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Geoff Goodwin
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Dear Geoff Goodwin,

You have asked me for my opinion concerning the Susan May case. In 2009, I have worked for the NSW police force to finish my master degree in Forensic science. I worked with DAB (diaminobenzidine), as it was still used as a valid presumptive test, and wrote a review about blood enhancement in Forensic Science International. I've understood from your literature that the TAB that was used is another abbreviation for the same test that I call DAB. Also, another name for diaminobenzidine is 3,3',4,4' tetraaminobiphenyl, which can be abbreviated as TAB. Moreover, the reaction obtained with TAB in the presence of blood was described by Mr. Hussain as a dark solid precipitation, which is the same reaction one expects for DAB. In the light of this experience I can write to you. Note that I do not know the case other than the information you have send me, which for instance did not include evidence from Dr. Basley and Miss Symmons. I, therefore, will not make general statements about the case and can only provide you with additional information.

DAB is considered as a presumptive test and not a confirmative test, therefore a positive reaction is merely an indication for the presence of blood. It is thus not possible to say with certainty that the brown colouration obtained with DAB is caused by blood. The haem group in human blood may cause this oxidation reaction, but also the presence of haem in animal blood as well as plant and microbial cells may result in the oxidation reaction and thus brown colouration without observing an atypical reaction.

DAB is carcinogenic and therefore spraying with DAB is discouraged. Furthermore, DAB needs to be freshly prepared on the scene. The practical disadvantages can be weighed against the expected performance on the material that requires blood enhancement. DAB is likely to outperform some of the other presumptive tests in the sense that it may reveal more of the finer details in a finger mark. I, for instance, have experienced that O-toluene (O-tol) can cause the marks to run and thereby information from the fingerprint will be lost. What

method is used may depend on the preference of the investigators and what is required in the case. (see Bossers LC, Roux C, Bell M, McDonagh AM. Methods for the enhancement of finger marks in blood, Forensic Sci Int. 2011 Jul 15;210(1-3):1-11.).

As was correctly stated by mr. Hussain an indication of the presence of blood does not indicate that the fingerprints were in blood. A fingerprint can be left on the surface and at another point in time something else may have been transferred to the surface that can cause a positive reaction with DAB. Detailed pictures of the enhanced finger marks may give a clue about the sequence of the events and where the material that reacted with DAB was present in relation to the finger mark.

If you require more information feel free to contact me.

Kind regards,

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