

UltraClear™

REF	Name	Packaging size
3905.2500PE	UltraClear™	2.5 l (Jerrycan)
3905.5000PE	UltraClear™	5 l (Jerrycan)
3905.9010PE	UltraClear™	10 l (Jerrycan)

Intended purpose

UltraClear is intended to be used for in vitro diagnostic. The reagent is designed for use as clearing agent during tissue embedding and deparaffination processes.

Principle

Tissue that has been fixed must be embedded in paraffin to make sectioning in thin slices possible. First, the water in the tissue must be removed. This is normally done with a series of alcohols (70 – 95 – 100%). The next step is called “clearing” and consists of removal of the dehydrant, or water-removing agent, with a clearing reagent. UltraClear clearing agent is an iso-paraffin based clearing agent for tissue embedding and deparaffination. It works with all kinds of paraffin and no methanol is needed during dehydration. Iso-paraffins are considered to be more environmentally-friendly when compared to traditional solvent containing clearing agents. After clearing, the tissue is infiltrated with paraffin, sectioned, and put on a microscopic slide. The embedding process must be reversed in order to get the paraffin wax out of the tissue and allow water soluble dyes to penetrate the sections. The slides are deparaffinized by running them through UltraClear clearing agent and then through alcohols and then water and finally the slides are stained. The stained slide is taken through a series of alcohols to remove the water, then through UltraClear clearing agent to a point at which the cover glass can be mounted with UltraKitt mounting media.

UltraClear™ clearing agent is an isoparaffin-based clearing agent that can be used as an environmentally friendly xylene replacement during tissue embedding, deparaffinization, and staining processes. Not only is UltraClear™ clearing agent odourless, less toxic, and less flammable when compared to xylene, it is also easy to adapt with existing working protocols.

Specimens (collection and preparation)

Sections fixed in formalin, paraffin embedded tissues and histological and bacteriological smear specimens.

Reagent preparation

This reagent is ready to use and can be applied straight from the bottle, no special reagent preparation is needed.

Procedure (instruction for use)

When regular laboratory procedures is used but xylene is replaced by UltraClear™ clearing agent in tissue processing, the following steps should be considered:

- Frequent refreshment of ethanol 100%. Xylene still can dissolve small amounts of water while UltraClear™ clearing agent cannot. Ethanol 100% helps to complete the dehydration of the tissue.
- Time of clearing should be increased by 30 minutes. Penetration of xylene in tissue is faster than with UltraClear™ clearing agent; however, UltraClear™ clearing agent hardens fragile tissue material much less than xylene (examples are lymph nodes and testis). This is a major advantage to using UltraClear™ clearing agent over xylene.

UltraClear™ clearing agent is recommended and optimized for methods for tissue embedding on Shandon Hypercentre and the Sakura VIP 3000. Recommendations were made for deparaffination and coverslipping using both UltraClear™ clearing agent and UltraKitt™ mounting media during HE staining and PAP staining procedures. In all cases it should be noted that all recommendations are subject to individual changes and these recommendations should be used as a guideline.

PROGRAM ON HYPERCENTER OF SHANDON

Reagent sequence	
Formalin 10% v/v	5 min., 45°, 0, drain=2 min.
Ethanol 90%	5 min., 45°, 0, drain=2 min.
5x Ethanol 100%	5 min., 45°, 0, drain=2 min.
2x UltraClear	10 min., 45°, 0, drain=2 min.
UltraClear	15 min., 45°, 0, drain=2 min.
Paraffin	20 min., 60°, 0, drain=2 min.
Paraffin	30 min., 60°, 0, drain=2 min.

Reagent sequence	
Formalin 10% v/v	10 min., 0, drain=2 min.
Ethanol 90%	20 min., 0, drain=2 min.
Ethanol 100%	30 min., 0, drain=2 min.
4x Ethanol 100%	60 min., 0, drain=2 min.
2x UltraClear	90 min., 0, drain=2 min.
UltraClear	120 min., 0, drain=2 min.
2x Paraffin	150 min., 0, drain=2 min.

Reagent sequence	
Formalin 10% v/v	24h 10 min., N, drain=2min.
Ethanol 90%	20 min., 0, drain=2 min.
Ethanol 100%	30 min., 0, drain=2 min.
4x Ethanol 100%	60 min., 0, drain=2 min.
2x UltraClear	90 min., 0, drain=2 min.
UltraClear	120 min., 0, drain=2 min
2x Paraffin	150 min., 0, drain=2 min

PROGRAM ON VIP 3000

Reagent sequence	Minutes	Temperature
Formalin 10% v/v	30	40°C
Formalin 10% v/v	60	40°C
Ethanol 50%	30	40°C
Ethanol 70%	30	40°C
Ethanol 100%	30	40°C
Ethanol 100%	60	40°C
Ethanol 100%	60	40°C
Ethanol 100%	120	40°C
UltraClear	40	40°C
UltraClear	80	40°C
Paraffin	60	56°C
Paraffin	60	56°C
Paraffin	60	56°C
Paraffin	120	56°C

Composition

Component	Concentration
Hydrocarbons, C11-C12, isoalkanes,	<100%

Storage and shelf life



Store UltraClear™ in temperature 2-30°C.

The shelf life of UltraClear™ is 5 years if stored at the prescribed temperature range.
Do not use reagent beyond the expiration date printed on label.

Warnings and precautions

For in vitro diagnostic use.

For professional use only.

UltraClear™ meeting the criteria for classification in accordance with Regulation (EC) No 1272/2008.

	H226: Flammable liquid and vapor
	H304: May be fatal if swallowed and enters airways.
PREVENTION	P210: Keep away from heat, hot surfaces, sparks, open flames, and other ignition sources. No smoking
RESPONSE	P301+P310: IF SWALLOWED: Immediately call a POISON CENTER/doctor.
	P331: Do NOT induce vomiting.

For further information please refer to Master Safety Data Sheet.

Limitations of use

Do not use reagents with visible physical or chemical changes (color, turbidity) or in case of packaging damage.

UltraClear™ clearing agent cannot be used in combination with Eukit/DPX or Entellan. Neither UltraKitt™ mounting media nor UltraClear™ clearing agent can be used with coverslipping machines using a tape, as the glue of the tape will only dissolve in xylene, not in UltraClear™ clearing agent.

Disposal information

Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristic at time of disposal.