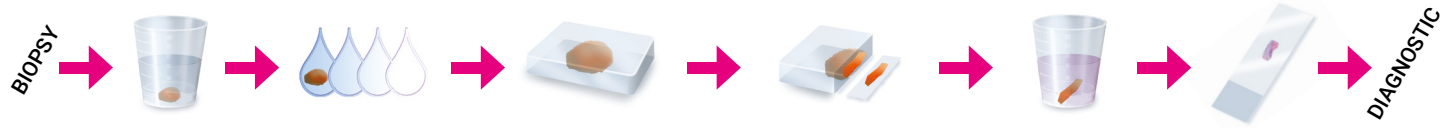


## Workflow of the microscope analysis in anatomic pathology/histopathology

The clinical workflow is usually composed of several steps or stages that allow biological samples to be ready for the microscope analysis.



Fixing	Drying and clearing	Inclusion	Cutting	Staining	Mounting
Histofix®, Histofix®-Safe, Formaldehyde, embalming mixture, Bouin Liquor, etc.	Ethanol, denatured Ethanol, Xylene, Xylene substitutes, etc.	Paraffin without DMSO, Paraffin with DMSO	Paraffin Cleaner	Eosins, Hematoxylin, Lugol's liquors, Papanicolaous, Giemsa kits, etc.	Immersion oils, Eukitt®, DPX, Histofluid

	Product number	Product name	CAS number	CE-IVD mark
Fixing	251803	Alcohol-Acetone 7:3 (CE-IVD) for clinical diagnostics	–	●
	254101	Fixing for fast staining (Panoptic No. 1) (CE-IVD) for clinical diagnostics	–	●
	253572	Formaldehyde 30-36% w/v concentrated buffered to pH=7 stabilized with methanol for clinical diagnostics	50-00-0	–
	143091	Formaldehyde solution 10% neutralized, stabilized with methanol pure	50-00-0	–
	252931	Formaldehyde 3.7-4.0% w/v buffered to pH=7 and stabilized with methanol (CE-IVD) for clinical diagnostics	50-00-0	●
	256238	Histofix® decalcifier 2 for clinical diagnostics	–	–
	256237	Histofix® decalcifier 3 for clinical diagnostics	–	–
	256462	Histofix® Preservative ready to use (CE-IVD) for clinical diagnostics	50-00-0	●
	257462	Histofix® Preservative ready to use (pink)(CE-IVD) for clinical diagnostics	–	●
	258462	Histofix®-Safe Preservative ready to use (CE-IVD) for clinical diagnostics	50-00-0	●
Drying and clearing	253139	Citrosol (Substitute of Xylene)(CE-IVD) for clinical diagnostics	5989-27-5	●
	251086	Ethanol absolute (CE-IVD) for clinical diagnostics (not available in Germany)	64-17-5	●
	147194	Ethanol 99.8% denatured with IPA, MEK and Bitrex pure (not available in Spain)	64-17-5	–
	251085	Ethanol 96% v/v (CE-IVD) for clinical diagnostics (not available in Germany)	64-17-5	●
	147195	Ethanol 96% denatured with IPA, MEK and Bitrex pure (not available in Spain)	64-17-5	–
	147196	Ethanol 70% denatured with IPA, MEK and Bitrex pure (not available in Spain)	64-17-5	–
	255069	Isoparaffin H (Substitute of Xylene)(CE-IVD) for clinical diagnostics	90622-58-5	●
	251769	Xylene, mixture of isomers (CE-IVD) for clinical diagnostics	1330-20-7	●
	211769	Xylene, mixture of isomers technical grade	1330-20-7	–
Inclusion	256993	Paraffin M.P. 55-58°C plasticized + DMSO pellets (CE-IVD) for clinical diagnostics	8002-74-2	●
	253211	Paraffin M.P. 56-58°C pellets (CE-IVD) for clinical diagnostics	8002-74-2	●
Cutting	256876	Paraffin Cleaner (CE-IVD) for clinical diagnostics	–	●
Staining	251301	Eosin Yellowish hydroalcoholic solution 1% (CE-IVD) for clinical diagnostics	–	●
	251338	Giemsa's Azur-Eosin-Methylene Blue solution(slow) (CE-IVD) for clinical diagnostics	–	●
	256649	Gram-Hucker's Staining Kit (Droppers) (CE-IVD) for clinical diagnostics	–	●
	253949	Harris Hematoxylin solution (CE-IVD) for clinical diagnostics	–	●
	256991	Harris Hematoxylin modified solution (CE-IVD) for clinical diagnostics	–	●
	251774	Lugol's Liquor with 0,4% of Iodine (diluted) (CE-IVD) for clinical diagnostics	–	●
	256692	Masson's Trichrome Kit for clinical diagnostics	–	–
	254766	Mayer's Hematoxylin solution (CE-IVD) for clinical diagnostics	–	●
	253594	Papanicolaou's Solution EA 50 (CE-IVD) for clinical diagnostics	–	●
	253892	Papanicolaou's Solution OG 6 (CE-IVD) for clinical diagnostics	–	●
Mounting	255254	DPX, mounting medium fast (toluene base) for clinical diagnostics	–	–
	253681	Eukitt®, mounting medium for clinical diagnostics	–	–
	251002	Immersion Oil (CE-IVD) for clinical diagnostics	8001-79-4	●
	255811	Mounting Medium for substitutes of xylene for clinical diagnostics	–	–



	Product number	Product name	CAS number	CE-IVD mark
Other	251563	Fehling's A Reagent for clinical diagnostics	—	—
	251564	Fehling's B Reagent for clinical diagnostics	—	—
	187051	Hydrochloric Acid 10 mol/l (10N) volumetric solution	7647-01-0	—

## About the workflow

**Fixing:** fixation interrupts degradation processes after cell death, trying to preserve tissue / cell architecture and composition as closely as was possible in the living organism.

- It is the most essential stage
- Fixation ≠ Conservation
- There is no universal method of fixation

**Drying and clearing:** drying is the complete removal of water from the specimen or tissue sample so that it can be properly embedded in the inclusion media other than water soluble. Fixed and washed pieces are taken into 96% alcohol and then to absolute alcohol for a variable time, usually one and a half hour in each bath. The **clearing** process is the replacement of the dehydrating agent with a substance miscible with the embedding medium to be used.

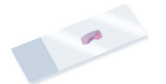
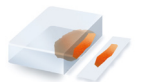
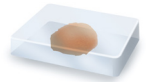
**Inclusion:** inclusion or embedding consists in replacing the water of the tissue by a liquid medium capable of solidifying under the appropriate temperature conditions, in order to provide the sample with adequate consistency and homogeneity to obtain very thin translucent sections by means of an instrument called a microtome.

**Cutting:** Paraffin included tissues are reduced to cuts thin enough (4-6 microns) to allow the passage of light to examine it under a microscope. This is made with a microtome: a mechanical instrument with which tissue sections of micrometric thickness are made.

**Staining:** generally, all tissues of animal origin are colorless unless they contain some type of pigment, in which case they adopt the color provided by the latter (pigment). Dyes are substances that in contact with a suitable support, join it in an enduring manner transmitting its color to it.

**Mounting:** mounting media interposes between the slide and the coverslip to avoid the contact of the preparation with the environmental air to preserve the sample.

**Other applications:** products with different applications in clinical diagnosis not linked to microscopy, as sugar determination in blood, urine analysis, blood density determination, etc.



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