

**The Bill Blackwood  
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**Portable Breath Analysis**

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**A Leadership White Paper  
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## **ABSTRACT**

Breath analysis is relevant to contemporary law enforcement because it is easy to obtain and proves beneficial in court, offense reporting, public relations, and overall public safety. While the portable breath test (PBT) possesses several valuable uses to police, not every law enforcement agency uses the instrument. Use of a PBT not only serves as another sobriety task for alcohol related offenses, it can help identify a person suffering from a diabetic problem requiring prompt medical attention.

Evidence collected from the breath specimen fortifies an offense report, and portions of the findings are admissible in both criminal and civil court proceedings. A portable breath test instrument enables law enforcement officials to quickly and easily obtain a sample of breath from people believed to have consumed alcoholic beverages and are suspected of a criminal violation. However, the distinct odor present on the breath of a person consuming an alcoholic beverage resembles the odor emitted from the breath of a person suffering from a diabetic complication. Inadvertently arresting a person suspected of being intoxicated, who may actually be unknowingly troubled with a legitimate medical condition, can result in serious bodily injury or death and civil litigation.

A PBT is simple to operate, and it takes little time to retrieve a breath specimen. Providing officers with additional tools that enable them in investigating criminal offenses more efficiently can improve their performance on the street. Law enforcement agencies should equip street level patrol officers with portable breath test instruments.

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## INTRODUCTION

Within the scope of law enforcement, there comes a time when it is necessary to deal with people under the influence of alcohol. Specialized training was developed to identify and recognize intoxication. Documenting clinical and physical indicators of impairment fortifies a criminal case (Voas, Holder, & Gruenewald, 1997). Using a portable breath test instrument (PBT) helps peace officers with alcohol related offenses. From an offense involving driving while intoxicated to a minor consuming alcohol, a PBT can provide additional supporting evidence for a criminal case (Shults et al., 2001). Additionally, a stronger bond is created between parents of juveniles consuming alcoholic beverages and police by including the parents during the administration of the PBT instrument (Shults et al., 2001).

The operation of a PBT uses a few key components that quickly obtain a calculated measurement of alcohol concentration, and this can be extrapolated from a single sample of breath (Breakspere & Williams, 2009). A dry fuel cell installed inside a PBT detects the presence of ETOH as a person blows a sample of breath through a tube or mouthpiece attached to the instrument (Breakspere & Williams, 2009). The breath sample passes through an opening in the mouthpiece, which then exposes a portion of the breath to the dry fuel cell chamber (Breakspere & Williams, 2009). Excess breath passes through the tube and is not measured (Breakspere & Williams, 2009). The dry fuel cell chamber measures the breath alcohol content and displays the results with an LED screen located on the front of the instrument (Whitmore, 1987). After each breath specimen, the instrument purges the sample from the fuel cell (Breakspere & Williams, 2009). How long this process takes varies depending upon a

number of variables: individual PBT model, concentration of alcohol detected on breath, and the amount of force exerted during the sample (Whitmore, 1987).

A sample of breath needed in a PBT for a measurable sample lasts only a few seconds and does not require a forceful amount of breath (Whitmore, 1987). If the presence of ETOH is detected, the display screen will indicate a number above 0.000% breath alcohol content (Whitmore, 1987). The mouthpiece is then discarded and replaced with a new one, and the mouthpieces are individually sealed in separated packages. Changing out a new mouthpiece between each sample reduces the risk of spreading a communicable illness and ensures preservation of evidence (Simpson & Robertson, 2001).

Law enforcement agencies should equip street level patrol officers with portable breath test instruments. While working the street, patrol officers tend to encounter alcohol related offenses. Arming officers with the proper tools can increase the quality of the job by enabling them to write more detailed reports (Voas, Holder, & Gruenewald, 1997). Although PBT instruments also benefit criminal and civil cases, not all law enforcement agencies provide these tools to police officers. Reasons for not equipping officers with a PBT include confusion regarding its validity in court, lack of training, and a more common problem resulting from a lack of financial resources.

## **POSITION**

Alcohol leaves a familiar odor on the breath, especially when consumed in large volumes (US Department of Transportation, n.d.). Smell alone counts as only a single clue for indicating intoxication. People suffering from diabetes can have complications mimicking alcohol intoxication and often perform poorly with sobriety tasks (Mark,

1993). A diabetic person may have complications that appear as alcohol intoxication, including an odor on the breath resembling the smell of an alcoholic beverage (Bernstein, 2007). If the officer does not differentiate the symptoms of a diabetic complication from those of alcohol intoxication, an arrest may arise for a person actually requiring prompt medical attention. Inadvertently arresting a person troubled with diabetic problems can cause serious injury or death from the illness (Bernstein, 2007). An accidental death is an almost certain way to bring civil litigation against the arresting officer and the agency. Wrongful death lawsuits can devastate a local government budget.

Inside the lungs, small alveoli blood vessels collect oxygen and release the carbon dioxide gas waste (Meislich, Nechamkin, Sharefkin, & Hademenos, 2009). When alcoholic beverages are consumed, the ethyl alcohol (ETOH) is ultimately absorbed into the blood (Mark, 1993). When a person consumes alcoholic beverages, the alveoli releasing carbon dioxide gas also has trace amounts of ETOH (Meislich et al, 2009). It is when the body exhales that permits the PBT to retrieve a breath specimen to measure (Effros & Chang, 1993). The normal process of breathing is only one method of eliminating ETOH from the human body (Meislich et al., 2009). Other methods of eliminating ETOH occur through urination, sweat, and vomiting (Effros & Chang, 1993).

Acetone and Ketone molecules are found on the breath of a person suffering from a severe diabetic reaction (Bernstein, 2007). Actions on a physical level, made by these people, also resemble an intoxicated person (Bernstein, 2007). The molecule of ETOH is similar to the Acetone and Ketone molecules emitted from the breath of a

person having a severe diabetic reaction (Mark, 1993). The dry fuel cell will not indicate a reading with the presence of either Acetone or Ketone (Simpson & Robertson, 2001). When an officer tests the breath of a person suspected of being intoxicated and the results of the PBT indicate 0.000, this could be a warning sign of potential diabetic distress (Simpson & Robertson, 2001). Without the use of a PBT to help rule out the presence of ETOH, the officer may not realize the person is in any sort of danger (Karch, 2007). Diabetic conditions may also cause the victim to display actions mimicking indicators of intoxication (Bernstein, 2007). A reading of 0.000% should indicate to the officer to contact medical personnel immediately (Karch, 2007). A reading of all zeros indicates some other problem causing the behavior resembling intoxication (Karch, 2007).

Horizontal Gaze Nystagmus (HGN) can also be used to help rule out the possibility of a diabetic complications (Karch, 2007). In order to effectively administer HGN, the person must cooperate and follow instructions for the sobriety task (Karch, 2007). An intoxicated person unable to follow the directions to perform HGN will provide little to no scientific value for standardized field sobriety tasks (Simpson & Robertson, 2001). This presents a downfall for relying solely on the results of HGN because the person's behavior and actions prevent the administrator from noting the presence of nystagmus during the task. If the person does not have equal tracking or they have unequal pupil sizes, they are not a candidate for HGN (Karch, 2007). People with disabilities preventing them from being subjected to the standardized field sobriety tasks also make good candidates for the PBT (Karch, 2007). Environmental conditions may also hinder the effectiveness of sobriety checks (US Department of Transportation,

n.d.). Extreme temperature, adverse weather conditions, terrain, or even the presence of insect swarms can interrupt the evidence collected during a field sobriety task (Karch, 2007). The versatility of the instrument adds to the ease of use as well as being a supplemental field sobriety task.

When dealing with juvenile minor offenders, those people under the age of 17, officers may ultimately confront the parents of the offenders. When a formal breath test is administered through the Intoxilyzer 5000, parents are not permitted to be present during the process (Voas, Holder, & Gruenewald, 1997). With the PBT, parents can witness their offspring take the test and observe the measured detectable presence of an alcoholic beverage. Using a PBT in this manner may help fortify the public relations involving parents of juvenile offenders and law enforcement (Peak & Glensor, 2004). Samples provided by minors present at the party who show no indicators of consuming, a sample reading of 0.000%, also helps establish credibility for the PBT instrument (Simpson & Robertson, 2001). Parents can witness for themselves that the PBT instrument does not simply provide a series of numbers for anyone who provides a sample (Peak & Glensor, 2004). This can be especially useful when dealing with parents who tend to wholeheartedly believe every spoken word of their adolescent child compared to that of the officer (Peak & Glensor, 2004). Showing the parents the results creates better communication with the community, thus enhancing public relations (Peak & Glensor, 2004). Parents may also be encouraged to contact law enforcement when their child comes home and is suspected of drinking alcoholic beverages (Peak & Glensor, 2004). With a PBT, officers can collect a quick sample and create a stronger bond with the community.



## COUNTER POSITION

One reason that law enforcement agencies choose not to outfit their officers with the PBT is due to the cost (Simpson & Robertson, 2001). Financial constraints pose realistic concerns for all businesses, and law enforcement is certainly no exception. Early PBT models were more expensive, costing nearly \$2,000 per unit, and they were less efficient and less accurate (Breakspere & Williams, 2009). Accuracy of a PBT creates a source of controversy for some of the agencies that have chosen to not equip their officers with the device (Voas, Holder, & Gruenewald, 1997). Early models also required a longer timespan between breath specimens before a subsequent sample could be collected (Breakspere & Williams, 2009).

Due to an increase in technology, PBT models available today may be purchased for around \$150 to \$250 and have a higher degree of accuracy (Breakspere & Williams, 2009). New models are smaller in size, more ergonomically correct for the hands, and they have a quicker recovery time between breath specimens (Breakspere & Williams, 2009). The mouthpiece for each device is disposable to prevent the spread of germs and other communicable illnesses (Whitmore, 1987). To help save on the cost of replacement mouthpieces, purchasing large quantities of one thousand are \$350; however, they become much more expensive if only a few are purchased at a time (Simpson & Robertson, 2001).

Previously, original samples of the PBT were completely stricken from the courts as being invalidated scientific evidence (Shults et al., 2001). However, by using a PBT, officers can detail further information relevant to filing criminal charges, and the instrument also carries weight in civil court proceedings (Shults et al., 2001). In Texas,

when a person is arrested for driving while intoxicated, they are asked to provide a sample of breath, blood, or a sample of both (Simpson & Robertson, 2001). When a sample of breath is requested, the sample is collected with an Intoxilyzer 5000, a scientifically validated instrument issued by the State of Texas (Simpson & Robertson, 2001). Although the portable breath test is not as accurate as the Intoxilyzer 5000, the results are admissible in court with a lesser degree of evidentiary value (Shults et al., 2001). The Intoxilyzer 5000 is not a portable device and has a limited number of qualified operators, while the PBT may be administered on the side of the road, inside a home, and within a jail environment (Shults et al., 2001).

Administrative license revocation (ALR) civil cases may suspend the privilege to operate a motor vehicle (Breakspere & Williams, 2009). Rules of evidence for an ALR hearing are significantly different from requirements for criminal prosecution (Shults et al., 2001). When a suspect voluntarily provides a sample of breath with a PBT, the numerical value of the instrument can be used in an ALR hearing even though it will be suppressed in a criminal case (Simpson & Robertson, 2001). For a criminal case, the numerical results of the PBT are inadmissible; however, the officer may report that the instrument indicated intoxication (Simpson & Robertson, 2001). An officer may also video record the incident, so the jurors may view the suspect providing a breath specimen to the PBT instrument, whereas the Intoxilyzer 5000 sample is not video-recorded (Shults et al., 2001). Refusal to provide a sample of breath for the PBT has zero bearing on the administrative license revocation of the violator (Shults et al., 2001). A suspension of the driver's license occurs when the person refuses to provide a

sample of breath for the Intoxilyzer 5000 or if the provided sample exceeds the legal limit (Breakspere & Williams, 2009).

In the State of Texas, the legal age to consume alcoholic beverages begins at the age of 21 years. According to the Texas Alcoholic Beverage Code, a person under the legal age to consume alcoholic beverages is defined as a minor (US Department of Transportation, n.d.). The presence of an alcoholic beverage on the breath of a minor establishes probable cause for the criminal offense of consuming alcohol (Breakspere & Williams, 2009). Adding a sample of breath from a PBT strengthens the case for court (Shults et al., 2001). Current admissible evidence for the offense of consuming alcohol by a minor includes field sobriety tasks, odor of alcoholic beverage on breath, admission of drinking, presence of alcoholic beverages, and the PBT breath specimen analysis (Shults et al., 2001). Use of a PBT adds another link in the chain for developing probable cause for a warrantless arrest (Simpson & Robertson, 2001).

A defense lawyer typically makes attempts to discredit the credibility of the testifying officer through their training (Simpson & Robertson, 2001). Each component used to build probable cause for a driving while intoxicated charge is usually dissected by the defense, and training is often the key to affirming the observations of the arresting officer (Shults et al., 2001). An Intoxilyzer 5000 requires 40 hours of training certified through the Texas Commission on Law Enforcement Standards and Education (TCLEOSE), and subsequent training is required on an annual basis (US Department of Transportation, n.d.). Since the PBT is not scientifically validated for the courtroom, there is no mandatory training required (Shults et al., 2001). However, an agency looking to implement the PBT can provide training in compliance with TCLEOSE

records (Shults et al., 2001). Training records may also be subpoenaed to court and also help strengthen the prosecution's case (Shults et al., 2001). Introducing the TCLEOSE training records for an officer may improve the credibility on the stand (Breakspere & Williams, 2009).

## **RECOMMENDATION**

Outfitting police officers with resources designed to perform their duties more effectively helps make their patrol shift occur with greater ease and increased accuracy (Simpson & Robertson, 2001). The use of a PBT is one such resource and is a valuable tool for the patrol officer. Courtroom testimony also benefits the prosecution of both civil and criminal cases involving alcohol related offenses (Breakspere & Williams, 2009). In addition to assisting the officer with intoxication offenses, the quality of reports becomes more solid. Parents of juvenile offenders consuming alcoholic beverages may be given an opportunity to observe the taking of or actual results of the PBT instrument, creating a tighter bond with the community (Peak & Glensor, 2004).

A peace officer swears to serve and protect human life, and the PBT helps recognize when a person may be in desperate need of immediate medical attention from a diabetic reaction (Breakspere & Williams, 2009). Helping to save the life of a person needing medical care can help reduce civil litigation incurred from arresting the person because their actions mirrored intoxication (Voas, Holder, & Gruenewald, 1997). Costs of PBT instruments have become less expensive, making it easier to obtain for those law enforcement agencies working with tighter budgets (Breakspere & Williams, 2009). Training for the PBT can help support the integrity of the instrument and the credibility of the officer testifying on the stand (Shults et al., 2001). Documentation of

the training can be completed through TCLEOSE so that a formal training record may easily be obtained in court (Shults et al., 2001).

Law enforcement agencies should equip their officers with as many tools possible to help them perform their duties. A PBT is one tool that can significantly improve an officer's abilities in investigating offenses involving alcohol related crimes (Breakspere & Williams, 2009). If only one life could be saved from the use of a PBT, no amount of monetary value could be assigned to such an event.

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