Transilluminator

It is also referred to as a gel light box or lab light box, the UV transilluminator works by emitting high levels of UV radiation through the viewing surface. The key application for a UV transilluminator is for visualization of DNA and protein agarose and polyacrylamide gels after electrophoresis.

PRINCIPLE

UV Transilluminator are used in molecular biology labs to view DNA[oRNA] that are separated by electrphoresis through an agarose gel. Then added a flouroscent dye which binds with nucleic acid . that's dye stainedgel to a UVB light source to became visible and fluoresce the DNA segments.

INSTRUMENTATION :

At the time of electrophoresis, a flourescent dye is used to stained agarose gel which binds with nucleic acids . exposing the stained gel to a UVB light source which causes DNA segments to became visible and flouresce.

PRECAUTIONS:

• Because EtBr [ethydium bromide] isa toxic chemical substance so it has been used safely and handled very carefully.

• When we want to avoid UVB as a light source , we can recommended the blue light LED transilluminator such as the one describes here.

• A safety lid for viewing the gel which comes in transilluminator , however , when the lid is not in place, safety glasses must be worn when operating the UVB bulb.

• We recommended that gloves to be worn bcz EtBr is a toxic substance which is added into the staining gel.

USES :

• Place sample on the filter area . it is recommended to place the gel on a gel- tray to protect the filter surface from cut and scratches.

• Press On\OFF switch on . the uv tubes within the unit should be glowing

. • Now switch on the main power.

• When using a transilluminator with multiple UV wavelength dial the knob to the appropriate wavelength setting.

ADVANTAGES:

• Provision of UV protecting shield.

• Best suitable for viewing fluorescent stained gel

. • Gel viewing filter provides high quality performance by facilitating sharpened gel view.

• Compact in size and light in weight.

• Provision of working in both high and low intensities with an aid of simple system.