

Dye: SYBR Safe gel stain

SYBR Safe gel stain from Molecular Probes, Invitrogen was developed as a safe alternative to ethidium bromide. SYBR safe stains DNA and RNA in agarose or acrylamide gels. The detection sensitivity with SYBR Safe stain is comparable to that obtained with ethidium bromide.

The SYBR Safe dye can either be added directly to the agarose gel before it is set or the agarose gel can be incubated for 30 minutes in the dark with a solution of SYBR Safe dye diluted in TBE or TAE buffer.

Applications

SYBR Safe dye can be used to detect DNA and RNA from PCR's, restriction enzyme digests, separation of restricted genomic DNA and many more.

Visualization

Agarose gels stained with SYBR Safe dye can be visualized extremely well using all Syngene image capture systems. SYBR Safe dye has an excitation peak of 300/480nm and an emission peak of 530nm.

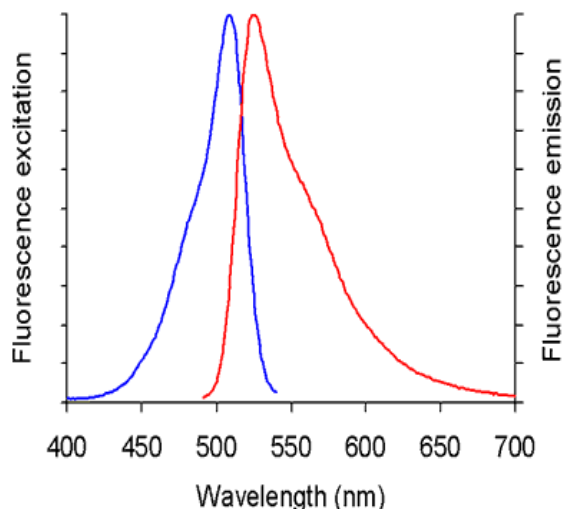


Figure 1 – Excitation (blue line) and emission (red line) spectra of SYBR safe dye

Table 1 - Recommended lighting and filter selection for visualizing the SYBR Safe stained agarose gels using Syngene image capture systems

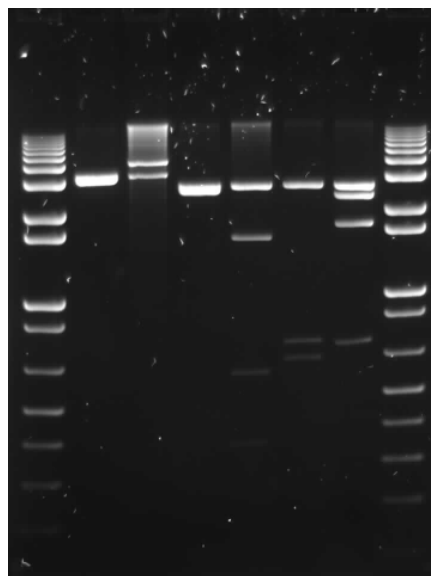


Figure 2 – SYBR Safe stained agarose gel visualized using the G:BOX iChemi image capture system

Samples of DNA were resolved on a pre-stained SYBR Safe 2% agarose gel in TAE buffer. The gel was run at 120 volts for 1 hour. Bands were visualized by exposure to UV light on a transilluminator and a short wave band pass filter. The gel image was captured using GeneSnap software (Syngene) for an exposure time of 300 milliseconds using the G:BOX iChemi Syngene image capture system

An ideal SYBR Safe gel image will have clearly defined bright bands as illustrated in the image above.

Syngene reserves the right to amend or change specifications without prior notice. This Application note supersedes all earlier versions.

All trademarks acknowledged.

System	Lighting	Filter
Dyversity, G:BOX iChemi ranges and InGenius	Transilluminator – medium wave uv Blue light converter on transilluminator Safe Imager Epi blue from RGB module	FiltSP FiltSG FiltSI FiltUV

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