Violent crime scenes often involve bloodstains on items of clothing. The objective of this research was to examine and compare the characteristics of the same fabric composition between fabrics and controls. Hypothesis: Stain sizes, shapes, and characteristics are different; inspiration for this study was suggested a reference collection of projected bloodstains; called for research needed in the BPA community (SWGSTAIN).

Materials & Methods

A Comparison of Bloodstains on Fabric: Characteristics of Impact Spatter: Effects of three fabrics on contact, pressure, and angle of impact. Ten representative spatter spots were selected on 60 control samples.

Results

Results show that different fabric textures affect the bloodstain characteristics. The following are the characteristics observed:

- **Nylon / 10% Lycra**: 71% Irregular Shape, 32% Round/Oval, 1% Round/Oval
- **100% Polyester (Rain Coat)**: 67% Irregular Shape, 24% Round/Oval, 1% Round/Oval
- **100% Acrylic**: 90% Irregular Shape, 15% Round/Oval, 1% Round/Oval
- **100% Polyester (Denim)**: 96% Irregular Shape, 6% Round/Oval, 0% Round/Oval
- **100% Silk**: 69% Irregular Shape, 22% Round/Oval, 1% Round/Oval
- **90% Nylon / 10% Lycra**: 70% Irregular Shape, 15% Round/Oval, 1% Round/Oval
- **100% Polyester (Fleece)**: 77% Irregular Shape, 11% Round/Oval, 0% Round/Oval
- **100% Cotton (Denim)**: 72% Irregular Shape, 10% Round/Oval, 1% Round/Oval
- **100% Acetate**: 83% Irregular Shape, 15% Round/Oval, 2% Round/Oval
- **100% Cotton**: 65% Irregular Shape, 25% Round/Oval, 1% Round/Oval

The only trend present in impact spatter on fabric is the absorption of stains on different layers of fibers. Angle of impact and other methods for reconstruction would be beneficial in future research. Future research will employ other mechanisms of spatter simulation to ensure a constant horizontal distance from the simulation mechanism to the clothing sample. The use of a cardboard box, 24" x 20" x 14" ("blood box") helps control messes and may have been used in the simulation process.

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