

## **Chemical Principles behind Akers' Breath Alcohol Testers**

Here's the principle upon which the BreathScan<sup>®</sup> detector works: the ethyl alcohol in the blood escapes through the lung tissue into the exhaled breath. The presence of ethyl alcohol in the breath is detectable by a color change of very sensitive chemically coated crystals contained in the BreathScan<sup>®</sup> tester. The BreathScan<sup>®</sup> alcohol detector keeps the chemically coated crystals fresh in a hermetically sealed ampoule until the test is to be administered. Immediately prior to use, the ampoule is ruptured by slight finger pressure on the outer flexible clear tube to release crystals within the confines of the tube. When the subject exhales into the tube, the fresh crystals interact with breath vapor and change color from yellow to blue green, if alcohol is present. If all the crystals change color completely, this indicates that the subject's blood alcohol level is at or above the level indicated on the tester label. Testers that measure alcohol levels of .02%, .04%, .05%, and .08% are available.

The crystals in the BreathScan<sup>®</sup> alcohol tester are unaffected by heat and cold and the shelf life is 3 years. Each tester can be used until the glass ampoule inside the tester is broken.

The BreathScan<sup>®</sup> alcohol detector has been shown to be superior to any other disposable alcohol tester available today. Strict quality control ensures that each tester is properly calibrated, giving the user assurance of consistent tester results. No other tester is easier to use.