



Glowing products for science

Call us : [800-304-5357](tel:800-304-5357)

One-Step Blue® Protein Gel Stain

A visible, blue protein gel staining solution. Fast protein staining in a single step without fixation or washing.



Product attributes

Product Description

One-Step Blue® Protein Gel Stain is a ready-to-use visible blue protein gel staining solution. With no fixation or wash steps required, One-Step Blue® is a great choice for convenience and safety. One-Step Blue® can detect as little as approximately 10-20 ng of protein per band.

- One-step staining procedure, no fixation required
- Non-toxic formulation is safe for easy disposal
- Sensitive protein detection down to 10-20 ng
- Visualize blue bands, or image with a near-infrared fluorescence imager
- 1 L size
- Store at 4 °C

See the simple one-step staining procedure in this quick video

Clear visible protein staining in just 1 hour, no destaining required

One-Step Blue® produces fast (5-60 min) protein staining in a single step without fixation or washing. Destaining is optional. One-Step Blue® has comparable sensitivity as the widely used Coomassie Blue, with a lower limit of detection around 10-20 ng depending on the detection method used. Note that staining intensity varies between proteins. The staining is fully compatible with mass spectrometry and Edman-based sequencing. Proteins can be detected by visible blue staining, or by near-infrared fluorescence.

Results are clear. One-Step Blue® is a superior alternative to Coomassie and other colorimetric protein gel stains.

In a comparison experiment with Coomassie Brilliant Blue R-250 and Simply Blue™ SafeStain, One-Step Blue® demonstrated much clearer staining after 1 hour of destaining in water compared to other stains.

One-Step Blue® is non-toxic

One-Step Blue® offers safer handling and disposal compared to Coomassie staining because it is entirely aqueous-based, without hazardous methanol or acetic acid. One-Step stains are certified under [CCR Title 22](#) as non-toxic to the environment for drain disposal after a simple pH neutralization step.

Please visit our [Protein Gel Stains technology page](#) to learn about our other safe and sensitive protein gel stains such as [One-Step Lumitein™](#) and [One-Step Lumitein UV](#) which are rapid, easy-to-use, and non-toxic alternative to SYPRO® Ruby and Oriole™ Protein Gel Stains.

| Product | Replacement for | Catalog number | Unit size | Product protocol | Safety report |
|---------------------------------------|--|----------------|-----------|--------------------------|---|
| One-Step Blue® | Coomassie Brilliant Blue stains | 21003-1L | 1L | PI-21003 | One-Step Gel Stains Safety Report |
| One-Step Lumitein™ | SYPRO® Ruby Protein Gel Stain | 21004-1L | 1L | PI-21004 | |
| 21004-4L | 4L | | | | |
| One-Step Lumitein™ UV | Oriole™ and Flamingo™ Protein Gel Stains | 21005-1L | 1L | PI-21005 | |
| 21005-4L | 4L | | | | |

One-Step Blue is a registered trademark of Biotium. Lumitein and its related technologies are covered by US and international patents. SYPRO is a registered trademark of Molecular Probes, Inc. Oriole and Flamingo are trademarks of Bio-Rad Laboratories. Cubitainer is a registered trademark of Hedwin Corporation. Simply Blue is a trademark of Thermo Fisher Scientific.

This datasheet was generated on January 12, 2026 at 08:46:03 AM. Visit product page to check for updated information before use.
Product link: <https://biotium.com/product/one-step-blue-protein-gel-stain/>