

**TENNESSEE BUREAU OF INVESTIGATION**  
*Forensic Services Division*

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Violent Crime Response Team Standard Operating Procedures  
Electrostatic Lifter

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**10. VCRT Procedures**

**10.13 Electrostatic Dust Print Lifter**

**10.13.1 Scope**

Electrostatic lifting attracts the particles to a dry surface using an electrical charge. Electrostatic lifting may be used on smooth floors, doors or walls where footwear impressions in dust are present.

Electrostatic lifts often yield prints with greater detail than can be captured photographically. Electrostatic lifted impressions may provide additional detail and the dark Mylar background may increase contrast.

**10.13.2 Definitions**

Refer to VCRT 11.0 Definitions and Abbreviations

**10.13.3 Chemicals and Reagents**

None

**10.13.4 Equipment and Supplies**

High voltage power supply  
Charging unit  
High voltage probe  
Ground leads  
Smoothing roller  
Ground plate  
Mylar lifting film

**10.13.5 Procedure**

Comparison photographs should be made before Electrostatic Dust Lifting is attempted. See VCRT 10.34 Comparison Photography for additional information.

Cut a clean piece of two-ply film large enough to cover the dust print allowing excess in all directions.

Place the Mylar with the black side toward the dust impression

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Note - On horizontal surfaces, the film is placed directly over the print.  
On vertical surfaces, the film can be positioned and held in place by  
taping to the surface.

Attach the probe and ground wire to the base unit.

Attach the ground to a metal surface (the latch on the carrying case).

Turn the unit on and touch the Mylar with the probe. The film should be pulled  
tightly against the impression surface. A metal plate can be placed very close  
next to the Mylar to help conductivity.

Gently use the roller to smooth out any air bubbles that have been captured  
under the Mylar.

Turn off the unit and touch the probe to a metal surface.

Lift the Mylar and secure it with tape to the bottom of a box with dust side up.

In the event of excessive extraneous dust attracted by the first lift, a second lift  
may yield a more detail.