

Imaging SYPRO Ruby and Deep Purple stained gels with G:BOX iChemi XR and XT

Introduction

SYPRO Ruby is a protein stain for the detection of proteins separated by polyacrylamide gel electrophoresis (PAGE). SYPRO Ruby stain can be used with either 1D or 2D gels. The SYPRO Ruby stain has equivalent or better sensitivity as silver staining techniques.

Deep Purple stain is a fluorescent stain used in the detection of proteins in gels or blots following electrophoretic separation. Deep Purple stain has been shown to be compatible with mass spectrometry.

SynGene's G:BOX iChemi XR/XT multi-functional image analysis systems can be used to detect and analyse the sensitive protein stains, Deep Purple™ and SYPRO Ruby. This will benefit users looking for an affordable, time saving method of automating their gel-based proteomics studies.

Imaging with G:BOX iChemi XR/XT

Imaging Deep Purple and SYPRO Ruby fluorescent dyes is possible with a G:BOX iChemi XR/XT because their high performance cameras detects a wide range of dyes that have UV excitation peaks. Additionally, since the G:BOX iChemi darkrooms are fitted with a filter wheel, white light pad with optional dual wavelength transilluminator, as well as overhead white and epi-UV light, it is easy to achieve the right illumination conditions for these and many other protein and DNA dyes.

For the best image SynGene's technical team recommend the following lighting and filter combinations:

System	Lighting	Filter
G:BOX iChemi XR/XT	Medium wave UV transilluminator	FiltUV
	Medium wave transilluminator with blue light converter	FiltSG

Table I- Recommended lighting and filter selection for SYPRO Ruby stain

System	Lighting	Filter
G:BOX iChemi XR/XT	Long wave UV transilluminator	FiltUV

Table II- Recommended lighting and filter selection for Deep Purple stain

The commonly used method for detecting SYPRO Ruby and Deep Purple stained proteins is laser-based scanners but these are expensive and many cannot detect traditionally used visible proteomic stains, such as Coomassie® Blue or Silver. However, by using the G:BOX iChemi XR/XT with a white light pad and SynGene neutral fielding correction, the system can image both of these dyes with ease.

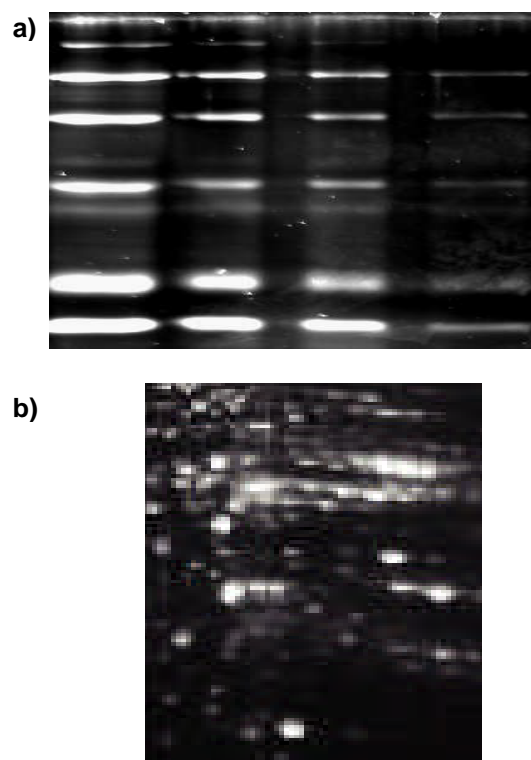


Figure 1- Deep Purple and SYPRO Ruby stained 1D and 2D gels.

a) Deep Purple stained 1D gel imaged using long wave UV transilluminator with a FiltUV filter. **b)** SYPRO Ruby stained 2D gel imaged using medium wave UV transilluminator with a FiltUV filter.

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