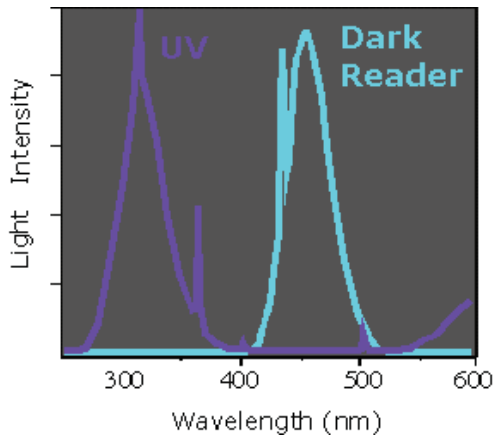
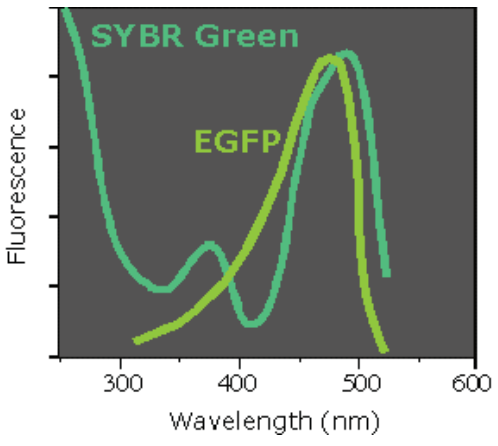
TekBiO Blue Light Transilluminator

The Blue light Transilluminator is a revolutionary Transilluminator that emits essentially zero UV light and is ideal for maintaining the integrity of DNA—crucial for the success of many manipulations. Used with SYBR® Green or GelStar®, the Dark Reader allows the direct visual detection of as little as 100pg of DNA. The Blue light Transilluminator is very easy to use—just put the gel on the surface of the Blue light Transilluminator, then place the amber screen over the gel and look at the DNA bands. For cutting out bands, the glasses can be worn. The Blue light Transilluminator is excellent for the detection of any dye excited between 420nm and 500nm and emitting over 520nm. It also works fairly well with dyes excited over 500nm such as ethidium and eosin, but is not quite as sensitive as a UV box. The Blue light Transilluminator Gel Box is a unique electrophoresis unit allowing DNA fragments to be directly viewed as they migrate. Continuously monitor the progress of DNA fractionation so that gel only needs to be run until the DNA band(s) of interest are separated: Gel running times can be cut to 15-20 minutes. DNA bands can be excised right out of the gel avoiding the danger of damaging the gel during transfer to a transilluminator.

SYBR is a registered trademark of Molecular Probes, Inc. GelStar is a registered trademark of FMC Corporation.

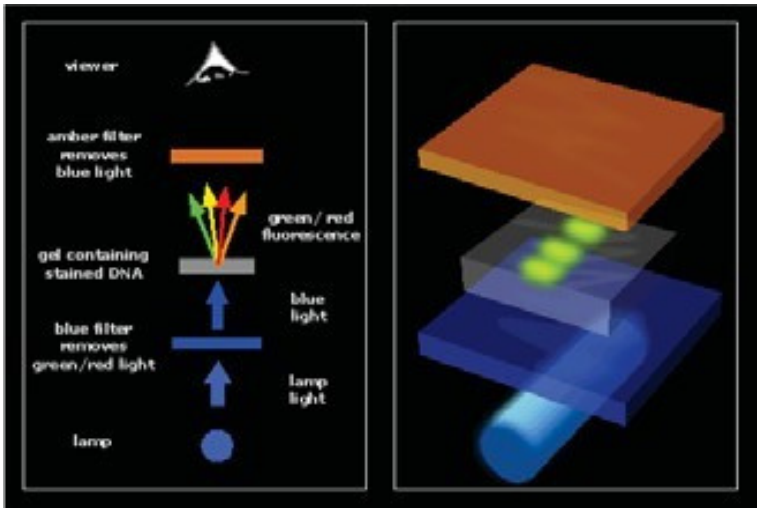


Excitation spectra of SYBR Green and EGFP



A comparison of the output of the Dark Reader and a 312 nm UV Transilluminator

Theory: Many Fluorophores Absorb Visible Lights, The excitation maximum for many popular dyes, including SYBR Green and red-shifted GFPs, are between400 and 500 nm - not in the UV (see fig below). These wavelengths correspond to blue-green light, which is well within the visible light spectrum. The Blue light Transilluminator uses Visible Light, The light sources in Blue light Transilluminator devices generate maximum light output between400 and 500 nm - close to where dyes such as SYBR Green, SYPRO Orange, eosin, fluorescein and ethidium bromide are excited. UV Transilluminator, on the other hand, typically output light around 300 nm - well removed from the absorption maxima of most common dyes The Blue light Transilluminator uses 2 Filters to reveal Fluorescence, If visible light is used for excitation of a fluorophore, any fluorescence from the sample is not directly detectable by the naked eye due to the large amount of incident light from the light source itself that reaches the observer. The Dark Reader achieves the removal of incident light in 2 steps. The first filter is between the light source and the DNA. This removes any green and red components from the lamp and allows through to the DNA only blue excitation light. A second filter is placed between the DNA and observer that removes the blue incident light but allows passage of the red and green fluorescent components.



Technical Specifications:

Parameter	Value – B-Trans-I	Value- B-Trans-II
Filter size/ Gel area	150 X 150 mm	200 X 200 mm
Cabinet Construction	M S powder coated	M S powder coated
Wavelength	400 and 500 nm	400 and 500 nm
Filters	Amber and Blue	Amber and Blue
Capacity	25 W Approx	25 W Approx
Protection	Fast blow fuse	Fast blow fuse
Weight	4 kgs.	4 kgs.

Ordering Information:

Product No: B-TRANS-1

Description: TekBiO Blue light Transilluminator viewing size: 150 X 150 mm
Useful for seeing SYBR Green and red-shifted GFPs stained gels, filters: Blue and amber, wavelength: 400- 500nm Non-UV blue lights, body construction: MS powder Coated, Fast blow fuse for units protection and User Manual.

Product No: B-TRANS-II

Description: TekBiO Blue light Transilluminator viewing size: 200 X 200 mm
Useful for seeing SYBR Green and red-shifted GFPs stained gels, filters: Blue and amber, wavelength: 400- 500nm Non-UV blue lights, body construction: MS powder Coated, Fast blue fuse for units protection and User Manual.

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