

	IMP-PM 12.2 Luminol	
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12.2 Luminol

12.2.1 Introduction

Bloody footwear and tire tread impressions can be enhanced for the purpose of aiding forensic examinations. This procedure requires the use of a positive blood control and negative control prior to application.

This reagent is best used only on multi-colored or dark surfaces where other reagents will not produce an impression with sufficient contrast.

12.2.2 Formula

0.1 gram Luminol

5 grams Sodium Carbonate

0.7 grams Sodium Perborate

100 ml Distilled Water

12.2.3 Mixing

In a 150 ml beaker on a magnetic stirring device, dissolve the Luminol and the Sodium Carbonate in the distilled water. Just prior to using the mixture, add the Sodium Perborate and mix thoroughly. The Luminol solution will be tested on a positive control blood stain prior to use.

12.2.4 Application

The Luminol solution may be applied by spraying the item to be enhanced with a non-metallic aerosol sprayer. It must be applied in total darkness. This chemical does not have a fixative in it and the blood may run with continuous spraying.

12.2.5 Reaction

A positive reaction will produce a blue white chemiluminescence which appears almost immediately and fades rapidly. Special photographic procedures using long exposure times must be used to record the

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reaction at the instant that it luminesces. Spraying can be repeated during photography if necessary to maintain luminescence.

12.2.6 Storage

The Luminol solution must be mixed immediately prior to use.

12.2.7 References

Bodziak, W. J., Footwear Impression Evidence, 2nd ed.; CRC Press: Boca Raton, FL, 2000.

SWGTHREAD Guide for the Chemical Enhancement of Bloody Footwear and Tire Impression Evidence, 2008