

Product Information

ColorBurst™ Electrophoresis Marker, High Range (M.W. 30,000–220,000)

Catalog Number **C4861**
Storage Temperature –20 °C

TECHNICAL BULLETIN

Product Description

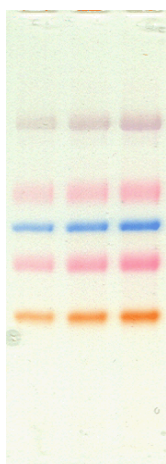
ColorBurst™ Electrophoresis Markers are designed for qualitative molecular mass determinations in Laemmli SDS-PAGE systems,¹ and for visual confirmation of Western blot transfer efficiency.

ColorBurst Markers are ready-to-use. They are formulated in a solution that resists freezing.

ColorBurst Markers offer the following features and benefits:

- No need for chemical reduction of the markers before loading the gel.
- No boiling required.
- No freeze/thaw cycles confers diminished degradation and longer shelf life.
- Storage at –20 °C saves on precious –70 °C freezer space.
- Simply remove from the freezer, warm to room temperature, and load the gel.

Figure 1.
ColorBurst Markers in SDS-PAGE Gradient Gel



The gel was loaded (left to right) with 3, 5, and 7 μ L of **ColorBurst** Markers. The markers were run using standard conditions on a 10 x 10 cm, 1 mm thick, 10 well precast 4–20% Tris-Glycine gel.

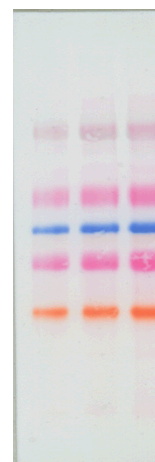
ColorBurst Markers are composed of 5 proteins, which have been chemically reduced, alkylated, and conjugated to brilliantly colored dyes. They can be readily visualized on a gel or membrane after transfer. Each vial of **ColorBurst** Markers contains 500 μ L of solution, enough for at least 50 mini-gel applications.

ColorBurst Markers transfer cleanly to nitrocellulose or PVDF membranes using Towbin's² or CAPS buffers, respectively.

Storage/Stability

This product ships on wet ice and storage at –20 °C is recommended. **ColorBurst** Markers are stable for at least one year as supplied. Crystals may form in the solution during storage at –20 °C. These crystals dissolve readily upon warming to room temperature. Repeated crystal formation will not affect the performance of the **ColorBurst** Markers.

Figure 2.
ColorBurst Markers transferred to nitrocellulose membrane using Towbin's buffer.²



Bands transferred to nitrocellulose membrane from a 4–20% Tris-Glycine gel are shown in Figure 2. Transfer was completed in 90 minutes at 70 volts using Towbin's buffer (Tris-Glycine in 20% methanol).

Apparent Molecular Masses (kDa) of ColorBurst Marker Proteins		
Band Color	4–20% Gel Tris-Glycine	10–20% Gel Tris-Tricine
Violet	220	210
Pink	100	90
Blue	60	65
Pink	45	40
Orange	30	30

Apparent molecular masses were determined using SigmaMarker, Wide Range (6.5–200 kDa) as a comparison standard. The molecular mass of the violet band, which is outside the range of the standard, is an approximation.

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

Note: It is **not** recommended that **ColorBurst** Markers be used as standards for quantitative molecular mass determinations, but only as a qualitative tool. For quantitative molecular mass determinations, use the appropriate SigmaMarker product, which can be found at www.sigmaaldrich.com.

Procedure

ColorBurst Markers are supplied ready-to-use. Remove from the freezer and warm to room temperature before loading onto the gel.

The following are suggested loading volumes for various gel formats:

- 1 to 2 μ L for a PhastGel[®]
- 5 to 10 μ L for a mini-gel with no transfer
- 3 to 5 μ L for a mini-gel with transfer to a membrane
- 10 to 15 μ L for a large gel

References

1. Laemmli, U.K., *Nature*, **227**, 680 (1970).
2. Towbin, H. *et al.*, *Proc. Natl. Acad. Sci. USA*, **76**, 4350 (1979).

PhastGel is a registered trademark of GE Healthcare.

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