

Excelsior™ AS Tissue Processor

Technical Specifications



Epredia Excelsior™ AS Tissue Processor combines exceptional tissue processing with simple operation, **reagent management** and **custom programming capability**.

Cassette baskets are gently rotated inside the circular chamber, providing effective agitation by enhancing fluid movement. Reagents can be pre-heated to up to 35°C, minimizing tissue shock and facilitating reagent penetration.

Specimen cassettes are loaded into the instrument in Organized or Random baskets. Up to 222 cassettes can be processed at any one time in the Organized baskets. Optional accessories allow up to 300 cassettes to be processed simultaneously.

Significant reagent cost savings

Alcohol quality measurement enables you to extend your reagent life and provides significant cost savings

Automatic reagent rotation further extends reagent life using a proven system

Triggers for reagent rotation can be based on days of the week, usage counts or alcohol quality (influenced by the total number of cassettes processed).

Streamline workflow and increase productivity

Reduce maintenance time by replacing one bottle of each reagent, rather than all of them

Run rapid biopsies during the day and conventional programs overnight

Compatible with IPA xylene-free processes as well as conventional reagents

Safe for the tissue—safe for the operator

When the chamber is opened, a fan pulls fumes through a filter to protect users from formaldehyde exposure

Fumes from the cabinet are also extracted through filters to protect users from alcohol, xylene, and formaldehyde

Waste paraffin can be removed by simply discarding a plastic tray—no paraffin spillage and burns

A log of every event generated from the last instrument reset to the present time.

Power outages are no longer a concern; Excelsior keeps your tissue safe with battery backup

So simple to learn and operate

The all-new touch-screen interface is intuitive and easy-to-learn

With intelligent software, it's easier to avoid mistakes that affect tissue quality

Environmental Specifications

For Indoor Use Only

"Epredia recommends ensuring that Epredia instrumentation have a line conditioner to protect equipment from power surges, correct voltage and waveform distortions, and remove external electrical noise with the intent to solve problems before they occur."

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Product details

Excelsior™ AS Tissue Processor	A82300001
Excelsior™ AS (C Series) Tissue Processor (China Only)	A82300003
Excelsior™ AS Tissue Processor(with line conditioner)	A82300001A

Mechanical Specifications

Dimensions (D x W x H)	Imperial (inches)	Metric (cm)
Height to working area (with tray)	22.8 x 27.9 x 42.5	58 x 71 x 108
Height to top of monitor	22.8 x 27.9 x 54	58 x 71 x 137
Weight	Imperial (lbs.)	Metric (kg)
With no reagents	267	121 kg
With typical reagents	445	202 kg

Electrical Specifications

Power Supply Voltages	100 - 240 VAC
Frequency	50/60 Hz
Power	1300 VA (maximum) 300 VA (typical)
Battery Backup Power	Yes
Temperature (operating limits)	+5°C to +40°C (+41°F to +104°F)
Temperature (recommended operation)	+15°C to +30°C (+59°F to +86°F)
Temperature (transit/storage)	-25°C to +55°C (-13°F to +131°F)
Humidity	Maximum 80% RH at 31°C (88°F) decreasing linearly to 50% RH at 40°C (104°F)
Altitude	Up to 2000 m (6500 feet)

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Pollution Degree	2
Over Voltage Category	II
Noise Level	<70dBA

Interface Connections

Remote Alarm	24 V DC, 3A max, operation non-powered output, protection for overtemperature and overpressure
Alarms	Underfilling/overfilling the reagent vessel.
LIMS	Serial RS232
Access Code Protection	Yes

Instrument Specifications

Total cassettes on board	222-300 standard cassettes in the Organized baskets
Number of reaction chamber	1
Number of baskets per chamber	6 (3 levels, 37-50 standard cassettes per basket X 2 baskets/level)
Basket design	Organized basket with built in space for fluid movement between cassettes
Chamber agitation	Contra-stir rotation
Agitation mode	Constant vacuum, Cycle vacuum, Constant pressure, Atmospheric conditions, and alternating vacuum and pressure
Wax heating temperature	45 to 65°C
Reagents heating temperature	Ambient to 55°C
Reagents preheat	Up to 35°C for alcohol and xylene
Cleaning reagent heating temperature	<66°C
Chamber level sensor	Four Optical IR sensors
Wax tank level sensor	3 sets Temperature sensors
Retort lid feature	Transparent lid
Number of process and flush programs	10 Processes(2 preprogrammed) 8 flushes (2 preprogrammed)

Paraffin Wax and Reagent Stations Specifications

Number of wax tanks	3 Wax tanks (5.6L) 1 Waste wax drawer (5L) for ease of exchange and disposal
Reagent Stations	16 Reagent bottles (5L) <ul style="list-style-type: none"> - 6 Dehydrants - 3 Clearants - 2 Fixatives - 2 Exchange bottles - 3 Cleaning reagents

Reagent Management System (RMS)

Number of density meter	1 for measuring the in-process specific gravity of alcohol <i>The factory default value for the A1 Quality Threshold is approx. 45%.</i>
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Paraffin and reagent rotation	A1 Alcohol Quality (Recommended) Days of the weeks Usage counts
Discarding waste wax	Single use waste wax drawers for end user safety

Fume Control Specifications

Downdraft ventilation on the chamber	U.S. Patent 6465245 European Patent 1279444
Number of onboard filters	1 Xylene Neutralizing filters (Activated Carbon) - Part no: 9990610 and 7411258 2 Formaldehyde Neutralizing filters (Potassium Permanganate) - Part no.: 9990612 and B9990612CS
External ventilation: Optional	Maximum flow rate of extraction 33 m3/hr.

Additional Information

Manufactured by	Shandon Diagnostics Limited, a subsidiary of Epredia														
Country of Manufacture	UK														
Compatible Consumables	<table> <tr> <th>Type</th><th>Approved Reagents</th></tr> <tr> <td>Fixatives</td><td> <ul style="list-style-type: none"> 10% neutral buffered formalin (phosphate buffers) Richard-Allan Scientific Pen-Fix </td></tr> <tr> <td>Dehydrants</td><td> <ul style="list-style-type: none"> Ethanol Reagent grade alcohol (RGA) / industrial methylated spirit (IMS) – up to 5% methanol in ethanol Isopropyl alcohol Richard-Allan Scientific Flex 100 (up to 40% methanol in isopropyl alcohol) </td></tr> <tr> <td>Clearants</td><td> <ul style="list-style-type: none"> Xylene Toluene Shandon Xylene Substitute Richard-Allan Scientific Clear-Rite 3 </td></tr> <tr> <td>Infiltrants</td><td> <ul style="list-style-type: none"> Shandon Histoplast Shandon Precision Cut Richard-Allan Scientific Histoplast PE Richard-Allan Scientific Histoplast LP RA Lamb VA5 Richard-Allan Scientific Type 1, Type 3, Type 6, Type 9, Type L and Type H </td></tr> <tr> <td>Flush</td><td> <ul style="list-style-type: none"> Any of the named clearants (max 65° C) Any of the named dehydrants Water </td></tr> <tr> <td>Surface Cleaning</td><td> <ul style="list-style-type: none"> Sodium hypochlorite (10% in water used at ambient temperature) </td></tr> </table>	Type	Approved Reagents	Fixatives	<ul style="list-style-type: none"> 10% neutral buffered formalin (phosphate buffers) Richard-Allan Scientific Pen-Fix 	Dehydrants	<ul style="list-style-type: none"> Ethanol Reagent grade alcohol (RGA) / industrial methylated spirit (IMS) – up to 5% methanol in ethanol Isopropyl alcohol Richard-Allan Scientific Flex 100 (up to 40% methanol in isopropyl alcohol) 	Clearants	<ul style="list-style-type: none"> Xylene Toluene Shandon Xylene Substitute Richard-Allan Scientific Clear-Rite 3 	Infiltrants	<ul style="list-style-type: none"> Shandon Histoplast Shandon Precision Cut Richard-Allan Scientific Histoplast PE Richard-Allan Scientific Histoplast LP RA Lamb VA5 Richard-Allan Scientific Type 1, Type 3, Type 6, Type 9, Type L and Type H 	Flush	<ul style="list-style-type: none"> Any of the named clearants (max 65° C) Any of the named dehydrants Water 	Surface Cleaning	<ul style="list-style-type: none"> Sodium hypochlorite (10% in water used at ambient temperature)
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Country of Consumable Manufacture	USA														
Organized baskets (300 cassettes)	A82310038														