

1970

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### Recommended Citation

Shariq Alavi, O. P. M. Tripathi, Blood Tests at the Scene of Crime, 60 J. Crim. L. Criminology & Police Sci. 532 (1969)

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## BLOOD TESTS AT THE SCENE OF CRIME

SHARIQ ALAVI AND O. P. M. TRIPATHI

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Freshly dropped blood stains with their characteristic red color, when found at the scene of a crime, do not pose much difficulty to an investigating officer. He can take them as blood stains by mere appearance and forward them to chemical examiner's laboratory for confirmation. However, with the passage of time the exposed red blood pigment, haemoglobin, present in the blood is transformed into methaemoglobin and haematin which are brown, green, or black in color, and then it becomes difficult to recognize the blood stains by mere appearance.

According to the prevalent practice in India and other countries, stains suspected to be of blood are referred to the chemical examiner's laboratory or a forensic science laboratory for examination. With the introduction of field units or mobile scientific squads attached to the forensic science laboratories a preliminary sorting out of stains can be done by the expert at the scene of crime itself. Even then exhibits may be referred to the laboratory for confirmatory tests and formal report.

There are various chemical methods by which blood stains can be identified. Most common amongst them is benzidine test. Lucas recommends benzidine reaction as the most powerful preliminary test. According to him "In no case has the presence of blood ever been found after negative benzidine reaction."<sup>1</sup>

The conventional method of benzidine test is that a solution of benzidine base is made in glacial acetic acid and it is dropped on a wet filter paper on which the stain material had already been transferred by pressing the filter paper against the

stain on the exhibit. Then a drop of hydrogen peroxide is added. A bright blue color indicates the presence of blood.

We have evolved an easy technique to perform this test even at the scene of crime by an ordinary police officer.

Filter paper is soaked in a solution of benzidine in acetic acid for about an hour. It is then taken out and dried at 25°-30° C. This paper is then cut into strips. Now the stain suspected of being blood is moistened with one or two drops of distilled water, and then benzidine reagent paper is pressed against it. A drop of hydrogen peroxide taken from a sealed capsule is put on the benzidine paper. If blood is present, it will immediately give a blue color.

Benzidine reagent paper has been tried under different atmospheric conditions, and it has been found to remain effective for about a year though with the passage of time the brightness of the blue color diminishes. These reagent papers can be "revitalised" by again resoaking them in benzidine solution.

The introduction of benzidine reagent paper has made it quite easy to carry the Blood Detection Kit Box to the scene of crime. It can safely be handled by any identification officer who simply has to keep one packet of benzidine reagent paper, two small polyethylene dropping bottle, one filled with distilled water and another with hydrogen peroxide.

It may be feared that owing to the age of the benzidine paper if it has become ineffective and a field investigator still uses it in ignorance the blood stains may be missed. But it is always advisable that control tests should and must always be per-

<sup>1</sup>A. LUCAS, FORENSIC CHEMISTRY & SCIENTIFIC CRIMINAL INVESTIGATION (third edition) p. 32.

formed. They eliminate any possibility of such mistakes.

#### ACKNOWLEDGEMENT

Authors are thankful to Sri S. R. Gupta, S.P., Scientific Section, C.I.D., U.P., and his predecessor

Sri S. N. Gupta, I.P.S., for providing Laboratory facilities. They also are grateful to Sri S. N. Sharma, Dy.S.P., S.S., C.I.D., U.P., and Sri R. P. Rastogi and Sri M. K. Jain, Experts, Scientific Section, for their valuable help and advice.

Statement of Ownership, Management and Circulation required by the Act of October 23, 1962; Section 4369, Title 39, United States Code.

1. *Date of Filing:* October 1, 1969.
2. *Title of Publication:* Journal of Criminal Law, Criminology & Police Science.
3. *Frequency of Issue:* Quarterly.
4. *Location of known Office of Publication:* 428 E. Preston St., Baltimore, Md. 21202.
5. *Location of the Headquarters or General Business Offices of Publisher:* 428 E. Preston St., Baltimore, Md. 21202.
6. *Publisher:* The Williams & Wilkins Company, 428 E. Preston St., Baltimore, Md. 21202.  
*Editor:* Fred E Inbau, Northwestern University, Chicago, Ill. 60611.
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	(a)*	(b)†
10. A. Total No. Copies Printed (Net Press Run).....	4955	5100
B. Paid Circulation.....		
1. To term subscribers by mail, carrier delivery or by other means.....	2916	3554
2. Sales through agents, news dealers or otherwise.....	—	—
C. Free Distribution (including samples), by mail, carrier delivery or by other means.....	53	64
D. Total No. of copies distributed.....	2969	3618

\* Average no. of copies for each issue during preceding 12 months.

† Single issue nearest to filing date.

I certify that the statements made by me above are correct and complete. Mary G. MacIsaac, Publisher.