

IN THE COURT OF COMMON PLEAS OF LYCOMING COUNTY, PENNSYLVANIA

COMMONWEALTH OF PENNSYLVANIA

v.

**HAKIM HOPKINS,
Defendant**

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**No. 948-2012
CRIMINAL DIVISION**

OPINION AND ORDER

The Defendant filed a Motion in Limine on May 17, 2013. A hearing on the Motion was held August 6, 2013 and September 20, 2013.

Background

On April 9, 2012, Sergeant Chris Kriner (Kriner) of the Old Lycoming Township Police Department was dispatched to the Days Inn in South Williamsport to assist Officer Keeler of the South Williamsport Police Department. Dashika Wilson's (Wilson) father had called police and was concerned that his daughter was not being permitted to leave a hotel room by her boyfriend. As a result of an interaction with Hakim Hopkins (Defendant) at the hotel and observations from a vehicle used by him and Wilson, Kriner suspected that the Defendant had been involved in a previous assault and/or home invasion. After obtaining consent to search the vehicle by Wilson and her father, Kriner found various items of contraband including a suspected stolen TV, firearms, and crack cocaine.

In addition to the contraband being found, police seized U.S. currency during the search of the vehicle found on the Defendant and in Wilson's purse. This currency was placed in a bag and sealed by Sergeant James Taylor of the South Williamsport Police Department. On August 9, 2012, testing using an IONSCAN device was performed on the seized currency. The currency tested positive for the presence of cocaine in a higher concentration than that of mere casual

contact based on the Pennsylvania National Guard's casual contact average for 2012. In other words, it was determined that the currency possessed by the Defendant had more cocaine on it than the average currency in circulation within the Commonwealth of Pennsylvania.

On August 6, 2013, Sergeant Joshua Cesavice (Cesavice) testified about the IONSCAN device, the determination of the casual contact average for 2012, and performing the actual IONSCAN of the currency in this case. The IONSCAN testing is performed by the operator using a wand with an applicator to collect a sample from a location or object. Although the device has other testing uses, when testing currency for the presence of a controlled substance the bills are spread out on a table and the edges of the bills are run over with the applicator at the end of the wand. The applicator is then placed into the airflow of the IONSCAN device and within seconds the device alarms as to whether it has detected the presence of any of the compounds it was seeking to find, depending upon the detection library programmed into the device. In this case, the IONSCAN device was set to detect approximately ten (10) different types of narcotics, including cocaine.

When attempting to detect narcotic compounds on currency one challenge presented is that normal currency already has a typical amount of certain compounds found on it. According to Cesavice, narcotics or explosives are found on eighty (80%) to eighty-seven percent (87%) of currency. In order to determine what the average amount of each compound found on currency could be, the Pennsylvania National Guard tests currency provided by both banks and casinos throughout the Commonwealth with an IONSCAN device. The average from these results is used to determine the casual contact levels to be found on currency within Pennsylvania. Further, the casual contact levels are determined annually to ensure they stay current. For example, in 2007, 2008, 2010, and 2012 the casual contact levels for cocaine were 219.29 digital

units, 277.43 digital units, 269.05 digital units, and 275.28 digital units respectively. The casual contact levels are then used to determine whether currency obtained through criminal investigations possess greater than the normal amount of a certain narcotic, supporting the inference that the currency was involved with the delivery or packaging of controlled substances.

In this instance Cesavice testified that he personally tested the currency at issue with the IONSCAN device. Before the currency was tested, Officer Ed Lucas' hands were tested to make sure the device would not give out a false positive. Cesavice ran the applicator over the officer's hands using a wand and then placed the applicator into the IONSCAN device. The IONSCAN of the officer's hands resulted in no alarms. The currency in question was then spread out and Cesavice ran the applicator over the edges of the currency. The IONSCAN device determined that the currency removed from the Defendant's person had twice the amount of cocaine found using the 2012 casual contact levels.

The Defendant filed a Motion in Limine challenging whether the IONSCAN's use was based upon generally accepted scientific principles, whether the process involved in the use of the IONSCAN was done in accordance with standard operating procedures, and whether the casual contact average was sufficient to determine whether the currency had more than the average amount of cocaine. As the Court believed it needed to hold a Frye hearing, an additional hearing was scheduled to allow the Commonwealth provide the testimony needed.

On September 20, 2013, Dr. John J. Carroll Ph.D (Carroll) and Dr. Timothy G. Strein Ph.D (Strein) testified regarding the scientific principles behind the technology of IONSCAN.¹ To use the IONSCAN device an object is initially swabbed by an applicator covered with an

¹ In short, IONSCAN is what is known as an ion mobility spectrometer, which identifies chemical substances using their ion mobility or drift times.

absorbent paper and the paper then placed into the IONSCAN device. The substance collected on the swab is heated which causes vapors to be created. The vapors created move through the IONSCAN device where they enter an ionization region. Those ionized vapors are given a charge from the beta radiation source Nickel 63. The charged ionized vapors then travel down a drift tube attracted by a voltage gradient with those ions directed to a collector. The time the ionized vapors take to travel down the drift tube to the collector is calculated and is called the drift time. Each compound, whether it is a controlled substance or an explosive, has a unique mobility concept or drift time and the manufacturer of the IONSCAN device has determined the drift time in their device for each compound being detected. The drift times for every compound is unique and if the IONSCAN device possess identification information for that compound in its library it will recognize its drift time and identify that compound as being present.

Whether the IONSCAN device was based upon generally accepted scientific principles

The Defendant initially challenged whether the IONSCAN technology was a generally accepted scientific principle. The Supreme Court of Pennsylvania adopted the Frye test, which requires that novel expert testimony or scientific evidence must be sufficiently established and accepted in the relevant scientific community to be admissible.² See Commonwealth v. Topa, 369 A.2d 1277 (Pa. 1977). Under Pa.R.E. 701, expert testimony is defined as scientific, technical, or other specialized knowledge beyond that possessed by a layperson.

The requirement of general acceptance in the scientific community assures that those most qualified to assess the general validity of a scientific method will have the determinative voice. Additionally, the Frye test protects prosecution and defense alike by

² The Frye test is not implicated every time science comes into the courtroom but only when involving a novel science. “What constitutes novel scientific evidence has historically been decided on a case-by-case basis, and there is some fluidity in the analysis; indeed, science deemed novel at the outset may lose its novelty and become generally accepted in the scientific community at a later date, or the strength of the proponent’s proffer may affect the Frye determination.” Commonwealth v. Dengler, 890 A.2d 373, 382 (Pa. 2005).

assuring that a minimal reserve of experts exists who can critically examine the validity of a scientific determination in a particular case. Since scientific proof may in some instances assume a posture of mystic infallibility in the eyes of a jury of laymen, the ability to produce rebuttal experts, equally conversant with the mechanics and methods of a particular technique, may prove to be essential.

Id. at 1282. The Frye test has continued to be applied in Pennsylvania Courts and not the newer federal standard adopted by the United States Supreme Court in Daubert. See Blum ex. Rel. Blum v. Merrell Dow Pharmaceuticals, Inc., 764 A.2d 1 (Pa. 2000); Commonwealth v. Chmiel, 30 A.3d 1111 (Pa. 2011).

The scientific principle behind an IONSCAN device is actually called Ion Mobility Spectrum (IMS). Carroll testified that IMS has been used by the scientific community for approximately thirty (30) years. In addition, there is a Journal of IMS and a textbook solely on the topic of IMS, which is currently publishing a third edition. The principles of IMS are used by multiple competing manufactures to produce IMS detectors. IONSCAN is the trademark and name of the IMS detector made by Smiths Detection, a company that was formed in 2000. The model of the IONSCAN device in this case is a 500DT, which is the most current generation made by Smiths Detection. Carroll testified that the technology and its use in narcotic detection are generally accepted in the scientific community.

In addition, Strein further testified regarding the technology used in IMS detectors. The IONSCAN device in this case works with compounds by placing them in a gas phase, while Strein does research extensively with IMS used in the liquid phase. Both technologies use the same fundamental scientific principles. Strein also discussed how the number of peer review articles about IMS had increased significantly since its inception approximately thirty (30) years ago and that the technology is used extensively in explosive detection. While Strein did have reservations about an IMS detector's ability to determine exact amounts of substance or

quantitative numbers, he found that the technology is generally accepted in the scientific community for detecting compounds and for determining if a compound is found in larger amounts than normally found.

Finally, IMS detectors are widely used throughout the United States. The Pennsylvania National Guard has had a program using IMS detectors since 1997. In addition, the IMS detectors are used by the TSA, Homeland Security, D.C. Federal Police, prisons, and all the branches of the military for explosive and chemical testing. Cesavice further testified that the National Guard's program supports IMS detector use for the FBI, DEA, ICE, Pennsylvania State Police, and many local municipalities.

Following the Frye hearing, the Defendant conceded to the issue of whether the IONSCAN device and IMS are generally accepted scientific principles. Defense counsel, however, strenuously opposed the scientific principles during the hearing. Based upon the hearing, the Commonwealth provided more than sufficient evidence for this Court to find that the IONSCAN device and IMS are based on generally accepted scientific principles.

Whether the IONSCAN of the currency in this case was done according to standard operating procedures

The second issue raised by the Defendant was whether the IONSCAN testing of the currency was done in accordance with standard operating procedures. As stated above, the device was tested on an officer's hands prior to the currency to determine whether the device was working properly and would not issue a false positive. After the results verified that the IONSCAN was properly working the currency was tested. The currency was spread out and the edges were run over with the applicator. Only the currency found on the Defendant was alerted for cocaine and not the currency found in Wilson's purse. Further, Carroll reviewed the results

from the IONSCAN and testified that the device was working properly. Following the hearing the Defendant withdrew his challenge of the operating procedures in this case. Therefore this Court finds that the testing using this drive was done in accordance with standard operating procedures.

Whether the casual contact average was sufficient to determine whether the currency had more than the average amount of cocaine

The last issue raised by the Defendant was whether the casual contact average for 2012 was sufficient to determine that the currency had more than the average amount of cocaine. The main reason that the Defendant contends that the casual contact average is insufficient is because no currency from Philadelphia County was used in the calculation. The casual contact average for 2012 was calculated by using the following counties: Alleghany; Butler; Dauphin; Lancaster; Lehigh; and Reading. The Commonwealth argues that the Pennsylvania law has established that casual contact averages are distinct per state and not by county. Defense counsel argues that since the Defendant was from Philadelphia, the comparison numbers should be from Philadelphia.

This Court finds the Commonwealth's argument persuasive and that casual contact levels are not county specific. In \$9,000 United States Currency, the Commonwealth Court of Pennsylvania addressed the issue of casual contact levels from other states. Commonwealth v. \$9,000 United States Currency, 8 A.3d 379 (Pa. Commw. 2010). The Commonwealth Court found that the Commonwealth never offered evidence that the money seized was ever circulated in Pennsylvania and that the casual contact levels of New York and West Virginia should have been identified even if they were similar. The Pennsylvania Courts have evaluated the casual contact levels based on the state the currency was circulated and not each individual county. See

also Commonwealth v. \$15,000 United States Currency, 31 A.3d 768 (Pa. Commw. 2011);
Commonwealth v. \$310, 020.00 United States Currency, 894 A.2d 154 (Pa. Commw. 2006);
Commonwealth v. Burke, 49 A.3d 542 (Pa. Commw. 2012).

Here, the Defendant is not challenging whether the correct state is being used but only whether the number used for Pennsylvania is appropriate because it does not include Philadelphia County. The Court finds that the casual contact average for Pennsylvania was appropriately calculated. While Philadelphia County is not included in the calculation for the 2012 average, it included counties with the cities of Pittsburgh, Harrisburg, Lancaster, and Allentown. Further, any prejudice that may have resulted from the omission of Philadelphia County is also limited by currency from casinos being included in the calculation for 2012.

In addition, the averages have stayed fairly close to one another over the years, regardless of the counties used to calculate the figure. For example, in 2007, 2008, 2010, and 2012 the casual contact levels for cocaine were 219.29 digital units, 277.43 digital units, 269.05 digital units, and 275.28 digital units respectively. The currency found on the Defendant was also twice the casual contact average for 2012 and not close to the average. The Court cannot see any reason why each and every county must be tested for an appropriate average and therefore finds that using the Pennsylvania casual contact average for 2012 as the standard was sufficient to determine that the Defendant's currency had more cocaine on it than currency found generally in circulation in Pennsylvania.

ORDER

AND NOW, this _____ day of November, 2013, based upon the foregoing Opinion,

the Court finds that both the IONSCAN device and IMS are based on generally accepted scientific principles. In addition, the Court finds that the casual contact average for Pennsylvania is the appropriate standard to be used to establish whether the currency found has more than the average amount of cocaine. Therefore, the Defendant's Motion in Limine is hereby DENIED.

By the Court,

Nancy L. Butts, President Judge

xc: DA
Peter Campana, Esq.