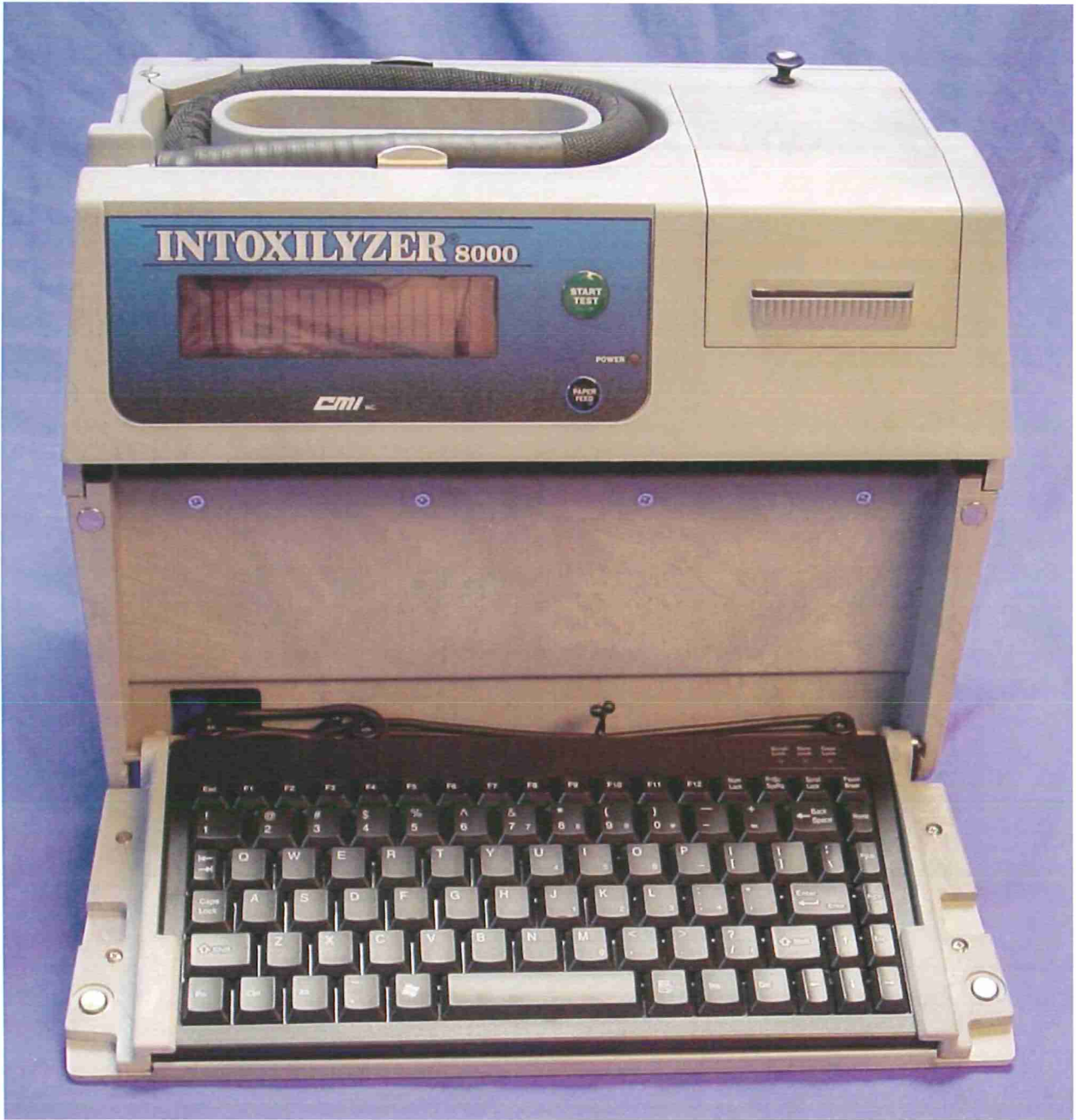


Intoxilyzer 8000



GENERAL INFORMATION ABOUT THE INTOXILYZER 8000 EBAT DEVICE

The Intoxilyzer 8000 uses the concept that alcohol molecules absorb light energy at specific wavelengths to measure ethyl alcohol concentration in breath samples. The wavelengths of infrared (IR) light used are 3 and 9 micron.

The heart of the Intoxilyzer 8000 instrument is its self contained heated optical bench. This optical bench consists of the heated sample chamber, pulsed IR light source and the pyroelectric detector. The sample chamber within the Intoxilyzer 8000 consists of two preheat chambers and the final sample chamber. At one end of the chamber the light source, a quartz iodide lamp, emits IR light energy. This energy is directed through the chamber by a lens. At the other end of the chamber is a pyroelectric detector which changes the heat energy of the light source into an electrical response. This electrical response is then used to calculate the breath alcohol concentration (BrAC) of the sample.

The determination of the BrAC is based on the amount of light energy striking the detector. When no alcohol is present the IR light passes through the chamber unaffected creating a certain voltage level. This can be called X. As a sample with alcohol is introduced, some of the IR light is absorbed. As the alcohol level increases, the amount of light passing through the chamber reaching the detector decreases. This new level of voltage can be called Y. The difference between X and Y represents the concentration of alcohol in the sample. The greater the difference between the X and Y values the higher the BrAC reading.

There are other chemical structures that absorb light energy at similar wavelengths as alcohol. These chemical structures are known as interferences, such as acetone. The Intoxilyzer 8000 will detect a difference in the readings at the 3 and 9 micron wavelengths and will abort the test giving the message 'Interferent Detect'. The following pages show examples of several other informational messages the Intoxilyzer 8000 will give.



*Kathleen Sebelius, Governor
Roderick L. Bremby, Secretary*

DEPARTMENT OF HEALTH
AND ENVIRONMENT

www.kdheks.gov

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Intoxilyzer 8000

Protocol

1. Keep the subject in your immediate presence and deprive the subject of alcohol for 20 minutes immediately preceding the breath test.
2. Check to determine the power switch of the instrument has been activated and is in "Ready Mode".
3. Press the green Start Test button and follow the instructions displayed by the instrument.
4. The instrument will begin the Kansas approved sequence automatically. The sequence is Air Blank, Ext Std Check, Air Blank, Subject Test, Air Blank.
5. The acceptable range for the External Standard Check is 0.075 to 0.085.
6. When prompted for Subject Test, place an unused mouth piece into the breath tube and request the subject provide a breath sample.
7. After the final Air Blank cycle, a test result will be printed.