NEXT GEL™ is a revolutionary ready-to-pour pre-mixed solution of acrylamide, bisacrylamide, gel buffer and SDS that enables ultra-fine resolution of protein bands.

The unique acrylamide matrix of NEXT GEL™ slows the progression of proteins, eliminating the need for a stacking gel. This not only saves time, but also permits the proteins to run across a longer gel surface, resulting in increased resolution.

NEXT GEL™ ensures batch-to-batch consistency for reliable, reproducible results on each gel run. It may be used with all standard SDS-PAGE equipment and all common staining procedures. NEXT GEL™ is compatible with most downstream applications including 1D and 2D gels, Western blotting, protein sequencing and Maldi analysis.

**Product Summary**

<table>
<thead>
<tr>
<th>Product Description</th>
<th>Code</th>
<th>Size</th>
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<tbody>
<tr>
<td>NEXT GEL™ 5%</td>
<td>M254-100ml</td>
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<tr>
<td>Includes: NEXT GEL™ Running Buffer, 20X</td>
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<td>Separation Range: 10 kDa-500 kDa</td>
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<td>NEXT GEL™ 7.5%</td>
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<td>NEXT GEL™ 10%</td>
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<td>Separation Range: 100 kDa-200 kDa</td>
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<td>NEXT GEL™ 10% Sample Kit</td>
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<td>Separation Range: 100 kDa-200 kDa</td>
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<td>NEXT GEL™ 12.5%</td>
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<td>Separation Range: 3.5 kDa-100 kDa</td>
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<td>NEXT GEL™ 15%</td>
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<td>Includes: NEXT GEL™ Running Buffer, 20X</td>
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<td>Separation Range: 2.5 kDa-100 kDa</td>
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<td>NEXT GEL™ Trial Kit</td>
<td>M261-KIT</td>
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<td>Includes: Each NEXT GEL™ Concentration, 30ml</td>
<td>M261-KIT</td>
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<td>NEXT GEL™ Running Buffer, 250 ml</td>
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<tr>
<td>Sample Loading Buffer, 1 ml</td>
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</tbody>
</table>
**SPRINT NEXT GEL™**

**TURBO NEXT GEL™**

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**Ultra fast SDS-PAGE!**

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Convenient > Ready-to-pour solutions that are room temperature stable for at least 6 months.

Quality > Consistent, reproducible results.

Versatile > Compatible with standard staining methods and downstream applications including Western Blotting, 2-D electrophoresis, sequencing, MALDI analysis and LC-MS.

Economical > No hazardous shipping charges apply. Less expensive than pre-cast gels.

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**SPRINT NEXT GEL™** is a ready-to-pour acrylamide solution optimized to reduce running time on standard SDS-PAGE mini-gels. It is ideal for any situation that requires rapid analysis of protein samples by electrophoresis. **SPRINT NEXT GEL™** is available as a ready-to-pour 1X solution at acrylamide concentrations of 10% or 12.5%.

**Fast Casting Time** > Cast and polymerize a 10 x 10 x 0.75 cm mini-gel in less than 15 minutes.

**Fast Run Time** > Run your mini-gel in less than 30 minutes.

**Fast Western Blotting** > Cast, run and transfer a gel plus develop a blot in one day.

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**TURBO NEXT GEL™** is a ready-to-pour acrylamide solution formulated to provide superior band resolution and to reduce running time for 16 x 16 cm SDS-PAGE gels. The gel casting procedure is a simple one step process with no stacking gel needed. **TURBO NEXT GEL™** is offered as a ready-to-pour 1X solution at concentrations of 7.5%, 10% or 12.5% acrylamide.

**Fast Run Time** > Run a 16 x 16 cm gel in 2.5 - 3 hours.

**Convenient** > Ready-to-pour acrylamide blend solution with 20X NEXT GEL™ Running Buffer supplied as a powder.

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**PRODUCT DESCRIPTION**

**CODE**

**SIZE**

**SPRINT NEXT GEL™, 10% Solution**

Includes: NEXT GEL™ Running Buffer, 20X

Each 7.5 ml will prepare a 10 cm x 10 cm x 0.75 mm mini-gel.

Separation Range: 10 kDa-200 kDa

M312-100ML

100 ml

M312-500ML

500 ml

**SPRINT NEXT GEL™, 12.5% Solution**

Includes: NEXT GEL™ Running Buffer, 20X

Each 7.5 ml will prepare a 10 cm x 10 cm x 0.75 mm mini-gel.

Separation Range: 3.5 kDa-100 kDa

M311-100ML

100 ml

M311-500ML

500 ml

**TURBO NEXT GEL™, 7.5% Solution**

Includes: NEXT GEL™ Running Buffer, 20X

Each 30 ml will prepare a 16 cm x 16 cm x 1 mm gel.

Separation Range: 20 kDa-300 kDa

M323-100ML

100 ml

M323-500ML

500 ml

**TURBO NEXT GEL™, 10% Solution**

Includes: NEXT GEL™ Running Buffer, 20X

Each 30 ml will prepare a 16 cm x 16 cm x 1 mm gel.

Separation Range: 10 kDa-200 kDa

M313-100ML

100 ml

M313-500ML

500 ml

**TURBO NEXT GEL™, 12.5% Solution**

Includes: NEXT GEL™ Running Buffer, 20X

Each 30 ml will prepare a 16 cm x 16 cm x 1 mm gel.

Separation Range: 3.5 kDa-100 kDa

M310-100ML

100 ml

M310-500ML

500 ml

---

**Silver Stained SDS-PAGE on**

**10% NEXT GEL™**

Gel was run at 300 V for 30 min. Lane A: AMRESCO Mid/Low Range Protein MW Marker. Lane B: Total E. coli lysate, 50 µg.

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**Western Blot of Rat-1 fibroblast lysates - Courtesy of Dr. June Yun at Northeastern Ohio Universities College of Medicine (NEOUCOM).**

Identical lysates were run on 10% SPRINT NEXT GEL™ or 10% Laemmli gels, transferred onto PVDF membranes and incubated with anti-GAPDH antibodies.

Lane A: 30 µg lysate.

Lane B: 20 µg lysate.

Lane C: 10 µg lysate.

Lane D: 5 µg lysate.

Lane E: 1 µg lysate. Total procedure was performed in a single day.

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**Turbo NEXT GEL™**

**PRODUCT DESCRIPTION**

**CODE**

**SIZE**

**Gels in < 3 Hours!**

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**Running Mini-gels in < 30 Minutes!**

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**Running Large Format Gels in < 3 Hours!**

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© Amresco Inc. 2023
In-gel Fluorescent Staining

- Immediate band visualization
- No post-run staining or destaining
- Sensitivity matches Coomassie® Blue

Fluorescent NEXT GEL™ offers immediate band visualization without the need for post-run staining or destaining after SDS-PAGE. Based on the NEXT GEL™ system that provides ready-to-pour convenience at a fraction of the cost of pre-cast gels it reduces post-run visualization process to under 5 minutes and eliminates the use of hazardous, time-consuming staining procedures.

The proprietary fluorescent dye in Fluorescent NEXT GEL™ binds to the sample proteins and co-migrates with them during electrophoresis. Bands are visualized immediately after the run by exposing the gel to UV irradiation on a conventional UV transilluminator. Within 3 minutes the bound dye becomes covalently cross-linked to the proteins and begins emitting an intense fluorescent signal. Resolved proteins appear as bright white bands against a dark background since unbound dye does not fluoresce.

<table>
<thead>
<tr>
<th>PRODUCT DESCRIPTION</th>
<th>CODE</th>
<th>SIZE</th>
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</thead>
<tbody>
<tr>
<td>Fluorescent NEXT GEL™, 10% Solution</td>
<td>M290-100ML-KIT</td>
<td>100 ml</td>
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<tr>
<td>Including NEXT GEL™ Running Buffer, 2X</td>
<td>M290-500ML-KIT</td>
<td>500 ml</td>
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<tr>
<td>Each 10 ml will prepare a 10 cm x 10 cm x 0.75 mm mini-gel</td>
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<tr>
<td>Fluorescent NEXT GEL™, 12.5% Solution</td>
<td>M291-100ML-KIT</td>
<td>100 ml</td>
</tr>
<tr>
<td>Including NEXT GEL™ Running Buffer, 2X</td>
<td>M291-500ML-KIT</td>
<td>500 ml</td>
</tr>
<tr>
<td>Each 10 ml will prepare a 10 cm x 10 cm x 0.75 mm mini-gel</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Comparison of rapid fluorescent visualization with traditional Coomassie® staining. A 10% Fluorescent NEXT GEL™ was run using AMRESCO’s Mid/Low Protein Marker (Code: J450-200UL) and NEXT GEL™ Running Buffer. The gel was run at 175 volts for 1 hour. The protein bands were first visualized by exposure to UV light for 3-5 minutes (A). The same gel (B) was subsequently stained with 0.1% Coomassie® R-250 for 3 hours and destained according to standard methods. Fluorescent NEXT GEL™ offers comparable sensitivity to Coomassie® R-250 (100 – 200 ng/band) in a fraction of the time.

Fast > Cast and run an SDS-PAGE mini-gel in under one hour. No stacking gel needed!

Instant Band Visualization > Bands are visible within 5 minutes of illumination with UV light.

Sensitive > Comparable to Coomassie® Blue.

Versatile > Compatible with downstream applications including Western blotting and 2-D electrophoresis.

Rapid visualization of protein bands on 12.5% Fluorescent SPRINT NEXT GEL™. Gel was run at 300 V for 30 min., and bands visualized by exposure to UV light for 3 min. Lane A: AMRESCO Wide Range Protein MW Marker. Lane B: Total E. coli lysate. Lane C: AMRESCO Mid/Low Range Protein MW Marker.
Agarose-based NEXT GEL™ Systems

Protein electrophoresis on standard horizontal gel apparatus

Native NEXT GEL™ Electrophoresis Kit

Maintain native protein conformation

Kits include a proprietary agarose blend and running buffer optimized for optimal resolution while maintaining native protein confirmation. The agarose gel eliminates exposure to the hazards associated with liquid acrylamide and simplifies recovery of the protein following electrophoresis.

Resolutions of Native Proteins

A variety of proteins were separated using the Native NEXT GEL™ Electrophoresis Kit. Lane 1: Trypsin Inhibitor. Lane 2: BSA. Lane 3: BSA. Lane 4: Blank. Lane 5: Glucose Oxidase. Lane 6: Glucose Oxidase. (Proteins stained with Coomassie® blue)

PRODUCT DESCRIPTION | CODE | SIZE
--- | --- | ---
Native NEXT GEL™ Electrophoresis Kit | M271-KIT | 1 Kit
Includes: Agarose HRP, 25 g
NEXT GEL™ Running Buffer, 20X
NEXT GEL™ Sample Buffer, 4X
Contains sufficient reagents to perform 10 - 20 mini gels.

HTS NEXT GEL™ Electrophoresis Kit

High Throughput Electrophoresis

A unique blend of agarose and NEXT GEL™ Running Buffer resolves SDS-denatured protein on a standard horizontal gel apparatus. Various configurations of the horizontal system allows for the analysis of 20 to 200 samples in one to two hours.

MAIN PHOTO: HTS NEXT GEL™ (4%)-Stained with Coomassie® R-250. INSET PHOTO: HTS NEXT GEL™ (4%)-Stained with Coomassie® R-250. Protein samples used: MW Standards (Wide) (Code: K494)

PRODUCT DESCRIPTION | CODE | SIZE
--- | --- | ---
HTS NEXT GEL™ Electrophoresis Kit | M281-KIT | 1 Kit
Includes: HTS Agarose, 250 g
NEXT GEL™ Running Buffer, 20X
NEXT GEL™ Sample Buffer, 4X
Contains sufficient reagents for 5 (25 cm x 25 cm) gels

LP-NEXT GEL™ Kit

Separate denatured proteins between 0.2 and 6.5 megadaltons

LP-NEXT GEL™ Kit provides a high-resolution agarose blend optimized for the separation of SDS-denatured proteins between 0.2 and 6.4 megadaltons. Besides agarose, the kit offers two running buffer options, the NEXT GEL™ running buffer as well as a running buffer containing a fluorescent dye for band visualizations immediately following electrophoresis. The fluorescent stain is incorporated into the agarose gel and binds to the proteins during migration. Protein bands are visible within 3-5 minutes following exposure to UV light.

PRODUCT DESCRIPTION | CODE | SIZE
--- | --- | ---
LP-NEXT GEL™ Kit | M272-KIT | 1 Kit
Includes: Agarose HRP, 25 g
NEXT GEL™ Running Buffer, 20X, 500 ml
Fluorescent NEXT GEL™ Buffer, 20X, 125 ml
NEXT GEL™ Sample Loading Buffer, 4X, 5 ml
Sufficient materials to run 50 mini gels.

Resolution of cross-linked myosin molecule on 1% Agarose HRP prepared with Fluorescent NEXT GEL™ Buffer. The gel was run at 100 volts for 1 hour. The protein bands were visualized by exposure to UV light for 3-5 minutes. The gel was then stained with 0.1% Coomassie® R-250 for 3 hours and destained according to standard procedures (Right). The LP-NEXT GEL™ Fluorescent procedure offers enormous time savings with sensitivity comparable to Coomassie® R-250.

PRODUCT DESCRIPTION | CODE | SIZE
--- | --- | ---
LP-NEXT GEL™ Kit | M272-KIT | 1 Kit
Includes: Agarose HRP, 25 g
NEXT GEL™ Running Buffer, 20X, 500 ml
Fluorescent NEXT GEL™ Buffer, 20X, 125 ml
NEXT GEL™ Sample Loading Buffer, 4X, 5 ml
Sufficient materials to run 50 mini gels.

Native NEXT GEL™ Electrophoresis Kit

Resolve of Native Proteins

A variety of proteins were separated using the Native NEXT GEL™ Electrophoresis Kit. Lane 1: Trypsin Inhibitor. Lane 2: BSA. Lane 3: BSA. Lane 4: Blank. Lane 5: Glucose Oxidase. Lane 6: Glucose Oxidase. (Proteins stained with Coomassie® blue)