

## A LUMINESCENCE TEST FOR BLOOD.

### A NEW TEST FOR BLOOD IN FÆCES AND URINE.

By JOHN HATCHER.

Though the use of a chemical luminescence method for the detection of blood, or, rather, blood stains, has for some time been used for forensic purposes, it is only recently that a method has been worked out for clinical application. Reference to the principle of the technique occurred in the German literature in 1936 and 1937, but it was not till last year that the first clinical application appeared in the English medical Press, when McGrath published a short paper dealing with both its clinical and forensic applications. The usual chemical tests for the detection of blood in fæces are the guaiacum and benzidine methods, both of which suffer from well-known fallacies; in addition, benzidine is now one of the substances in short supply. This new method is extremely simple; it needs no elaborate apparatus, and is therefore in every way suitable for the ward test room. Some months' experience of this technique, with controls by the usual methods, has failed to show any failures, though, if anything, the method tends to be over-delicate. Certainly, this method is one of the prettiest pieces of technique ever devised, and even in a large laboratory proved to be quite a show-piece.

#### Formulae of Test Solution.

3-Amino-phthalic-acid-hydrazide-		
hydrochloride ... ..	...	1 gram.
Sodium carbonate ... ..	...	50 "
Hydrogen peroxide (10 vols.) ...	...	50 c.c.
Distilled water ... ..	...	1000 c.c.

The solution keeps very well, though it is advisable to reactivate it from time to time by the addition of about 10 per cent. of its bulk by 20 vols. hydrogen peroxide.

#### Method for Fæces.

A pellet of fæces is emulsified in about 5 c.c. of distilled water; this is very conveniently done in a test tube, to this is added 2 c.c. of the test solution. The resulting reaction must, of course, be observed in the dark, and a positive reaction is indicated by a fluorescence, weak or strong, according to the amount of blood present. This fluorescence is not, of course, permanent; usually it persists from five to ten minutes, and until the hæmatin is exhausted, may be prolonged by the addition of more test solution. As has already been mentioned, the test is very delicate; it will detect the presence of blood as dilute as one in a million. Though the fact that the test must be read in the dark sounds troublesome, in practice this is not so; a dark cupboard or the ordinary "black-out" of the room is satisfactory, but, in any case, it is very easy to make a dark box with eye slits in which the test can be read. Alternatively to carrying out the test in test tubes, some of the fæces under examination may be spread on a microscope slide and flooded with the test solution. The writer has, however, found the test tube method rather more easy to read.

#### Method for Urine.

The procedure for urine is very similar to that for fæces, 5 c.c. of urine is placed in a test tube and 2 c.c. of the test reagent added, and the test read in the same manner.

## THE PASSING BELL.

### MISS ETHEL FRANCES DAVEY, S.R.N., F.B.C.N.

It is with real sorrow that we record the death of Miss Ethel Frances Davey, S.R.N., F.B.C.N., matron of St. Pancras Hospital, N.W.1, which occurred very suddenly on Wednesday, January 26th last.

Miss Davey had held her responsible position for 18 years. The funeral took place at Bedford on Tuesday, February 1st, and a memorial service was held in the church in the hospital grounds on Monday, February 7th, which was attended by many of her sincere friends.

We recently had an interview with Miss Davey, who has been a Fellow of the British College of Nurses, Ltd., for many years, and noted that she appeared broken-hearted; the hospital was to be closed as a Training School for Registered Nurses, work in which she had spent years of whole-hearted devotion. Her pupils were to be removed, and St. Pancras Hospital, if retained by the L.C.C., would be used for the work of Assistant Nurses, a system entirely antipathetic to Miss Davey's conscientious convictions. Miss Davey's many friends will learn of her death with deep regret.

### MISS MARY THERESA LITTLE, S.R.N., M.B.C.N.

It is with deep regret that we have received news of the death of Miss Mary Theresa Little, S.R.N., and, although she recently retired from active work, the members of the Hull Co-operation of Nurses feel that they have lost a very kind friend. She was a sister of the late Miss Charlotte Little, who was well known to many of us, for she took a very active part in the struggle to achieve the establishment of an Act for the State Registration of Nurses. Miss Theresa Little did not enter quite so prominently into the movement, but none the less did she give it her full support, and indeed she was interested in and generous to all movements in her profession to which she felt she could give her approval. The greatest sincerity and loyalty was indeed a characteristic of both Sisters in this respect.

The British College of Nurses, Ltd., of which she was a member, will deeply regret the loss of Miss Theresa Little, as she has been a loyal member for many years.

## WHAT TO READ.

### MEMOIRS AND BIOGRAPHY.

"England Under the Hanoverians, 1714-1815." Sir C. Grant Robertson.

"Off the Record." Countess of Oxford and Asquith.

"These Were Actors." James Agate.

### FICTION.

"Wide is the Gate." Upton Sinclair.

"So Little Time." John P. Marquand.

"Land from the Waters." Doreen Wallace.

"Miss Shumway Waves a Wand." Jainer Hadley Chase.

"We Happy Few." Collinson Owen.

"The Dark Stream." Barbara Cartland.

"Happy Families." Elizabeth Carfrae.

"High Mountains." Bridget Chetwynd.

"Testimony of Three." Nora K. Strange.

"Sweet Pilgrimage." Hermina Black.

### MISCELLANEOUS.

"With Pennants Flying." David Masters.

"Survey of Russian History." B. H. Sumner.

"The Evil Cross." Sidney Esmond.

"Things Which Abide." Raymond Abba.

"The Burmese Scene: Political, Historical, Pictorial." Maurice Collis.

"I Saw Two Englands." H. V. Morton.

[previous page](#)

[next page](#)