

414 F.Supp.2d 472 (2006)

UNITED STATES,
v.
Richard BENTHAM, Defendant.

[No. 03 Cr. 328\(JSR\).](#)

United States District Court, S.D. New York.

February 15, 2006.

Margaret Garnett, Assistant United States Attorney, Southern District of New York, New York City, for Plaintiff.

Robert M. Baum, Federal Defenders of New York Inc., New York City, for Defendant.

OPINION AND ORDER

RAKOFF, District Judge.

Defendant Richard Bentham is charged with various violations of the conditions of his probation, to wit, failure to satisfy his restitution obligation; use of cocaine on or before September 8, 2004, August 1, 2005, August 8, 2005, and January 6, 2006; use of marijuana on or about July 30, 2005 and November 14, 2005; and frequenting places where controlled substances are illegally sold or used on or about July 30, 2005. Defendant admits to the use of marijuana on or about July 30, 2005 and to the use of cocaine on or about September 8, 2004 and January 6, 2006; but he denies in one respect or another the other charges. In particular, with respect to the charges that he used cocaine on or about August 1, 2005 and August 8, 2005, defendant, while conceding that the "sweatpatch" tests he took around those dates tested positive for cocaine, asserts that these must be so-called "false positives," [473*473](#) since he did not in fact use cocaine at any time during this period.

Because resolution of the August 2005 cocaine charges (unlike the other denied charges) might well be material to any overall sentence the Court might impose, the Court conducted an evidentiary hearing on the August 2005 cocaine charges, at which the Court heard testimony not only from witnesses to the immediate events in issue, namely, Probation Officer Shevell Rudolph, Probation Officer Kyle Crayton, and the defendant himself, but also from competing experts, namely Dr. Leo Kadehjian and Dr. Fred Smith. Based on that testimony, the parties' written submissions and oral arguments, and other relevant materials, the Court makes the following findings of fact and conclusions of law.

False positives — that is, inaccurate incriminating test results — are endemic to much of what passes for "forensic science." See Michael J. Saks & Jonathan J. Koehler, *The Coming Paradigm Shift in Forensic Identification Science*, 309 Science 892 (2005). Polygraph tests, for example,

are so unreliable as to be inadmissible in most courts. See [*United States v. Scheffer*, 523 U.S. 303, 311-12, 118 S.Ct. 1261, 140 L.Ed.2d 413 \(1998\)](#). Even the "gold standard" of forensic testing, DNA tests, may, because of human error, prove fallible. See Paul C. Gianelli, *Crime Labs Need Improvement*, Issues in Sci. & Tech. (Fall 2003). In the instant case we are concerned with a relatively new test: sweatpatch testing for cocaine. The Court concludes that it may sometimes be fallible, but probably not in this case.

The cocaine sweatpatch here in issue, marketed by PharmChem, Inc., is composed of an absorbent pad and an outer membrane. After the skin is cleaned with alcohol, the patch is applied to the wearer's forearm or to his back above the shoulder blade, and the absorbent pad collects the wearer's sweat, as well as any drugs or metabolites in the sweat, over a period of a week or more. The outer membrane is designed to protect the pad from external contamination while allowing water vapor to pass through the membrane, thereby increasing the wearer's comfort and allowing for long-term wear. See Def. Ex. 3500-C, David A. Kidwell & Frederick P. Smith, *Susceptibility of PharinChek Drugs of Abuse Patch to Environmental Contamination*, 116 Forensic Sci. Int'l 89, 89; see also transcript, 10/12/05, at 62-63. The patch has been "cleared" by the Food and Drug Administration for use as a drug testing device and is used widely in the criminal justice system because of its perceived advantages over other forms of drug testing, e.g., its non-invasiveness, resistance to intentional adulteration, and ability to detect drug-use over relatively long periods. *Id.* at 90; Def. Ex. 3500-D, D.A. Kidwell *et al.*, *Comparison of Daily Urine, Sweat, and Skin Swabs among Cocaine Users*, Forensic Sci. Int'l (2003); see also transcript, 12/15/05, at 10-13.

Although the sweatpatch test has not been the subject of a great many, studies, most of the studies thus far support the reliability of the sweatpatch test as a method for detecting drug use. See Kidwell & Smith, *supra*, at 89-90 (discussing the literature); see also transcript, 12/15/05, at 11, 16-17. A few studies, however, suggest that the sweatpatch test may be susceptible to contamination that may produce false positive results. Such contamination ultimately results either from the presence of cocaine on the skin prior to application of the patch, known as "contamination from within" (or "CFWI"), or exposure of the patch's outer membrane to cocaine, known as "contamination from without" (or "CFWO").

[474*474](#) As to CFWI, some studies indicate that applying small amounts of cocaine to skin that has been cleaned with alcohol can result in levels of cocaine remaining on the skin sufficient to produce a positive sweatpatch result when the patch is applied as late as seven days later. Kidwell & Smith, *supra*, at 99-100; see also transcript, 1/10/06, at 109-13. As to CFWO, the same studies indicate that when cocaine in a basic solution is applied to the outside of a patch that has been internally wetted with artificial sweat, the drug may permeate to the inside of the patch where it will then produce a positive result. Kidwell & Smith, *supra*, at 93-96; see also transcript, 1/10/06, at 100-07.

While these studies indicate that false positives may occur in use of the sweatpatch test, the extent of the actual risk of false positives is much harder to estimate, because the conditions under which the studies generate false positives do not readily correspond to "real world" conditions. As to the CFWI test, the application of alcohol to the skin prior to adding the cocaine enhances the likelihood of contamination by removing the protective outer lipid layer of the skin,

thereby making it more likely that drug residue will penetrate to a level where it is more difficult to remove by subsequent cleaning. *See* transcript, 1/11/06, at 191-92. As to the CFWO test, the conditions under which it evidences contamination, *e.g.*, where artificial sweat was applied to the inside of the patch and cocaine in a basic solution was applied to the outside of the patch, are unlikely to be replicated in "real life."

So far as expert testimony is concerned, therefore, the Court concludes that, on the one hand, the possibility of false positives cannot be ruled out when sweatpatch tests are used, but that, on the other hand, the experimental conditions in which false positives have been shown to exist do not directly correspond to everyday circumstances. Mr. Bentham alleges, however, that his activities in the period of late July and early August 2005 were such as to bring him into unknowing contact with cocaine users in ways that were sufficiently analogous to the CFWI and CFWO conditions as to create the possibilities of false positives in his case. Specifically, the defendant argues that there is evidence that his sweatpatches came loose during the relevant period and that, during the same period, he had intimate sexual contact with a person he only later learned was a cocaine user and also had more casual "touching" contact — as through dancing, clubbing, and beach partying — with numerous other persons, some of whom might have been cocaine users. Transcript, 1/10/06, at 30-37.

At the hearing, the experts were in disagreement as to whether such contacts could have led to false positives in Mr. Bentham's tests. The Court finds it unnecessary, however, to resolve that dispute because it finds that the defendant's testimony — on which this defense rests — is insufficiently reliable to justify the Court in accepting defendant's account of the underlying circumstances.

In reaching this conclusion, the Court takes note, *first*, of the defendant's prior history of doubtful representations to this Court. Thus, when first confronted with his having tested positive for cocaine in August 2005, he told his probation officer that his use of the drug amwdcillin was responsible for the positive test result. *See* transcript, 10/12/05, at 15. However, he was unable to provide any documentation to substantiate such use, *id.* at 16-17, and ultimately he abandoned this explanation altogether. More recently, on January 6, 2006, when the defendant was scheduled to testify before the Court in this matter, he advised the Court that he was delayed because he had overslept and [475*475](#) because of train delays, and, after appearing several hours later, allowed his counsel to advise the Court that he was experiencing flu-like symptoms. Transcript, 1/6/06, at 2, 7. But after being required to take a urine test later that afternoon that reported positive for cocaine, the defendant admitted to having used cocaine the previous day, thus evidencing that his previous explanations were, at a minimum, materially misleading.

Second, the defendant's testimony relevant to the specific circumstances here in issue strikes this Court as strained and improbable. Having tested positive for cocaine not once but twice in early August, in tests involving two separate sweatpatches, the defendant wants the Court to believe that, on the one hand, he was cocaine-free and was avoiding persons whom he knew used cocaine and places where he knew cocaine was distributed, *see* transcript, 1/10/06, at 26, 33, 43, but that, on the other hand, he still managed to have sex with someone whom he later learned was using cocaine, *id.* at 31-33, and also associated at the beach and at clubs with other persons

he now believes may have included cocaine abusers. Taken as a whole, the story seems too convenient.

Third, although as a result of hearing the defendant testify, the Court developed some sympathy for him as a human being, his demeanor did not impress the Court as that of a fully candid person. If anything, it gave rise to an adverse inference.

In reaching these somewhat negative conclusions about the defendant's credibility, the Court is mindful that the defendant has admitted to drug use on some past occasions, most recently in January 2006, and one might therefore wonder why he continues to deny the August 2005 uses. However, when the defendant was confronted with the positive sweatpatch test results in August 2005, it had been nearly a year since he had last tested positive for cocaine, and at that point it was strongly to his advantage to claim that his drug use was a thing of the past. Having then denied the August 2005 uses, he was effectively locked into the story even after his January 2006 test reported positive for cocaine.

The burden of proof, of course, lies with the Government; but since this is a probation violation, the burden is to prove the violation by a preponderance of the credible evidence. The Government's proof that defendant twice tested positive for cocaine in August 2005 is undisputed; and the defendant has not come forward with sufficiently credible evidence to cast material doubt on the accuracy of those results.

Accordingly, the Court finds the defendant guilty of the use of cocaine on or about August 1, 2005 and August 8, 2005. Sentencing on this and on the other charges defendant admitted will go forward as scheduled on February 16, 2006 at 5:30 p.m. The other open charges will be dismissed.

SO ORDERED.