

LGC Classification: RESTRICTED

Statement of Denise Stanworth

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Lab. Ref. LGC-14274854

PCRN: 5115490/14, SSRN: 2014/24269, URN: 14KG9110135536

Witness Statement

(Criminal Procedure Rules 2014, r. 27.2; Criminal Justice Act 1967, s. 9, Magistrates' Courts Act 1980, s.5B)

Statement of	Denise STANWORTH BSc (Hons)
Age	Over 18
Occupation	Forensic Scientist

with

LGC Forensics (a division of LGC limited)
Culham Science Centre, Abingdon, Oxfordshire, OX14 3ED

This statement, consisting of 7 pages 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 in it anything which I know to be false or do not believe to be true.

Dated the 21st day of November 2014

Signature **Signature**

Qualifications and Experience

I am a Bachelor of Science (Honours) in physiology and biochemistry. I was employed for over 16 years by the Home Office Forensic Science Service as a forensic scientist specialising in the analysis of body fluids and other materials for the presence of alcohol, drugs and poisons. The analyses were commissioned mainly by police forces and H M Coroners. While in the Forensic Science Service I was designated an Authorised Analyst under the provisions of Section 16 of the Road Traffic Offenders Act 1988. Since September 1998 I have been employed by Forensic Alliance Limited, now LGC Forensics, in a similar capacity.

Case Reference Numbers:

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Nature of Examination

The blood was screened for the following commonly abused drugs and groups of drugs: amphetamine and related drugs; common benzodiazepines (the group of drugs that includes diazepam and temazepam); benzoylecgonine (the metabolite of cocaine); buprenorphine; cannabinoids (the active constituents of cannabis and cannabis resin); methadone; opiate drugs such as morphine and codeine and for chemically basic drugs including antidepressants, common antihistamines such as chlorphenamine, certain antipsychotic drugs, centrally acting painkillers such as tramadol, fentanyl and ketamine, certain hypnotic drugs such as zolpidem and zopiclone, methylamphetamine, 3,4-methylenedioxymethylamphetamine (MDMA, "Ecstasy"), piperazines, mephedrone and methylone, amongst a wide range of other drugs.

The blood and urine were analysed for alcohol and specifically for gamma-hydroxybutyrate (GHB). The blood was then analysed more specifically for diphenhydramine and mephedrone, together with a range of amphetamine-related substances. No further analysis was carried out on the blood and urine.

The gastric contents consisted of a small quantity of a dark brown liquid with some solid material that had the appearance of food particles. The item was not examined further.

The vitreous humour was not examined.

Results

The following substances were detected at the concentrations stated:

Blood

Alcohol	low concentration detected (less than 10 milligrams per 100 millilitres)
GHB	254 milligrams per litre
Mephedrone	0.17 milligrams per litre
Diphenhydramine	0.090 milligrams per litre
Caffeine	detected
Nicotine	detected

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Urine

Alcohol	18 milligrams per 100 millilitres
GHB	detected (greater than 800 milligrams per litre)

None of the other substances listed under Nature of Examination were detected in the blood.

Comment

These comments are based on the reading and interpretation of scientific and medical literature, and should be viewed as general comments only, as I am unable to determine precisely how alcohol or drugs will affect a particular individual at a given time. In addition, it is not possible to determine from analytical measurements on single samples precisely when drugs or alcohol were taken, nor the exact amount taken. The comments are based on the information provided and I may have to revise my comments if any of the information should change.

In the comments that follow I have assumed that the concentration of drugs detected in the blood represents the situation at the time of death. However, due to post-mortem redistribution of the drugs after death this may not necessarily be so. The effects of post-mortem redistribution are usually minimised by taking the blood sample from an isolated peripheral blood vessel such as the femoral vein.

Alcohol

The concentration of alcohol detected in Mr Whitworth's blood and urine is very low and could be the residue of alcohol consumed some considerable time before death. Such a concentration would not have been exerting a significant effect at the time of death.

Gamma-hydroxybutyrate (GHB)

GHB is an anaesthetic drug with primarily sedative properties originally developed as a premedication prior to surgery. It gained popularity in the 1980's among body builders for its ability to stimulate muscle development. It has recently gained popularity as a recreational drug particularly on the dance and club scene and has also been implicated in 'date-rape' incidents.

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GHB is usually found in a liquid form popularly known as 'liquid ecstasy' or 'G' but is also sold as a powder or in the form of capsules. It is normally taken in doses of one teaspoon, containing up to 5 grams, which may be dissolved in a drink.

At low doses GHB is reported to produce euphoria, to lower social inhibitions and to increase libido. At higher doses euphoria gives way to sedation which may lead to unrousable sleep. Dizziness, nausea and vomiting, amnesia and visual disturbances have also been reported. These effects, which are similar to those of alcohol, start about 15 minutes after administration and may last for several hours. Larger doses produce anaesthesia and may lead to coma and respiratory depression.

The concentration of GHB in this case lies within the range of reported values in a number of deaths attributed to GHB overdose.

Mephedrone

Mephedrone is a stimulant drug similar to the plant alkaloid, cathinone, found in the Khat plant (*Catha edulis*). It is often referred to as MCat or Meow Meow and was originally marketed in the form of a powder as 'plant food' or 'bath salts'. Such powders may often contain other related substances. Mephedrone is now a Class B controlled drug under the Misuse of Drugs Act 1971.

The stimulant effects of mephedrone use include euphoria and a feeling of well-being towards others, sweating, hyperactivity and restlessness and have been reported to last for several hours. As the stimulant effects wear off the 'come down' effects take over; these may include exhaustion, drowsiness and depression. There is limited information regarding the concentrations in blood generally encountered following use of this drug but the concentration measured in this case is likely to reflect the use of abuse amounts.

Diphenhydramine

Diphenhydramine is an antihistamine drug used for the symptomatic relief of allergic conditions and as an anti-emetic in the control of nausea and vomiting such as that experienced in motion sickness. It has pronounced sedative effects and is also used in the short term management of insomnia in preparations such as 'Nytol'. Diphenhydramine is also present in many cough and cold remedies.

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