F22 Due Process: Unscrambling SCRAM®

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After attending this presentation, attendees will appreciate the necessity of unscrambling the Secure Continuous Remote Alcohol Monitor's (SCRAM's®) subjective Transdermal Alcohol Concentration (TAC) test results by the legal community.[1]

This presentation will impact the forensic science community by increasing the realization that the use of convenient biomonitoring devices should not usurp scientific accuracy and reliability in the judicial process.

SCRAM® is designed to measure alcohol content as it diffuses through a person's skin as insensible perspiration.[1] TAC does not directly correlate to Blood Alcohol Concentration (BAC) in a SCRAM®.[2] The Drager fuel cell is contained in an ankle bracelet worn by the offender. The device is manufactured by Alcohol Monitoring Systems (AMS). It is designed for court-ordered alcohol monitoring of TAC readings.[3] The unit's modem transmits continuous periodic measurements every 15, 30, or 60 minutes. Positive TAC readings are sent to a central monitoring location for internal review and confirmation.

The device is commercially available to law enforcement agencies and privately operated correctional institutions. SCRAMs® are not subject to uniform standards and regulations for approval, use, maintenance, and calibration. The units can be purchased without governmental oversight and have lower standards than those promulgated in the Driving Under the Influence (DUI) industry.

SCRAMs® are useful in general population biomonitoring of self-induced alcohol consumption as a passive preliminary testing device; however, SCRAMs® have limitations. This presentation briefly reviews the manufacturer's material and scientific literature for accuracy of results as a basis to suppress the TAC results.

The data is transmitted from the device to a central database for initial screening review by a committee. An analyst subjectively decides if the presumed positive is a confirmed positive, presumed tamper, confirmed tamper, or compliant result. The purported analytical determination is problematic and generates inconsistent reporting. Data from the original SCRAM® device, as compared to the current generation SCRAM® II and SCRAMx® devices, indicate poor performance in identifying alcohol consumption events.[4] SCRAM® results should be considered a presumptive violation followed by a confirmatory test.

Justice Blackmun wrote in *Daubert v. Merrill Dow Pharmaceuticals, Inc.*, "under the Rules the trial judge must ensure that any and all scientific testimony or evidence admitted is not only relevant, but reliable." Accordingly, "evidentiary reliability is based upon scientific validity."[5] Attorneys should question the SCRAM's® results by requiring that the analyst testify in court pursuant to *Melendez-Diaz v. Massachusett*.[6] In *Melendez-Diaz*, the United States Supreme Court held that a laboratory report (evidence affidavit or laboratory certificate) prepared for a criminal prosecution in lieu of court testimony is "testimonial" evidence subject to the Sixth Amendment's Confrontation Clause. It is not a business record.[7] Therefore, the defendant has a right to cross-examine the analyst who conducted the testing — not the probation officer or distributor trained by AMS to validate the results.

Significant issues for a motion to suppress SCRAM® results are: (1) alcohol in the perspiration; (2) alcohol from surficial application of a substance with alcohol or some interfering substance in it; (3) interfering substance in the perspiration; (4) unit being regularly calibrated before and after use; (5) production of separate results for TAC, temperature, and current-times-resistance (IR) voltage; (6) operating procedure not including periodic accuracy checks to validate calibration; (7) calibration log not available to user; (8) valid calibration if within 20% of target value; (9) non-existent independent approved calibration standard to test the transdermal devices; (10) questionable ability to differentiate between methanol, isopropanol, and diethyl ether (huffers); (11) no blank reference prior to sampling; (12) device's inability to make a determination of result; and (13) qualifications and competency of analyst.[8]

The attorney has a constitutional obligation to question scientific evidence. Public policy and convenience should not replace objective, accurate, and reliable monitored TAC results. Flawed evidence should not be admissible. Wrongful convictions must be prevented.

Reference(s):

1. SCRAM® is the registered trademark of Alcohol Monitoring Systems, Inc., Littleton, Colo.
2. *People v. Dorcet*, 29 Misc.3d 1167, 1170 (2010).
3. Marques, P.R., A.S. McKnight, and National Highway Traffic Safety Administration. *Evaluating transdermal alcohol measuring devices.* (Report No. DOT HS 810 875). Washington, DC: US Government (2007).
4. Ibid.; Barnett, Nancy P., E.B. Meade, and Tiffany R. Glynn. Predictors of detection of alcohol use episodes using a transdermal alcohol sensor. *Experimental and clinical psychopharmacology.* 22, no. 1 (2014): 86, 93, fig. 2&3.
5. *Daubert v. Merrill Dow Pharmaceuticals, Inc.* 509 U.S. 579, 589, 590-91 n.9 (1993).
6. *Melendez-Diaz v. Massachusetts.* 557 U.S. 305 (2009); Williams v. Illinois, 567 U.S. 50 (2012).
7. Fed. Rule Evid. 803(6).
8. *SCRAM® Calibration Process, Technical Overview.* Alcohol Monitoring Systems, Inc., Littleton, Colo., p.2, Oct. 10, 2004.

Transdermal Alcohol, SCRAM®, DUI

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