

GEORGE BLACK.

CONTAINS MORPHINE.

Stomach Contents

220 CC - 7 oz.

Received Jan. 4th. 11 A.M. One bottle marked "Stomach Contents, George Black, Thos. W. Jeffs Dept. Coroner. Jan. 3rd. 07. H.O.J." Sealed but writing on seal not distinct.

Mark on bottle - B. A.P.

Two separate portions were treated as follows:-

1st. Portion treated with rectified spirits acidulated with Acetic Acid and digested for a short time. The solu. was then pressed through muslin and evaporated almost to dryness, taken up with water and treated with Acetate of lead, warmed and filtered the filtrate was then treated with H<sub>2</sub>S. gas, filtered, the filtrate evaporated almost to dryness, taken up with alcohol, evaporated to dryness and taken up with alcohol. and responded to all of the following tests:-

2nd. Portion was treated with Acetic Ether, filtered and evaporated to small bulk and solu. treated with Acetate of lead, filtered and filtrate treated with Sulphuretted Hydrogen gas, again filtered and evaporated to dryness with Potass Carbonate, taken up with alcohol, again evaporated and taken up with alcohol and responded to all of the following tests:-

Tests Used -

Nitric Acid produced a deep orange red color fading to yellow (difference from Quinine) *on adding sodium phosphate No change (Bucine changes to violet)*

*1-0-die*  
Iodic Acid and chloroform produced a pink color and on adding ammonia to this the pink color was discharged and the solution became of a dirty brown color (there is no albumnoid, nor alkaloid outside of Morphine known to Medical Science that will cause this reaction). - *1 drop of Iodic - 2 drops Chloroform*

Potass Ferri Cyanide and neutral Ferric chloride produced a deep prussian blue color (difference from Codine)

Formaldehyde and Sulphuric Acid produced a deep purple color.

Sulpho Molybdic Acid produced a crimson or purple color changing to a dingy green or x blue. - *5 grains Molybdic Acid in 2 drachms Conc H<sub>2</sub>SO<sub>4</sub>*



2.

Sulphuric Acid and Potassium Bi Chromate- produced in a short time a <sup>permanent</sup> green color.

From a portion crystals were separated out with Ammonia and on examination under the microscope were found to be identically the same as Morphine Crystals, on testing with

Nitric Acid produced a deep orange red color fading to yellow.

Potass Ferri Cyanide and neutral Ferric chloride produced a deep prussian blue color.

Iodic Acid and Chloroform produced a faint pink color, <sup>supernatant watery solution</sup> turned faint brown on adding ammonia.

The lead Acetate precipitate from the first portion was treated with dilute Sulphuric Acid and neutralized with Ammonia, the solution was treated with neutral Ferric Chloride - no change. Sulphuric Acid added - still no change, absence of Meconic Acid.

The Lead Acetate precipitate from second portion was treated with Sulphuretted Hydrogen gas filtered and evaporated to expell the gas and tested with Ferric Chloride - no change. Added Sulphuric Acid still no change - absence of Meconic Acid.

*Sulphuric Acid and Potass Bi Chromate  
 $H_2SO_4$  produces no change or only a  
faint pink colour*

*Sulpho. Hydrolytic Acid - Narcotine gives  
a green changing to dirty Brown - (not sure)*

*Conioid Acid -  $21\text{H}_2\text{O}$  - Brown color changing  
to green then blue*

*$H_2Cl_6$  = purple color -*



George Black.

STOMACH.

CONTAINS MORPHINE

Received Jan. 4th. 11 A.M. One jar marked "Stomach,  
George Black, Thos. W. Jeffs Dep. Corn. Jan. 3rd. 07"

Sealed but writting on seal not distinct.

Stomach was cut in half and one half was treated with Rectified spirits and Acetate Ether filtered and evaporated to small bulk. Lead Acetate added, percipitate filtered off. Sulphuretted Hydrogen passed through the solution to precititate exess of Lead Acetate filtered, evaporated to dryness, taken up with rectified spirits, again evaporated and taken up with rectified spirits and tested as follows:-

Tests used Iodic Acid and Chloroform produced a pink color the solution changing to a dirty brown color on addition of Ammonia.

Nitric Acid produced a deep orange red color fading to yellow.

Potass Ferri Cyanide and neutral Ferric Chloride produced a prussian blue color.

Lead Acetate precipitate dissolved in dilute Sulphuric Acid neutralized with Ammonia and tested with Neutral Ferric Chloride - no change. On adding Sulphuric Acid - no Change. Absence of Meconic Acid



CHAMPAGNE BOTTLES.

Received Jan. 6th. 2.45 p.m.

Four Champagne bottles containing a few drop of liquid <sup>and</sup> marked  
"Found in the room of Eva McDaniels at 133 Harris St. Jan. 1st. 08.  
J. & McL. No 1 No. 11 No 111. No 1V. J.A.P.

Each bottle tested ~~separately~~ separately:-

No. 1 J.A.P. White Seal - No Morphine A.  
" 11 J.A.P. " " - " " B.  
" 111 J.A.P. G.H. Munn - " " C.  
" 1V J.A.P. " " - Contains Morphine D.

Bottles washed with hot water and a few drops of Acetic Ether.

Tests Used

Iodic Acid and Chloroform produced a pink color, the  
solution changing to a dirty brown color on addition of Ammonia.

Glasses

Contain Morphine

Received Jan. 6th. 2.45 p.m.

Two empty glasses marked " found in the room of Eva McDaniel's  
at 133 Harris St. Jan 1st. 08. J. & McL."

Glasses washed with hot water collectively,

Tests used

Iodic Acid and Chloroform produced a pink color  
the solution changing to a dirty brown on addition of Ammonia.

TABLET IN ENVELOPE

NO MORPHINE.

Received Jan. 13th. 08 4.45 p.m. marked "found under  
the bed of Eva McDaniels at 133 Harris St. Jan 3rd. 08."

Contains Bi-Chloride of Mercury probably used as anti-  
ceptic.

- *Mercuric* -

*Tests used -*

*Na OH =*

*KI*

*Sucl<sub>2</sub>*

*yellow ppt*

*scarlet = sol. in spec*

*white changing to grey*



GEORGE BLACK.

BRAINS.-

Received from Dr Poole on Jan. 21st. 1908.

9.45 AM

MORPHINE PRESENT

- / ~~0.24~~ grain

0.24 grain

Analysis

The brain was allowed to stand in rectified Spirits (400 cc) and Acetic Ether (50 cc) from Jan 21st. to March 3rd, <sup>42 days</sup> on which day the solution was separated from the brain warmed for some time and filtered, the filtrate evaporated to a small bulk, treated with a solution of lead Acetate warmed and filtered, the excess of Lead Acetate added was ~~precipitated~~ precipitated by passing Sulphuretted Hydrogen gas through the solution the precipitated sulphide of lead was filtered off and the filtrate evaporated to dryness with the addition of a small quantity of Potass Carbonate (to render the Morphine <sup>soluble</sup> ~~soluble~~) the residue taken up with rectified spirits again evaporated to dryness and again taken up with rectified spirits. The solution now is practically free from organic matter and the following tests were used-

Nitric Acid produced a deep orange red color fading to yellow.

Iodic Acid and Chloroform produced a pink color on adding Ammonia the supernatant watery solution acquired a <sup>dirty</sup> brown color.

Potass Ferri-cyanide and neutral Ferric Chloride produced a deep prussian blue colour.

A separate portion of 290 cc of the solution was treated exactly as above and the crystals of morphine were separated out with ammonia. The crystals were treated with absolute alcohol to make certain of their purity, dried and weighed. These crystals were subjected to examination with the microscope and found to be similar to those shown in Fig. 19-20 page 189 - Taylor's (American) and on testing these crystals with

Nitric Acid produced a deep orange red color fading to yellow.

Iodic Acid & Chloroform produced a pink color the supernatant watery solution acquiring a brown color on addition of Ammonia.

Potass Ferri cyanide and neutral ferric chloride produced a deep prussian blue.

*Refined  
Grains 50  
2050  
Alcohol*



3.

CRYSTALS of Morphia were separated out from Morphine Sulphate under the same conditions and on examination with the microscope were found to be exactly the same as the crystals of Morphia separated from the Brain.

Analysis finished March 11th. 08.

Total Solution in Dessicator 450 cc

" Formaldehyde solution ~~200 cc~~  
~~6.50~~

280 cc = 131 grain

Nitric acid Test:

Layton Butcher

deep orange red colour. warm till red color turns to yellow. dilute with a little warm water and add gradually a fresh sol<sup>n</sup> of Sodium Thiosulphate the color does not change to violet (distinction from brucine)

Morphine is the chief poisonous alkaloid of opium from which it yields 5 to 20%

Morphine Crystallizes in fine white prisms

Sulphuric acid and potash Bi Chromate <sup>immediately</sup> gives green color from the production of chromic oxide, and retains its color for sometime. other alkaloids are not thus affected - Narcotine is turned a bright yellow on adding  $H_2SO_4$ . on adding Bi Chromate of potash. it becomes green but rapidly becomes a dingy brown opium

Meconic Acid in ~~Opium~~ = 3 to 10%

Stychnine =  $H_2SO_4 + K_2Cr_2O_7$  = Blue then quickly violet then red

$H_2SO_4 + K_2MnO_8$  = violet colour



Separate tests were made for Arsenic and  
Strychnine - Arsenic = Reichen's test

Raw meat was treated under same conditions  
as Stomach contents - results negative

White Seal - Moist ~~Ex~~ Chandon - Alcohol = 10.23% <sup>By weight</sup>  
Whisky = 45% By weight  
Beer = 4.63 "

Comporation tests were made alongside of  
Morphine

Cocaine will not reduce Iodic Acid  
less Morphine (Blowman 757)

Formaldehyde does not interfere with tests

Synth Molybdate acid produces no change  
on Hydrate of Chloral

Morphine Sulfate was crystallized

under same conditions as Brown

Fig 18-20 - page 108 Fig 20r  
Yes! Sulfate with  
H<sub>2</sub>SO<sub>4</sub> - Iodic Acid - H<sub>2</sub>O 96 & 72 46



### Ptomain's

Are alkaloids generated during decay, and closely resembling the vegetable alkaloids, not only in their physiological effect, but also in their chemical reaction.

Since ptomaines present in general the leading properties, physical and chemical of the vegetable alkaloids such as veratrine, Scurphine & Codeine, they may readily be confounded with these. The proper mode of distinguishing between the two classes of bodies is to determine all the chief chemical and physical properties of the isolated base and to compare these with those of the vegetable alkaloids, whose presence is suggested



Alkaloid = a nitrogenized substance of vegetable origin, possessing in some degree the properties of an alkali

Albuminoid: a thick glairy substance which forms a constitutional principal of plants and animals, and exists nearly pure in the white of an egg and in the serum of the blood

Alkaloid. = The name of a group of organic bodies that possess alkaline properties

They are characterized by the property of combining with acids to form salts and many have the power of giving an alkaline reaction with vegetable colours

All the natural alkaloids contain Nitrogen as an essential constituent, and are especially marked by possessing great medicinal properties



MORPHINE IN BRAIN.  
ny .48 grain.

2 (169)  
1345-

Page 1.

1st. Portion was treated with rectified spirits acidulated with Acetic Ether (this dissolves any Morphine present also a small quantity of albumnoids) the solution was then pressed through muslin (to separate the ~~course~~ <sup>Coarse</sup> organic matter) and evaporated almost to dryness, taken up with water and treated with a solution of Acetate of Lead (the ~~to~~ precipitates albumnoid and any Meconic Acid present) warmed and filtered, the filtrate was treated with H.2 S. gas (to precipitate excess of lead also albumnoids) filtered, the filtrate evaporated almost to dryness (this renders any albumnoid present practically insoluble) taken up with rectified spirits ( this dissolves out the Morphine) again evaporated to dryness and taken up with rectified spirits and tested.

2nd. portion was treated as above with alchhol and Acetic Ether, filtered, evaporated, treated with H.2 S. gas, precipitate filtered, the H.2 S. gas boiled off and the solution evaporated to dryness with potassium carbonate (this renders the Morphine more soluble if possible) taken up with alcohol, again evaporated to dryness and taken up with alcohol and tested.

Tests used:-

Nitric Acid produces a deep orange red color changing to yellow, on adding sodium Theosulphate, no change (Brucine changes to violet).

IODIC ACID and choloroform - produce a pink color and on adding ammonia to this the pink color was discharged and the solution became of a dirty brown color (A.S.Taylor Twelfth American Edition by Clark Bell page 190 - on adding Ammonia the pink color is discharges and the solution aquired a deep brown color. This reation distinguishes Morphine from all other ~~albumnoids~~ <sup>alkaloids</sup> and from other bodies such as the sulphocyanids ( in saliva) which liberate iodine from Iodic Acid) Strength of Solution - 1 - of Iodic 2 of Chloroform.



ANTICEPTIC TABLET

*Mercuric*~~Mercuric~~ Chloride:-

## Tests Used-

*S*odium Hydrate gave a yellow precipitate.Potass Iodide " " scarlet precipitate soluble  
in excess.Staneous Chloride gave a white precipitate changing  
to gray.**XX**

A POISON is a substance which when taken into the mouth or stomach or when absorbed into the blood, is capable of effecting health, or of destroying life by its actions on the tissues with which it immediately on after absorbtion comes in contact.

PTOMAINS

Ptomains reduce Iodic Acid and with Chloroform give the pink color as in Morphine, but on adding Ammonia the solution becomes clear when ptomains are present, whereas a deep brown color indicates the presence of Morphine.

Ptomains - give with Nitric Acid a yellow color.

Morphine " " " " " deep orange red color  
fading to yellow.

Ptomains with potass Ferri cyanide and Neutral Ferric Chloride give the same reaction as for Morphine.

*Morphine Crystallizes in hexahedral prisms which are white and perfect according to their degree of purity*

