Abstract Submitted
for the DFD16 Meeting of
The American Physical Society

Morphology of drying blood pools.[1] NICK LAAN, Institut de Recherche Criminelle de la Gendarmerie Nationale, FIONA SMITH, Aix-Marseille University, CELINE NICLOUX, Institut de Recherche Criminelle de la Gendarmerie Nationale, DAVID BRUTIN, Aix-Marseille University, D-BLOOD PROJECT COLLABORATION — Often blood pools are found on crime scenes providing information concerning the events and sequence of events that took place on the scene. However, there is a lack of knowledge concerning the drying dynamics of blood pools. This study focuses on the drying process of blood pools to determine what relevant information can be obtained for the forensic application. We recorded the drying process of blood pools with a camera and measured the weight. We found that the drying process can be separated into five different: coagulation, gelation, rim desiccation, centre desiccation, and final desiccation. Moreover, we found that the weight of the blood pool diminishes similarly and in a reproducible way for blood pools created in various conditions. In addition, we verify that the size of the blood pools is directly related to its volume and the wettability of the surface. Our study clearly shows that blood pools dry in a reproducible fashion. This preliminary work highlights the difficult task that represents blood pool analysis in forensic investigations, and how internal and external parameters influence its dynamics. We conclude that understanding the drying process dynamics would be advancement in timeline reconstitution of events.

[1]ANR funded project: D-Blood Project

FIONA SMITH
Aix-Marseille University

Date submitted: 27 Jul 2016 Electronic form version 1.4