

Product Information

MICROWAVE TISSUE PROCESSING PROTOCOL

H2100 MICROWAVE PROCESSOR

Biopsy Procedure

REAGENTS & CONSUMABLES REQUIRED

Reagent Alcohol	Quantity
Catalog No. R8382	1 gal, 4x1 gal
Isopropyl Alcohol (2-Propanol)	Quantity
Catalog No. 19,076-4	500 mL, 1 L, 2 L, 4 x4 L
Paraplast Plus Embedding Media	Quantity
Catalog No. P3683	1 Kg
500 mL Polypropylene Jar	Quantity
Catalog No. Z38,025-3	6 pack
Microwave Cassette Holder	Quantity
Catalog No. Z71,104-7	1 ea

SPECIMEN PREPARATION

Trim biopsy specimen to 1-3 mm thickness and place in standard **plastic** biopsy cassette designed for tissue processing. Tissue borders should not exceed the dimensions of the cassette. Fix tissue using appropriate fixative and procedure for routine histology.

PROCEDURAL NOTES

- Before beginning the tissue processing procedure, warm up the magnetron by placing approximately 500 mL of tap water in a microwave safe container and irradiating at full power for 1 minute.
- Read and understand the Material Safety Data Sheet flammability and health hazards for Reagent Alcohol and Isopropyl Alcohol.
- This protocol was designed for the H2100 Microwave for use with the specified jar and cassette holder. **Use of other equipment may alter results and damage tissue.**
- Up to 6 cassettes can be placed on the bottom level of the microwave cassette holder.
- Between each irradiation step gently agitate the solution by raising and lowering the cassette holder 5-10 times.
- Caution! Processing solutions are hot. Use thermal mitts or glove liners when handling processing jar.
- Reduce power if Reagent Alcohol or isopropyl alcohol begins to boil.
- Loosely place lid on top of microwave cassette holder and jar when irradiating. Leave lid ajar when measuring temperature to avoid excessive heat loss.
- Use the provided quality control chart for recording temperature measurements.
- Adjust the microwave time as necessary to be within the alcohol preheat temperature range.
- Desired temperature range for reagent alcohol steps 5, 6, 10 and 11 are 63-70 °C. Desired temperature range for isopropyl alcohol steps 15, 16, 20 and 21 are 74-80 °C. Adjust microwave power settings as needed.

PROCEDURE

- Remove cassettes from fixative, place in bottom level of cassette holder and rinse in tap water for 5 minutes.
- Preheat 400 mL of reagent alcohol for 1 minute at 800 watts. **Measure temperature** (range: 60-70 °C).
- Remove cassettes/holder from rinse water and place in preheated reagent alcohol. Agitate solution.
- Microwave for 5 minutes at 100 watts.
- Agitate solution. **Measure temperature.***
- If temperature is below 62 °C microwave at 150 watts for 4 minutes. If the temperature is above 62 °C microwave at 100 watts for 4 minutes. **Measure temperature.***
- Preheat 400 mL of FRESH reagent alcohol for 1 minute at 800 watts. **Measure temperature** (range: 60-70 °C).
- Transfer cassette holder to the fresh reagent alcohol jar.
- Microwave for 5 minutes at 100 watts.
- Agitate solution. **Measure temperature.***
- If temperature is below 62 °C microwave at 150 watts for 4 minutes. If the temperature is above 62 °C microwave at 100 watts for 4 minutes. **Measure temperature.***
- Preheat 400 mL of isopropyl alcohol for 1 minute at 800 watts. **Measure temperature** (range: 60-70 °C).
- Transfer cassette holder to the isopropyl alcohol jar.
- Microwave for 5 minutes at 100 watts.
- Agitate solution. **Measure temperature.***
- If temperature is below 75 °C microwave at 150 watts for 4 minutes. If the temperature is above 75 °C microwave at 100 watts for 4 minutes. **Measure temperature.***
- Preheat 400 mL of FRESH isopropyl alcohol for 1 minute at 800 watts. **Measure temperature** (range: 60-70 °C).
- Transfer cassette holder to the fresh isopropyl alcohol jar.
- Microwave for 5 minutes at 100 watts.
- Agitate solution. **Measure temperature.***
- If temperature is below 75 °C microwave at 150 watts for 4 minutes. If the temperature is above 75 °C microwave at 100 watts for 4 minutes. **Measure temperature.***
- Place cassettes in 400 mL of paraffin at an approximate temperature of 70 °C. **Measure temperature.** Agitate solution 15-20 times.
- Microwave for 10 minutes at 400 watts. Agitate solution. **Measure temperature** (typically 68-72 °C).
- Microwave for 10 minutes at 500 watts. Agitate solution. **Measure temperature** (typically 70-78 °C).
- Microwave for 10 minutes at 400 watts. Agitate solution. **Measure temperature** (typically 80-88 °C).
- Let cassettes sit in paraffin uncovered for 15 minutes. Periodically agitate paraffin 15 – 20 times.
- Remove cassettes and embed tissue using standard embedding procedure.

* See Procedural Notes number 11 for proper power settings.



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