may be best to wash and collect immunohistochemistry (IHC) dyes, e.g. DAB chromogen into a separate container to reduce the materials that have to be disposed of as hazardous.
- Use clean water to rinse/wash the Slide Pan and 9-Position Slide Rack Holder.

3) ihc Slide Manager Shipping Contents

3.1 Product Specifications:

ihc Slide Manager	M81050 (M81051 Replacement 9-Position Slide Rack)
Construction	Electrophoretically Painted Die-Cast Aluminum
Overall Size	10 ^{7/16} " x 6" x 1 ^{1/4} " (265 x 153 x 31mm)
Wash Fluid Well Capacity	170ml to 3 inner pedestals 300ml total usable volume
Slide Size Dimension	25.5-26.5 +/- 0.5mm

4) Benefits and uses of the ihc Slide Manager with a slide warmer

4.1 Systemic Product Benefits and Uses:

The ihc Slide Manager may be used independent of a slide warming device or in concert with slide warming devices. There are however benefits for utilizing both the ihc Slide Manager and a slide warming device together. Using these two components together may help laboratory personnel:

- Have a convenient method to manage slides and maintain consistency between users. The systems used together can help to minimize the bench space usage for completing immunohistochemistry tests and by retaining volumes of wash buffer solutions the ihc Slide Manager can help users keep test areas remain clean and uncluttered.
- Using these devices can help users obtain more consistent results between and across locations with multiple users.
- To better manage wash buffer solutions. The ihc Slide Manager pan is able to contain up to 300ml of wash buffer fluid, which is more than a sufficient volume to comfortably manage and thoroughly wash at least 9 slides.



NOTE: It may be beneficial for users to capture the wash effluent used to remove excess DAB and other chromogenic solutions into a separate container to better manage waste streams. This approach may help

to minimize ihc Slide Manager clean-up procedures. Depending upon the regulations in your region, separating out the DAB solution and the initial wash effluent from DAB may help to minimize the amount of chemicals that need to be disposed of as hazardous wastes.

- Overcome challenging room environments:
 - Where the temperature may be too cool to complete test process in the prescribed time or where there may be suboptimal temperatures that could potentially lead to less developed lab results. For IHC testing, users may see faint or less developed slides.
 - To help overcome temperature variability brought on by direct overhead HVAC air vents. Because HVAC systems start automatically, there can be fluctuations in temperatures at the lab bench level. This system can help users to obtain more consistent results, especially as seasons change throughout the year.
- Operate in a level environment. Some users put paper down to cover lab surfaces. It has been observed in some situations where these surfaces become uneven with the addition of these bench covers. In order to prevent the antibody or DAB from collecting on one side of the tissue, leveling out the surface can improve test results.



5) Operating the ihc Slide Manager

5.1 Using the ihc Slide Manager to organize lab space:

- Place the ihc Slide Manager on a flat surface in a room that is at or above the minimum temperature settings for the assay e.g. 22°C.
- Begin the test protocol by placing pre-cut tissue slides on the raised surfaces of the Slide Manager Pan. Utilize the 9-position raised platforms of the Pan for pipetting and incubating of slides. To perform wash steps, remove the individual slides or the whole 9-position slide rack. Utilize the non-raised or deep-well sections of the Pan for washing to capture the wastes away from other slides that might be in process. Keep the raised surfaces dry where possible as this may help to facilitate the testing processing, especially for those users who prefer removing excess fluids from

the top and bottoms of slides following wash steps to better manage surface tension and to better adhere antibody or color forming (DAB) reagents.

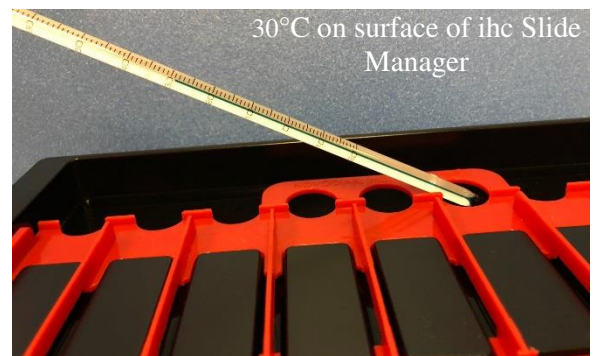
5.2 Operating the ihc Slide Manager with a slide warmer:

A. Slide Manager / slide warmer use description. The ihc Slide Manager can be used to conduct heat directly from the flat surface of a slide warmer to the slide surface via the device. Several customers have reported an optimal temperature of 30°C for IHC testing and all ihc assays are validated within a range of temperatures from room temperature (~22°C) to 30°C, so users should have confidence in the ihc assay system regardless of temperature setting. Please note that the slide surface temperature may be less than the temperature displayed upon the slide warmer. For

quality purposes, users must validate test protocols in-house prior to performing tests on patients. It is recommended that if a slide warmer is to be integrated into the procedure that users also perform tests ahead of time to qualify and optimize assay parameters within their specific laboratory environment. To this end, it may be helpful to confirm the desired temperature upon the ihc Slide Manager surface using a thermometer as the temperature setting of the slide warmer is unlikely to be equal to that of the Slide Pan surface.

Process steps include the following;

- Ensure that slide warmer and ihc Slide Manager are on a flat surface.
- Set the slide warmer to the desired temperature e.g. 34.5°C and allow the slide warmer and corresponding ihc Slide Manager Pan to come to desired temperature prior to operating.
- Process the slides according to the manufacturer's protocol, e.g. ihc with slides sitting flat on the ihc Slide Manager Pan surface.
- It may be desirable to avoid using the slide warmer for the hematoxylin counterstain step. Heating during this step may make the counterstain become darker than desired.



NOTE: During wash, lift slides individually or collectively off of the Slide Manager Pan surface to wash. Gently wash slides over the open well area and away from the corresponding 9 raised slide storage positions. Allow the wash buffer fluids to gently cascade over the tissues. Upon completion of the wash, remove any excess fluids from the slides and return them to an appropriate location on the Slide Manager Pan surface.



B. Using the ihc Slide Manager Pan Only

Place slides directly on to raised surface intended for slides on top of the ihc Slide Manager Pan. There are 9 slide positions that users may elect to utilize. In using this approach, users will likely be processing slides individually.

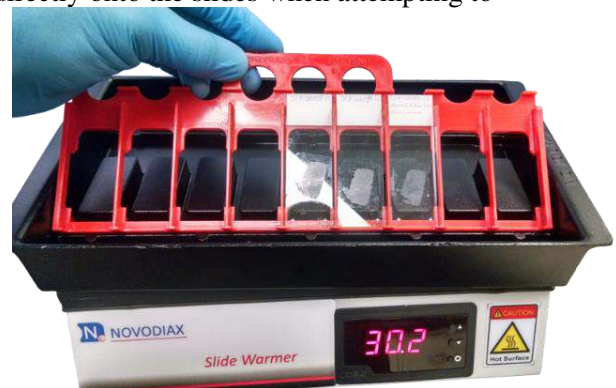
- Testing can be performed using the ihc Slide Manager Pan on either a heated or non-heated surface. For use of the ihc Slide Manager on a non-heated surface, place the ihc Slide Manager onto a flat surface in a room where the lab temperature is greater than or equal to 22°C. In environments cooler than 22°C, see the assay instructions for use about extending incubation times to account for the cooler temperatures.

C. Using 9-Position Slide Rack with Slide Manager Pan

Alternatively, for the above scenario, users may also elect to use the Slide Rack without the use of a slide warming device. The red 9-Position Slide Rack is made to integrate directly with the ihc Slide Manager Pan. This product allows users to manage multiple slides simultaneously. The Slide Rack allows users to wash all of the slides simultaneously. For this reason, users may want to incorporate the use of either an air blower/hair dryer or an air bulb that dispense air directly onto the slides when attempting to remove the excess fluids that may collect during wash steps.

Process steps include the following:

- Allow the slide warmer to come to desired temperature with the ihc Slide Manager Pan atop the surface.
- Place slides directly onto the Slide Rack. This rack then integrates onto the raised surface of the ihc Slide Manager Pan. Slides should only fit





one way on the device. As the rack is resting on the surface, begin your test protocol.

- Following antibody incubation, users can wash slides collectively or remove them for washing individually. Users should locate the 9-Position Slide Rack over the open (non-raised) area of the Pan and gently wash above the tissues. Gently move across the rack where the slides are attached traveling back and forth several times to complete the wash process. Users should allow the fluid to gently cascade over the tissues. Upon completion of the wash, users can tap the rack on the metal ledge within the Pan to start the process of removing excess fluids from the surface of the slides. Users may remove the excess fluid from each slide individually, picking up and handling each slide separately. As this can lead to variability in the first-to-last-slide time on the warmer it may be more desirable to utilize an air blower/hair dryer to collectively and more rapidly remove the excess wash buffer fluid from the slide surface. Users may also want to remove the excess moisture from the tops of the raised black 9 slide positions on the base of the Slide Manager to minimize amount of water that may collect below the slides sitting atop the 9-Position Slide Rack and the matching 9 raised posts on top of the ihc Slide Manager Pan. Following wash and quick drying techniques, place the Slide Rack back onto the surface of the Pan for the next step.
- Repeat this process for DAB wash step. Depending upon local regulations for managing and disposing of hazardous waste, users may desire to capture the DAB wash effluent in a separate container. Many users collect and manage all waste as a biological hazard and thereby use the Slide Manager to collect all associated waste streams.
- It may be desirable to avoid using the slide warmer for the hematoxylin counterstain step. Heating during this step may make the counterstain become darker than desired.



6) Caring for the ihc Slide Manager Pan and 9-Position Slide Rack

- Upon completion of assay protocols, safely dispose of used buffers and solutions.
- Use the same care in washing the Slide Manager as is outlined in the ihc Slide Manager Safety section on Page 1 and assume the device has been in contact with biological specimens.
- Wash both the Pan and the 9-Position Slide Rack with liquid detergent and water. Users need to use care when handling the 9-Position Rack so as to not bend or break the red plastic part. Because IHC tests utilize dyes and chemicals, some staining over time is considered normal.
- Users may decontaminate with alcohol.



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*Upon receipt of your new equipment
we recommend you record the following information for future reference:*

Date purchased/received: _____

Manufacturer: _____ Novodix, Inc. Hayward, CA _____

Phone number: _____ (510) 342-3043, Toll Free (888) 439-2716 _____

Fax number: _____ (510) 254-6704 _____

Warranty

The manufacturer warrants this product to be free from defects in material and workmanship under normal use for 1 year from the date of purchase. It does not cover damage resulting from abuse or misuse, repairs or alterations performed by unauthorized repair technicians, or damage occurring in transit.

If you have questions concerning this product or warranty within the United States, please contact us at the address below. If outside of the United States, please, contact your distributor from whom it was purchased. For warranty service, equipment should be well packed to avoid damage in transit. Include your complete return address and telephone number as well as a description of the difficulty, date and place of purchase, and ship to the address below. If under warranty it will be replaced at no charge. If misuse, alterations, accident or abnormal conditions of operation caused failure, an estimate for repairs will be provided for your approval prior to work being performed.



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