



Questioned Documents Section - 2013

J4 Stone Paper: An Overview of its Characteristics and the Impact They May Have on Forensic Document Examinations

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After attending this presentation, attendees will become familiar with a few of the stone papers (FiberStone[®], Gartner[®], Oxford[®], TerraSkin[®], ViaStone[™]) available on the commercial and retail markets for purchase. Attendees will understand the limitations involved in stone paper exams as well as what modifications may be needed when conducting certain questioned document examinations. These examinations include: indented impressions, typewriting, non-destructive ink (writing instruments, toner and inkjet printing) examination, tearing, folding, and stapling. The information gleaned from the latter three studies may be useful in alteration cases. An overview of water and grease interaction with inks on the stone paper, as well as the effect of environmental exposure on stone paper, is also discussed.

This presentation will impact the forensic science community by increasing the depth of knowledge regarding stone paper, a relatively new product available for purchase that may eventually appear in casework. Stone paper's general characteristics and modifications or work-arounds that are needed during questioned document examinations will be discussed. The goal is that this presentation will encourage members of other disciplines to develop their own studies regarding whether or not special considerations need to be taken for cases involving stone paper.

Stone paper (FiberStone[®], Gartner[®], Oxford[®], TerraSkin[®], ViaStone[™]) is comprised mainly of calcium carbonate and plasticizers. Unlike pulp paper, it is manufactured without large amounts of water and chemicals. Due to its unique composition and manufacturing process, stone paper manufacturers claim it is: more environmentally friendly than traditional pulp paper, 100% recyclable, water, grease, and tear resistant, and bio-degradable. Stone paper has been commercially available for ten years and is used by the packaging and marketing industries as gift bags, boxes, labels, and other wrapping materials. Many of these stone paper products are touted as being "greener" and, therefore, are used by a few environmentally conscious companies whose products can be found on store shelves. In the past three years, stone paper has become increasingly available in household consumer-use products, including notebooks and inkjet photo paper, which are available at various office supply, novelty, and "big box" stores, among other sources. For this study, supplies were obtained through manufacturer donations and purchase. As stone paper becomes more available, the forensic community will likely encounter stone paper in casework.

This study seeks to introduce and educate the forensic document community and the forensic science community at large, about stone paper characteristics, evaluate some of the manufacturers claims outlined above, and describe special considerations that must be taken during forensic document examinations involving stone paper. Actions and associated examinations undertaken include: indented impressions, typewriting, non-destructive ink (writing instruments, toner and inkjet printing) examination, tearing, folding and stapling, water and grease interaction, and environmental exposure. Results of the current study will show that examination of stone paper can be conducted in a manner similar to traditional pulp paper, with a few exceptions regarding indented impression examinations and fracture matching.

Stone Paper, Paper Examination, ViaStone[™]