

A Simple Method for Reducing Autofluorescence in Fluorescence Microscopy

Peira HistoSAFE 700 **removes background fluorescence** and, as such, **facilitates the acquisition of high-quality fluorescence images** and improves subsequent analysis in multiplex assays.

This method is **effortless, tunable, cost-effective, non-destructive**, and **maintains the antigenicity** of samples with **minimal user interaction**.



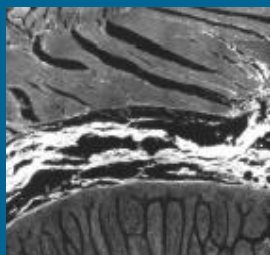
Case

Human colon, elimination of background autofluorescence

Images courtesy of Antwerp Centre for Advanced Microscopy (ACAM), acam-antwerpen.be

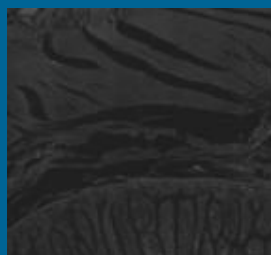
Before radiation

Strong autofluorescence, resulting in reduced sensitivity to fluorescent signals



After radiation

Reduced autofluorescence, enabling clear determination of fluorescent signals



Reducing Autofluorescence in Fluorescence Microscopy

Autofluorescence in histology is the natural light emitted by biological structures such as mitochondria and lysosomes when they absorb light. This phenomenon **can hinder the detection of specific fluorescent signals**, particularly when these signals are faint. While optimization methods such as autofluorescence quenching agents can help minimize autofluorescence, they are often cumbersome and yield inconsistent results.

The Peira HistoSAFE 700 Photo-Irradiation System

The Peira HistoSAFE 700 **consolidates the photobleaching approach into an integrated system**, addressing the issue of background non-specific fluorescence from fluorophores due to prolonged light exposure. Utilizing advanced radiation technology and experiment-backed knowledge, the Peira HistoSAFE 700 offers **simple and safe background removal**. The system features a holder for easy sample insertion (slides and cell culture dishes) and includes application support for radiation cycles.



Advantages

The Peira HistoSAFE 700 is a stand-alone system designed to **seamlessly integrate into existing laboratory workflows** to remove endogenous fluorescent signals.

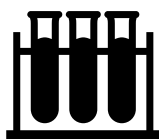
Easy to use and the HistoSafe 700 simplifies the histological processing, requiring **fewer steps** compared to traditional methods, which accelerates the overall process.

This system uses **no solvents**, thus **reducing environmental impact**, making it safer for lab personnel and reducing the ecological footprint.

Enhanced staining results: It improves the staining quality of tissues, making it easier to visualize fluorescent signals.

Potential use in **iterative re-staining** protocols.

Peira HistoSAFE 700 is **compatible with all tissue processors**, automated stainers, and mounting media



The Peira HistoSAFE 700 for histology labs

Laboratories **save time and money while improving service quality**. Labs benefit from an easy-to-use, standardized, and cost-effective process that delivers optimal fluorescence microscopy results. This system enhances overall efficiency and requires minimal manual interaction compared to other methods for minimizing autofluorescence.

The Peira HistoSAFE 700 for scientific research

The Peira HistoSAFE 700 is **ideal for research and advanced imaging needs**. Researchers frequently require sophisticated imaging techniques or complex autofluorescence reduction to eliminate background noise, particularly with weak signals, which can result in inconclusive data and increased experimental workload. The Peira HistoSAFE-700 provides a simple and effective solution for achieving clear and definitive imaging results.

The Peira HistoSAFE 700 for technicians

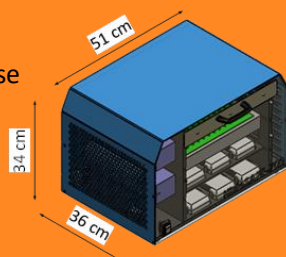
The Peira HistoSAFE 700 offers **technicians easy handling and minimal effort for achieving optimal histologic results**. Lab technicians benefit from straightforward access to effective autofluorescence reduction. This stand-alone system integrates seamlessly into common lab workflows and includes comprehensive instructions and support to ensure optimal outcomes.

Technical specifications

- Manufacturer : Komax Belgium NV
- Layout : 19.0004.00.000.00
- Model : Peira HistoSAFE 700
- Operating voltage : 230 V
- Power : 500 W
- Frequency : 50 Hz
- Year of construction : 2024

Scope of delivery

- Peira HistoSAFE 700 + case
- Sample holder tray
- Glass placing tool
- Operation manual
- Power supply cable



In a nutshell

- **Highly effective** - obtain high-quality fluorescence images.
- **Simplicity** - just place the samples in the HistoSAFE and wait till ready.
- **Seamless integration** - just plug in the system and you are ready to go. If you are done, there are no solvents or any other waste to deal with.