WITNESS STATEMENT

(CJ Act 1967, s.9; MC Act 1980, ss.5A(3) (a) and 5B; Criminal Procedure Rules 2005, Rule 27.1)

Statement of: ALLAN ALEXANDER RICHARD

Age if under 18: OVER 18 (if over 18 insert 'over 18') Occupation: FORENSIC SCIENTIST

This statement (consisting of 5 page(s) each signed by me) is true to the best of my knowledge and belief and I make it knowing that, if it is tendered in evidence, I shall be liable to prosecution if I have wilfully stated anything in it, which I know to be false or do not believe to be true.

Signed: A.R. ALLAN Date: 18/08/2003

Tick if witness evidence is visually recorded ☐ *(supply witness details on rear)*

Preamble

Further to my original statement dated the 21st July 2003 (21/07/2003) concerning the toxicological analyses on the post-mortem samples from Dr David KELLY , I have received a request to analyse a sample of water from a bottle found at the scene for any 'contaminants'.

I further clarify that in my original work, an analysis was carried out on the blood for volatile substances and that as nothing unusual was found, the left lung (item NCH/48) was not required for any further analyses of volatiles and was consequently returned to the police on the 22nd July (22/07).

I also wish to report the results of additional analyses on the vitreous humour for paracetamol and dextropropoxyphene and on the stomach contents for dextropropoxyphene.

Receipt of Item

On the 25th July 2003 (25/07/2003), the following item, amongst others, was received at the laboratory from Thames Valley Police, Didcot:

AMH 2/1 Liquid decanted from AMH 2 (Evian Water Bottle)

(Page 1 Ends)

Purpose

I have been asked by the Thames Valley Police to analyse the liquid for the presence of any contaminants i.e. toxins that may have been added to the liquid.

Nature of Examination

The liquid sample (item AMH 2/1) was analysed for the presence of substances that could cause sedation or drowsiness including: barbiturates; benzodiazepine drugs (the group that contains diazepam and temazepam and low dose benzodiazepines such as flunitrazepam, lorazepam and lormetazepam); chemically basic drugs such as antidepressants, chloral and related compounds; dextropropoxyphene and antihistamines amongst a wide range of other substances; gamma-hydroxybutyrate (GHB); methadone; opiate drugs such as morphine and heroin; and zopiclone.

Further analyses were carried out for acidic drugs such as aspiring, ibuprofen and paracetamol; anions that may be toxic such as cyanide or chlorate, and a wide range of elements including those that could be toxic such as arsenic, thallium and mercury.

The acidity/alkalinity (pH) of the liquid was also tested to check for corrosive substances.

The stomach contents (item NCH/49) was further analysed for dextropropoxyphene, and the vitreous humour (plain - item NCH/53) for this and for paracetamol.

A sample of blood is to be analysed for beta-hydroxybutyrate at the Royal Hallamshire Hospital in Sheffield.

No other analyses were performed.

In carrying out this work I was assisted by other scientists and I have taken their contributions into account when preparing this statement. A full record of this work is

(Page 2 Ends)

available at the Laboratory, and statements can be prepared by the other scientists involved if sufficient notice is given.

This work was performed under Forensic Alliance Limited case reference number FAL-05969-03.

Results

AMH 2/1 'Liquid decanted from AMH 2 (Evian Water Bottle)'

This liquid consisted of 111 millilitres of clear colourless fluid with the appearance of water and having no unusual odour. The pH (acidity) was normal for water indicating that no corrosive material such as an acid or an alkali was present.

Apart from a trace of dextropropoxyphene, nothing else of significance was detected in the water.

NCH/49 Stomach Contents

These contained an estimated 19 milligrams of dextropropoxyphene. This is an estimated amount because the amount found was outside the calibration range of the test.

NCH/53 Vitreous Humour

The following results were obtained for these two analytes:

paracetamol	66 micrograms	per millilitre of humour
dextropropoxyphene	0.56 "	"

Commentary

AMH 2/1 'Liquid decanted from AMH 2 (Evian Water Bottle)'

The liquid AMH 2/1 appeared to be uncontaminated water; none of a very wide range of toxic substances was identified. A trace of dextroproxyphene was found and this is likely to have come from the co-proxamol in the mouth or saliva of the person

(Page 3 Ends)

drinking from the contents of the bottle. I cannot rule out the possibility that a trace of paracetamol was also present because the test for acidic drugs such as paracetamol is much less sensitive than the test for basic drugs.

NCH/49 Stomach Contents

The estimated 19 milligrams of dextropropoxyphene in the stomach contents is consistent with the residue of less than one co-proxamol tablet as stated previously. (See my statement dated 21st July 2003) (21/07/2003).

NCH/53 Vitreous Humour

The vitreous fluid is the fluid behind the lens in the eyeball and has an aqueous composition with polysaccharides also present and is therefore comparable with serum. Because the vitreous fluid does not have a direct blood supply, the concentration of substances within it lags behind the changing concentration of those substances present in the blood plasma/serum having to pass from the one to the other. This period is typically about 1 hour for alcohol and may reasonably be expected to be similar for water-soluble drugs such as paracetamol. However because there is little data for paracetamol, caution must be used for any interpretation. Nevertheless the lower concentration of paracetamol in the vitreous humour as opposed to the blood seems to indicate that the blood concentration was still rising at death and that the vitreous concentration had not caught up. This tends to support the scenario that death had occurred before the paracetamol had been fully absorbed, and further supported by the fact that some of the co-proxamol still remained in the stomach contents.

Signed: A.R. ALLAN

Signature Witnessed by:

2006/07(1)

For drugs that are much less water soluble and more highly protein bound than paracetamol, such as dextropropoxyphene, the equilibrium may be more complex and the concentrations between the blood proteins, serum and vitreous will attempt to achieve equilibrium making the comparison between whole blood and vitreous more difficult than for the more water soluble drugs. Clearly if serum or plasma were available, this would simplify the comparisons, but as in most post-mortem samples haemolysis means that only whole blood is available for analysis. Again,

(Page 4 Ends)

notwithstanding these caveats the dextropropoxyphene levels appear to reinforce the scenario above.

Conclusions

1. Nothing unexpected was found in the liquid from the Evian water bottle.

2. The additional analyses on the stomach contents and vitreous humour support the scenario of death before all the co-proxamol had been absorbed.