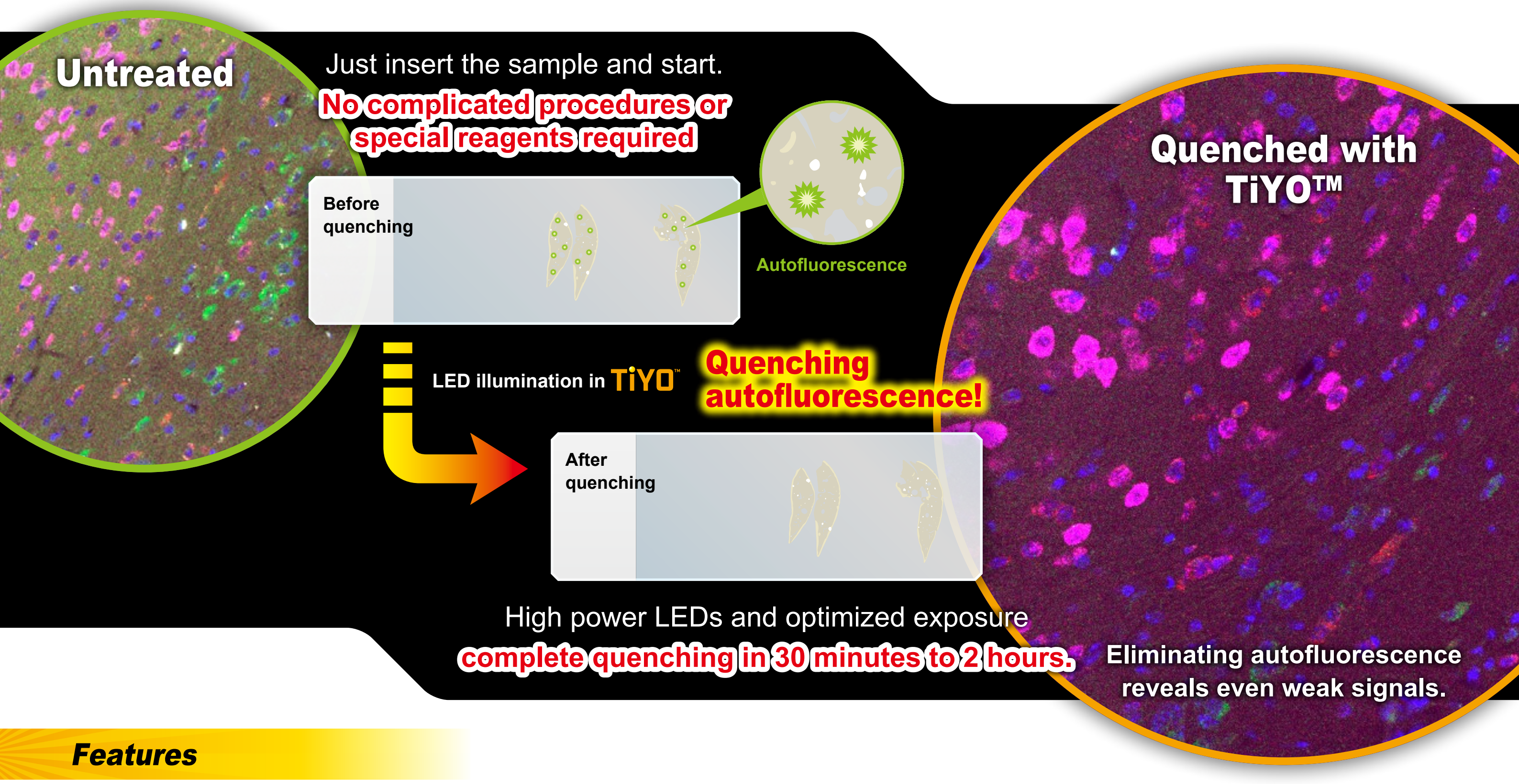
Autofluorescence Quenching Illuminator

TiYO™

Autofluorescence, which creates background noise in microscopy, is derived from lipofuscin, elastin fibers, vitamin A, and other naturally occurring molecules. This background signal often makes fluorescence imaging of tissues difficult. The TiYO™ quenches this autofluorescence by the use of photo-bleaching LEDs to significantly increase the signal-to-noise ratio.



Features

Only autofluorescence is quenched!

Unlike conventional quenching reagents, only the autofluorescence signal is affected. There is no reduction in the fluorescence from stains.

Evaporative cooling system

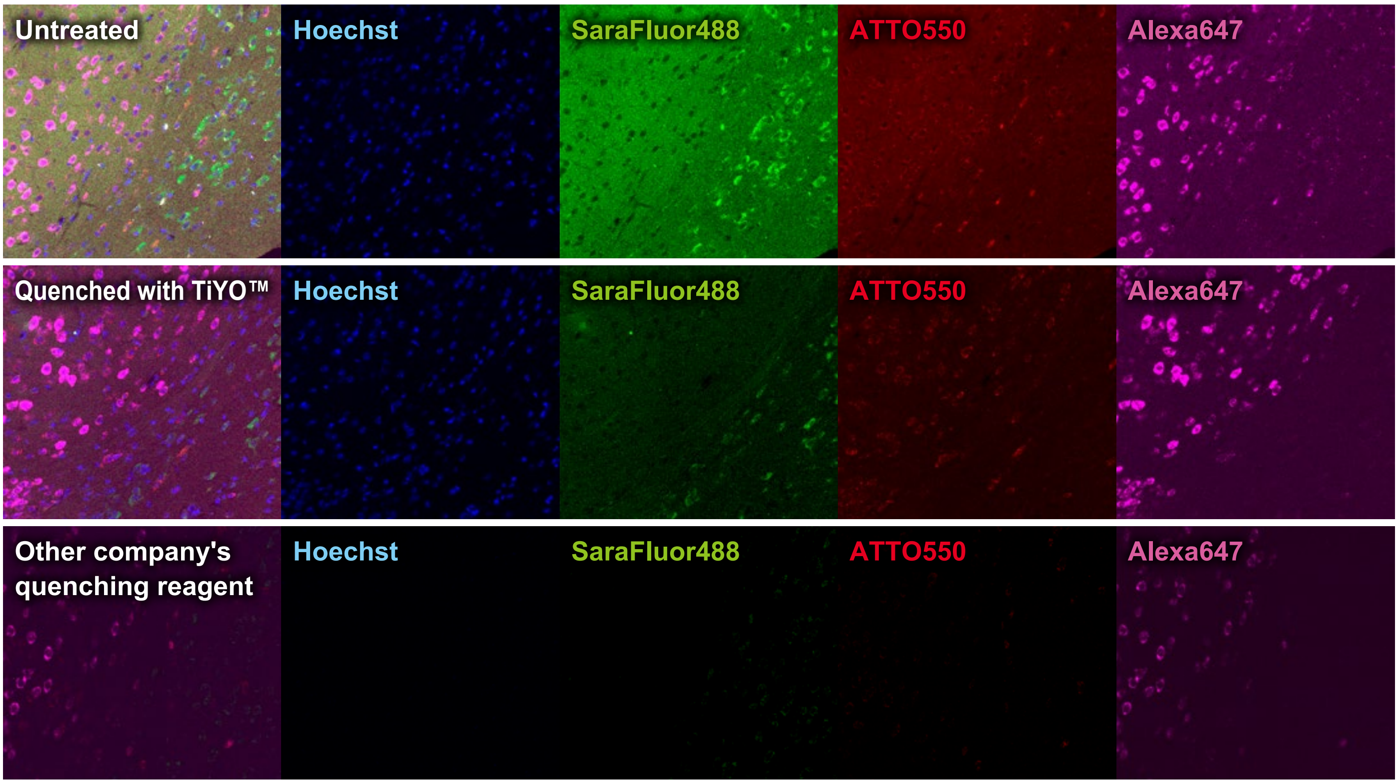
Powerful light irradiation combined with effective cooling prevents samples from overheating during photobleaching procedure.

Applicable samples: Slide sections, floating sections, whole mounts, and more

Specifications

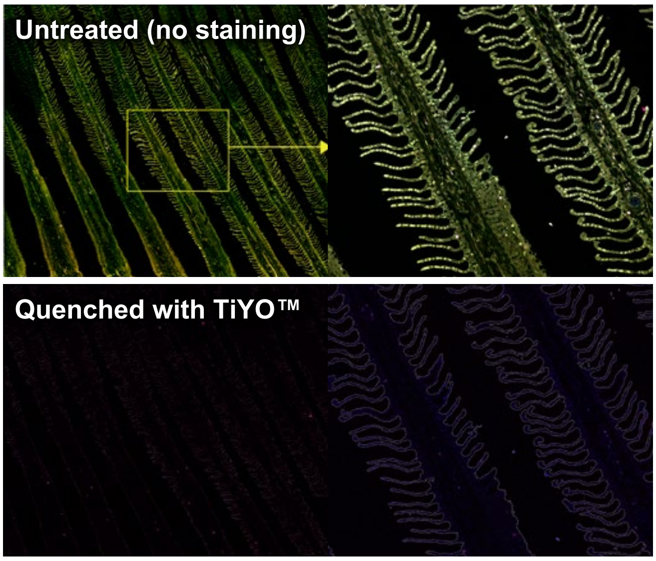
Control	Only power on/off *no other buttons/switches
Number of samples per run	Up to 12 (microscope slides or TiYO™ chambers for free-floating sections/whole mount samples)
Max. power consumption	360 W
Size	291 (W) × 210 (D) × 285 (H) mm
Weight	10 kg

Staining signals stay high - Autofluorescence is eliminated



Comparative data of fluorescence staining without treatment, with TiYO™ pretreatment, and with reagent treatment. The TiYO™ (the middle panels) has little effect on the fluorescence signal derived from stains. While the quenching reagent directly reduces the intensity of fluorescent stains.

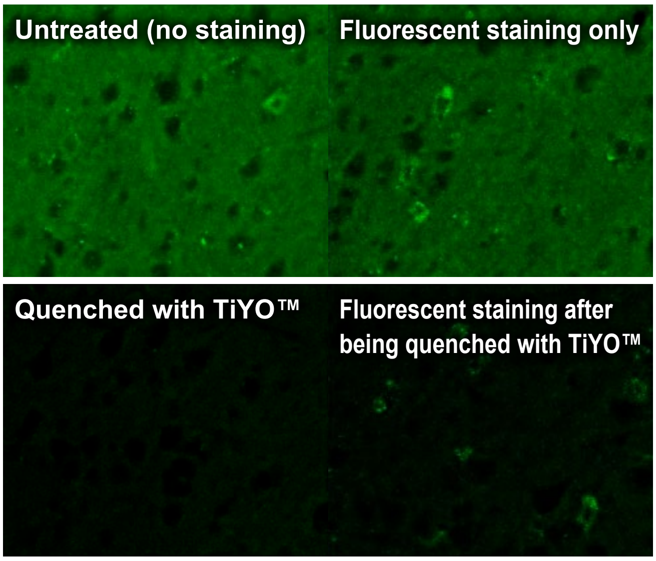
Effective for highly autofluorescent species



Autofluorescence of chum salmon gill sections and quenching with TiYO™. The same imaging conditions and contrast settings were used for all images (the outline of the tissue is outlined with translucent white lines).

Courtesy of Dr. Takehiro TSUKADA / Department of Biomolecular Science, Faculty of Science, Toho University

Increased contrast of signals hidden by autofluorescence



Autofluorescence and quenching treatment with TiYO™ in mouse brain tissue sections. The same imaging conditions and contrast settings were used for all images.

Reference: Fluorescence quenching by high-power LEDs for highly sensitive fluorescence *in situ* hybridization. Tsuneoka *et al.* (2022) *Front Mol Neurosci*

TiYO™ was jointly developed and commercialized using the technology invented by Associate Professor Yosuke Tsuneoka, Faculty of Medicine, Toho University (patent pending: JP-A 2021-008882).
*All features and specifications subject to change without notice.

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