

in very rare cases, to give a more positive statement in regard to a blood-stain than to say that it was mammalian blood, and from examination and measurements it was consistent with human blood. At the present day one can go much farther and can state definitely whether a given blood-stain is human or not, and can even go still farther and state whether it is a stain from any alleged domestic or other animal.

This test is known as the "Serum Test," and is performed for testing human blood in the following manner:

A rabbit is given from three to six injections of human blood serum, about 10cc. each, preferably into the peritoneal cavity, at intervals of several days. Then the animal is allowed to rest for several days and some blood is then withdrawn from the animal and allowed to coagulate, and the serum is then used for the test.

If fresh blood is to be examined it should be diluted with normal saline solution to about 1-100, that is a light pink color, and then either allowed to settle and the supernatant clear fluid decanted, or else centrifuged and the clear portion used.

If dried blood-stains are to be examined, and can be scraped off on to a watch glass a solution is made with distilled water, but if on bibulous material then some of it is cut out and allowed to soak in a small quantity of distilled water for some time to allow solution of the serum to take place. This is then diluted with a small quantity of normal saline solution, cleared and transferred to a narrow test tube.

To this liquid in the test tube is added a few drops of the serum from the treated rabbit (human-immunized rabbit serum) and at ordinary temperatures there is a precipitate after a little time, but at blood heat there is an abundant whitish precipitate distinct in a few minutes if the solution contains any human blood serum. This reaction occurs with no other species of blood except some of the apes, and here the reaction is a very faint one. In the same way any other species of blood might be tested for by injecting a rabbit with the serum from an animal of the species from which the stain is supposed to have come.

I do not know that this test has been used in any medico-legal case in Canada as yet, but I have had some experience of it in an experimental way and can vouch for the practicability of it, and I may say that I have taken a series of twenty-four bloods, including the ordinary domestic animals, and many wild ones as well, and have found that none of them can be confounded with human blood, although that of the monkey will sometimes give a slight and slowly forming precipitate.

The technique, however, is not quite as simple as it might appear, although the difficulties are not insurmountable and require only patience and a little practice.