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Zero Tolerance Alcohol Testing

Intoximeters' view on setting a minimum threshold

Since some employers and state agencies have chosen to consider any non-zero reading as a positive alcohol test result, Intoximeters is frequently asked about the significance of alcohol test results that fall between .000 BrAC and .020 BrAC.

When setting minimum thresholds, a policy maker should consider:

1. National Highway Traffic Safety Administration (NHTSA), the federal agency which approves Evidential Breath Testing devices (EBTs) only requires that EBTs produce consistent and accurate results at the .020 level and above in order to meet their evaluation criteria. During NHTSA's approval process, EBTs are not evaluated at lower levels (below .020).
2. Many over-the-counter products and prescribed drugs contain alcohol. Under DOT regulations and due to the safety sensitive nature of the regulated jobs, consumption of these products is prohibited.
3. Blood alcohol concentrations are generally reported in two digits (e.g., .00). The DOT rules only require a two digit result for breath alcohol readings. The significance of the third digit (.00X) on results below .010 can be questioned.

The following is some general information about "zero tolerance" testing with Intoximeters EBTs:

Assuming that a collection of breath has been performed according to the DOT protocol, which includes a fifteen minute deprivation period prior to the Confirmation Test:

1. The lowest level of alcohol which can be detected by one of our EBTs is .001 BrAC. However, most of our EBTs do not report results on subject samples below .004.
2. An instrument which is operating properly and is calibrated correctly can accurately detect ethyl alcohol at the .004 and .005 level. However, it could be argued that if a reading of .005 BrAC or below was used as the threshold for determining positive alcohol concentrations, the results at these low levels could be challenged for statistical significance. Testing done by NHTSA for U.S. DOT to establish the acceptability of a device for use as an evidential instrument only requires that the instrument be within the greater of 5% or ±.005 BrAC. By using .020 as a minimum alcohol threshold, the results reported by all of our approved instruments fall within the veil of the NHTSA approval process.
3. It is important to understand that most of our fuel cell based instrumentation does not discriminate between ethyl, methyl and isopropyl alcohol. If present in the sample, any of the three will be detected by the instrument. Note: DOT rules define alcohol as ethyl alcohol or other low molecular weight alcohol including methyl and isopropyl.)
4. Our instruments meet and exceed the requirements for evidential breath test devices as determined by the U.S. National Highway Traffic Safety Administration's Model Specifications. (We can provide you with a copy of the results from the NHTSA trials for a specific approved instrument upon request.)

Summary

In general, .020 BrAC is a prudent and established threshold for "zero tolerance". Instruments that have been tested and approved at this level are listed on the NHTSA Conforming Products List for evidential breath testing devices. If a threshold below .020 is chosen by an agency or company for "zero tolerance", the policy maker should be informed about the issues surrounding low level testing, and should make certain that the instruments used to perform these tests can meet the requirements of their program.

If you have any questions about how your specific Intoximeters instrument performs, please call us. If possible, have your instrument type and serial number(s) available, and be familiar with the requirements of your testing program so that we can provide you with the best information in an expeditious manner.