



F.A.Q. (Frequently Asked Questions) Greenfix

WHAT IS GREENFIX?

GREENFIX is an histological fixative formaldehyde free. It is a colourless solution, not toxic or harmful, suitable for all kind of tissues fixation allowing formalin replacement in laboratories.

WHICH ARE GREENFIX COMPOUNDS?

GREENFIX is an aqueous solution with Ethandial and ethyl alcohol that allows a better fixative penetration into the tissue. Ethyl alcohol percentage is so low that it doesn't classify the product as flammable.

WHAT IS ETHANDIAL?

Ethandial is a dialdehydic molecule that, differently from formaldehyde, is odourless, less volatile and doesn't provoke physical troubles for the operator.

WHAT IS THE OPERATING MECHANISM?

Ethandial has a similar operating mechanism during aldehydic fixation as formaldehyde.

IS GREENFIX TOXIC?

No, its formulation has been intentionally studied to have the slightest impact for the user and the environment. GREENFIX is a non toxic or harmful solution. For further information see the Material Safety Data Sheet.

WHY CHANGE FORMALIN FIXATION?

The formaldehyde contained in formalin is a dangerous substance, classified as carcinogenic (IARC 2004), characterized by a pungent smell, much irritating to eyes and respiratory tract as well-know for Pathological Anatomy operators.

WHY CHOOSE GREENFIX?

Because it is a non toxic, non carcinogenic, odourless, formaldehyde and methanol free fixative and it doesn't provoke typical formalin unpleasant reactions (lachrymation and burning to eyes and respiratory tract). It doesn't demand any special working protocol changes too.

GREENFIX CAN BE USED IN ASSOCIATION WITH OTHER PATHOLOGICAL ANATOMY REAGENTS?

Of course, GREENFIX is compatible with standard laboratory reagents (alcohols, xylene or substitutes) and it can be used in histoprocessing first step. Any dilutions are necessary; the product is ready to use.

HOW USE IT?

As well as formalin; obviously it is possible to observe formalin "good practises" as following: respect ratio volume specimen/fixative; check fixation time; open and clean up organs before putting them into the fixative; etc.

GREENFIX is also suitable for specimens with small or medium dimensions.

For further information see the operating manual.

WHAT IS THE DIFFERENCE BETWEEN GREENFIX AND GREENFIX PLUS?

The two formulations are both ready to use, non toxic or harmful.

GREENFIX PLUS has ethyl alcohol high concentration allowing ethandial penetration into bigger specimens.

For further information see the Safety Data Sheet.

THE MORPHOLOGY WILL BE PRESERVED?

We have tested the fixative in different centres and asked to different pathologists; and all are amazed to see preparation high quality with a morphology comparable to formalin fixation: in particular it shows a better detail than chromatin.

Special stains and Immunohistochemistry have done good results too.

The most evident artefact consists of blood cells are not so clear or they have an "invisible" appearance; however it has not hindered the diagnosis.

WHICH ARE THE RESULTS IN IMMUNOHISTOCHEMISTRY?

Immunohistochemistry results are good and comparable to formalin cases.

We suggest to not use a retrieval with protease, because it has a too aggressive effect on tissue.

HOW DISPOSE GREENFIX?

Always in accordance with local regulations concerning special waste disposal, GREENFIX is disposed as non toxic or harmful product; instead GREENFIX PLUS as flammable products (but non toxic or harmful).

Dr. Stefania Bencini
Martinengo, 09/12/2008