hywax green tech

Histology Waxes

Personal Care

Product Information

Origin

Histology waxes are produced by subjecting paraffin waxes to highly sophisticated refining processes, including unique crystallisation and de-oiling technologies.

Purity

Hywax GmbH utilises high-pressure hydrogenation, the most cutting-edge purification process, to produce histology waxes without any impurities. This production method guarantees a highly purified product that is ideal for use in histological laboratories. A dedicated product line and a multistage filter system ensure the highest-quality pastillation of the product to match the most exacting requirements.

Chemical structure

Histology waxes are essentially complex multicomponent combinations of saturated hydrocarbons, with medium-length hydrocarbon chains. The purity and inert properties of the waxes guarantee the perfect handling of all tissue samples.

A dedicated and full covered product line and an optimised filter system ensure highest quality pastillation of these products.

General Properties for our Histology Waxes

- Highest purity
- Fast and straightforward embedding process
- Good compatibility with the infiltrated sample
- Easy positioning of the tissue sample
- No cracking
- Excellent microtome sectioning results
- Gentle on microtome blades
- Highly soluble in xylene

Histology Wax 0587

- Exceptional flexibility
- Easy demoulding
- Excellent suppression of crystallisation
- Enhanced with additive
- Fast tissue penetration
- Lucent wax

Histology Wax 0599

- Exceptional flexibility
- Easy demoulding
- Excellent suppression of crystallisation
- Enhanced with additive
- Increased melting point: particularly suitable for use in high-temperature environments

Features and Processing

Histology waxes

Product	Congealing Point °C	Clear Melt °C	Water bath temperature °C	Cooling temperature °C	Packaging
HISTOLOGY WAX 0587	54-56	60-62	40-45	-2 to -6	Pastilles/Bags, 20Kg
HISTOLOGY WAX 0599	58-60	65	45-55	-2 to -6	Pastilles/Bags, 20Kg

FAQ - Frequently Asked Questions

FAQs

Question	Answer
How long should the tissue samples be kept in the fixation bath?	24 to 26 hours, minimum 24 hours.
What happens if I shorten the time for fixation?	Reducing the time for fixation can lead to considerable problems with producing the microtome sections
How long should dehydration last?	For optimum results, no tissue samples should be subjected to dehydration for periods longer than 12 hours (or the time recommended by the manufacturer). It depends on the thickness of the tissue; very small tissue can be dehydrated in a couple of hours. Super-mega sections need much longer for dehydration.
What is so beneficial to use Histology Wax 0587 for infiltrating?	As an intermediary product, all xylene must be completely removed from the tissue sample. High-purity paraffin is an ideal means for this purpose. The sample must not emit any odour of xylene! Even trace amounts of xylene can lead to cracking or holes in the sample.
Why should the paraffin wax for infiltration be changed regularly?	Xylene can have a negative effect on the infiltration of the new sample. Xylene traces in the sample can also lead to cracks and holes in the tissue sample.
Why should tissue samples be embedded at warm temperatures?	The tissue sample and embedding frames should be kept in a container heated to approx. 60 °C to avoid any interference coming from a difference in the temperatures of the tissue, the frames and the paraffin wax used for embedding. The metal mould is filled with the liquid paraffin wax to the first rim. Tissue samples should then be positioned quickly in the already-settling wax. The forceps used for handling the sample should also be (pre-) heated to prevent the tissue sample or paraffin wax from sticking to the instrument. All of these precautions are necessary to ensure a good bond between the infiltrated sample and the embedding wax.
Why should the temperature of the paraffin not alter during embedding? **• Histology Wax 0587: max. 64 °C** **• Histology Wax 0599: min. 65 °C**	This is the ideal temperature for embedding the tissue sample in the paraffin wax. The paraffin wax settles optimally at this temperature for a better connection between the wax and the infiltrated sample.
Is there any advantage in choosing a very low temperature for the cooling plate to speed up the cooling process?	There is no advantage! A large difference in temperatures can lead to cracking of the paraffin block, which would affect the tissue sample. After regular cooling, the paraffin and the tissue sample should have reached the desired temperature. The paraffin wax shrinks during cooling, which allows the block to be removed from the mould and the blocks to be cut in the microtome. Ten minutes are recommended as the optimum cooling period (at a temperature of -2 °C to -6 °C) for paraffin blocks of approx. 7 g.

Contact us:

info@hywax.com
+49 40 781150

Hywax GmbH

Worthdamm 13-27
20457 Hamburg
Germany