



F21 Secure Continuous Remote Alcohol Monitor (SCRAM®) Test Results: Fact, Fiction, Puffery, Rhetoric, and Hokum

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Learning Overview: After attending this presentation, attendees will understand the necessity of questioning SCRAM®-purported Transdermal Alcohol Concentration (TAC) test results when used to enforce alcohol abstinence, as it is now commonly used within the legal community.

Impact on the Forensic Science Community: This presentation will impact the forensic science community by providing recognition of what may constitute marketing rhetoric regarding the accuracy and reliability of biomonitoring alcohol devices for use within the judicial system to establish court-ordered abstinence.

SCRAM® is designed to measure alcohol content as it diffuses through a person's skin as insensible perspiration. SCRAM's® operation is premised upon measuring volatile substances passing through the skin and alcohol excretion in human perspiration.¹ The device is manufactured by Alcohol Monitoring Systems, Inc. The device, worn as an ankle bracelet, is commercially available to law enforcement agencies and privately operated correctional institutions. It is primarily designed and marketed for court-ordered alcohol monitoring of TAC readings.²

SCRAMs® do have limitations. TAC does not directly correlate to Blood Alcohol Concentration (BAC) in a SCRAM®.³ SCRAMs® are useful in general population biomonitoring of self-induced alcohol consumption as a passive preliminary testing device. Based upon the manufacturer's criteria, SCRAM® can only reliably detect the consumption of five or more standard beers or drinks, and 45.9% of all occasions of drinking one to three beers went undetected when using SCRAM's® 0.02g/dl as a threshold.^{4,5} This presentation briefly reviews the manufacturer's material and the scientific literature for factual comparisons of marketing statements and purported test results.

Judges control the determination of "good science" and "evidential reliability" under *Daubert*.⁶ Too often products are selected based on their price, convenience, and promotional marketing. In certain judicial proceedings, the standards for reliability of scientific evidence are reduced (i.e., probation violation hearings, parole revocation hearings, bond and bail hearings).⁷ SCRAMs® are subject to lower standards of evidential proof. The misuse of scientific devices through dilution questions their appropriateness for legal responsibility.

SCRAMs® are not amenable to the same consistent and evidential alcohol measuring devices, such as breath alcohol instrumentation and gas chromatographs. SCRAMs® are not subject to equivalent uniform standards and regulations for approval, use, maintenance, and calibration, as are other alcohol detecting and measuring devices.⁸ The units can be purchased without the same governmental oversight, and there are lower standards than those promulgated in the Driving Under the Influence (DUI) industry. SCRAM® presents selective marketing data and does not adhere to governmental or industry standards for reliability. Initial concern is whether the SCRAM® device is accurate and reliable to identify and measure TAC.^{5,9}

Information provided by the SCRAM® manufacturer, published studies, court testimony, and reports from the National Highway Traffic Safety Administration (NHTSA) indicate that the transdermal devices cannot reliably detect levels of alcohol use from one to four (and perhaps up to six) drinks.

Arguably actual limitations of SCRAM® devices and TAC data is skewed or specious through marketing and other claims, which include, but are not limited to, claims stating: (1) it can detect levels of alcohol. Manufacturer information, published articles, court testimony, and the NHTSA indicate TAC devices cannot reliably detect levels of alcohol use from one to six drinks; (2) the SCRAM® device "eliminates testing gaps—no ability to miss a test or drink around testing schedules"; (3) "99.3% of clients (of SCRAM®) are completely sober and compliant every day"; (4) "the SCRAM® device has a greater deterrent effect than other monitoring devices"; (5) "SCRAM® CAM is calibrated using the same court-accepted methodology as evidential breath testing equipment"; (6) SCRAM® CAM has "single-source admissibility—no back up tests required"; and (7) device "conclusively distinguishes alcohol consumption vs. environmental alcohol sources."^{5,9-15}

SCRAM's® claims are plausibly misleading or lack sufficient supporting evidence. It appears the use of SCRAM® beyond its intended judicial purpose is problematic. Questionable marketing claims underscore the need for vigilant implementation of good science and scrutiny by the consumer. SCRAM's® marketing of TAC results should not be considered scientifically credible or reliable.

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7. See, e.g. *Bell v. State of Florida*, Appellee. No. 5D14–1569. Decided: October 09, 2015.

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SCRAM®, Alcohol Testing, Abstinence