

## Product Information

### ColorBurst™ Electrophoresis Markers

Product No. **C 4105**  
Store at  $-20^{\circ}\text{C}$

### TECHNICAL BULLETIN

#### Product Description

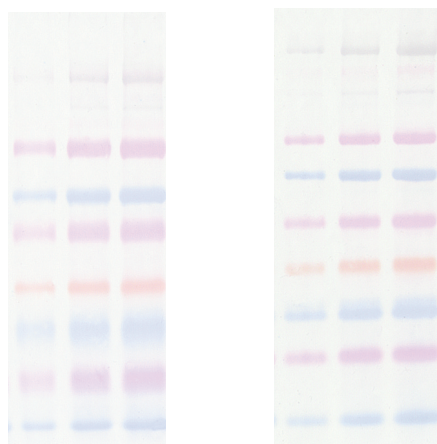
**ColorBurst™** Electrophoresis Markers are designed for qualitative molecular weight determinations in Laemmli SDS-PAGE systems,<sup>1</sup> and for use as a visual check of Western transfer efficiency.

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

- No need for the chemical reduction of the markers before loading the gel.
- No boiling is required.
- No freeze/thaw cycles means diminished degradation and longer shelf life.
- Storage at  $-20^{\circ}\text{C}$  saves on precious  $-70^{\circ}\text{C}$  freezer space.
- Simply remove from the freezer, warm to room temperature, and load the gel.

Each vial of **ColorBurst** Markers contains 500  $\mu\text{l}$  of solution, enough for at least 50 mini-gel applications.

#### ColorBurst Markers in SDS-PAGE Gradient Gels



4-20% Tris-Glycine      10-20% Tris-Tricine

#### Figure 1:

Both gels were loaded (left to right) with 3, 5 and 7  $\mu\text{l}$  of the **ColorBurst** Markers. The markers were run using standard conditions on 10 x 10 cm, 1 mm thick, 10-well precast gels.

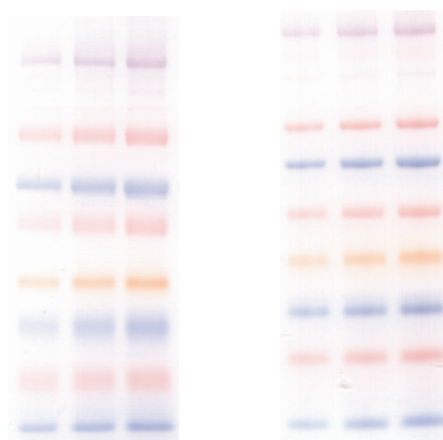
**ColorBurst** Markers are composed of 8 proteins which have been chemically reduced, alkylated, and conjugated to brilliantly colored dyes. They can be readily visualized in a gel or on a membrane after transfer.

**ColorBurst** Markers transfer cleanly to nitrocellulose or PVDF membranes using Towbin's<sup>2</sup> or CAPS buffers, respectively.

#### Storage/Stability

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

#### ColorBurst Markers transferred to nitrocellulose membranes using Towbin's buffer.<sup>2</sup>



#### Figure 2:

Bands transferred to nitrocellulose membranes from the gels in Figure 1 (Tris-Glycine on left and Tris-Tricine on right). Transfers were completed in 90 minutes at 70 volts with Towbin's buffer (Tris-Glycine in 20% methanol.)

Apparent Molecular Weights (kDa) of Proteins in <b>ColorBurst</b>		
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
Blue	20	20
Pink	12	13
Blue	8	8

Apparent molecular weights were determined by using SigmaMarker, Wide Range (6.5-205 kDa) as a standard. The molecular weight of the violet band, which is outside the range of the standard, is an approximation.

#### Precautions and Disclaimer

**Note:** It is **not** recommended that **ColorBurst** Markers be used as standards for quantitative molecular weight determinations, but only as a qualitative tool. For quantitative molecular weight determinations use the following standards:

SigmaMarker, Low Range (6.5-66 kDa)  
(Product Number M 3913)

SigmaMarker, High Range (36-205 kDa)  
(Product Number M 3788)

SigmaMarker, Wide Range (6.5-205 kDa)  
(Product Number M 4038)

#### Procedure

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

Suggested loading volumes:

1 to 2  $\mu$ l for a PhastGel

5 to 10  $\mu$ l for a mini-gel with no transfer

3 to 5  $\mu$ l for a mini-gel with transfer to a membrane

10 to 15  $\mu$ 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 Amersham Pharmacia Biotech.

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