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DUI

- Traffic crashes are the single greatest cause of death for every age group between three and 34 years of age in the U.S. (except for age 7)
- Almost 13,000 people are killed in crashes where at least one driver has a BAC of 0.08 or higher each year
- Alcohol related crashes cost society over 100 billion dollars each year

Substance Abuse and Crime

- Researchers estimate that:
  - Up to 80% of offenders under supervision have substance misuse issues
  - Up to 36% of crimes are committed while the offender is under the influence of alcohol
- Jail/prison don't work for substance abusers and overcrowding is a major concern

We need to take control of these issues before they take control of us

Approaches to Alcohol Misuse

Judicial

- Focuses on the crime itself
- Addresses alcohol as an element of a charged offense
- Tries to treat everyone the same
- Favors punishment
- Bases decisions on statutes and precedent

Medical

- Focuses on the alcohol misuse problem
- Addresses alcohol as a cause or contributing cause of behavior
- Treats people as individuals
- Favors rehabilitation
- Bases decisions on scientific evidence

Which approach works best?

Why do people routinely ask that question?

The solutions are NOT mutually exclusive…….in fact, comprehensive approaches are the MOST effective!

Why is alcohol monitoring such a hot issue?

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Monitoring the Drinking

- If we want to change an alcoholics behavior, we have to address the root cause of the problem: the drinking
- "The objective monitoring of a patient's drug and alcohol use during treatment . . . can help the patient withstand urges to use drugs"
- "Such monitoring also can provide early evidence of drug use so that the individual's treatment plan can be adjusted"

  - Quotes courtesy of the National Institute of Drug Abuse (NIDA)
    - "Principles of Drug Addiction Treatment" (1999)

Secure Continuous Remote Alcohol Monitor: SCRAM

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How SCRAM Works

- SCRAM samples the vapor over the wearer's skin every half an hour to identify potential drinking event
- SCRAM measures infrared reflection and temperature to identify potential tampers and obstructions
- SCRAM is a passive system

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Transdermal Transport is Widely Recognized

- Nicotine patches
- Birth control patches
- Scopalomine patches (for seasickness)
- Nitroglycerine for chest pain
- Blood pressure drugs
- Narcotic pain medicines
- Vick’s Vapor Rub
- Muscle relaxants

How SCRAM Works

- SCRAM utilizes the same fuel cell technology as some evidential breath testing instruments and most preliminary breath testers
  - Draeger manufactures the fuel cell
  - Over 50,000 Alcosensors are used worldwide across five continents

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The Benefits of a Continuous, Passive System

- 48 tests per day instead of a handful
- No opportunity to avoid participation
- No excuses
- No disruption of everyday activities:
  - Work
  - Treatment
  - Vacations
  - Sleep

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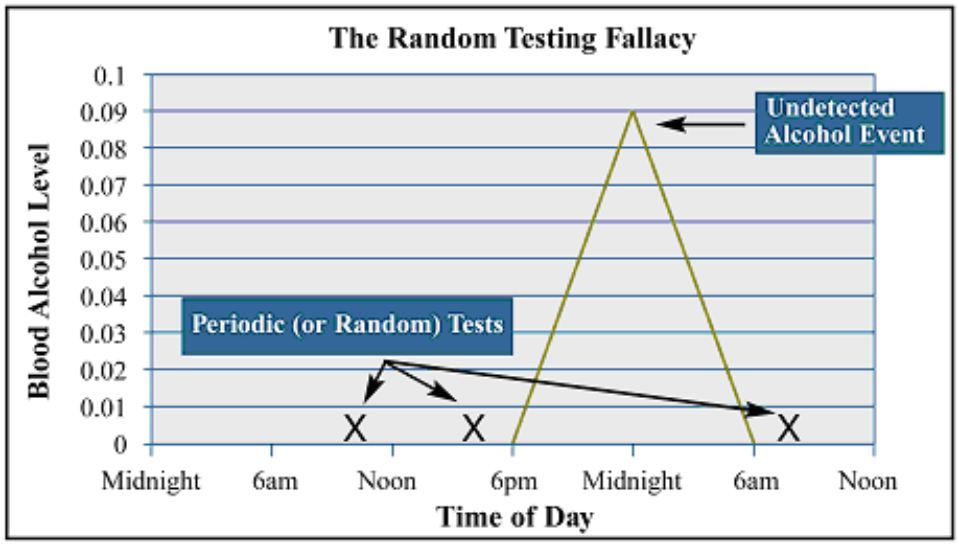
There Is No More Effective System

- SCRAM is the only court accepted method that continuously monitors the wearer reliably
  - ETG testing is not as reliable
  - Point in time testing is far less effective . . .



SCRAM® from AMS

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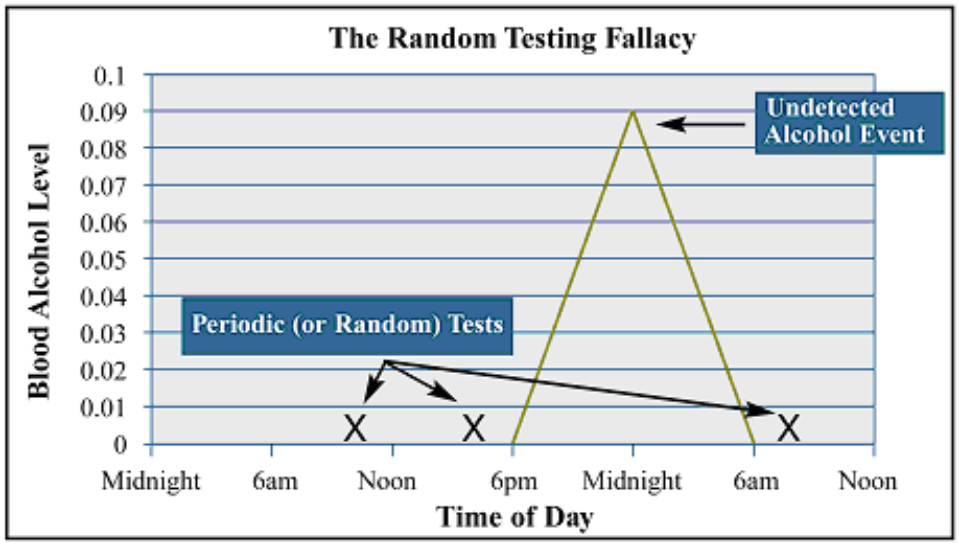

  - and requires offender participation

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Identifying Potential Drinking Events

- SCRAM “flags” potential drinking events for review
- The device itself does not “confirm” these events
- SCRAM does not “flag” a drinking event unless:
  - three consecutive readings exceed .02
  - the absorption rate does not exceed 0.05 per hour there is a peak
  - the elimination rate does not exceed 0.025 per hour
- These criteria are designed to give the wearer every reasonable benefit of the doubt

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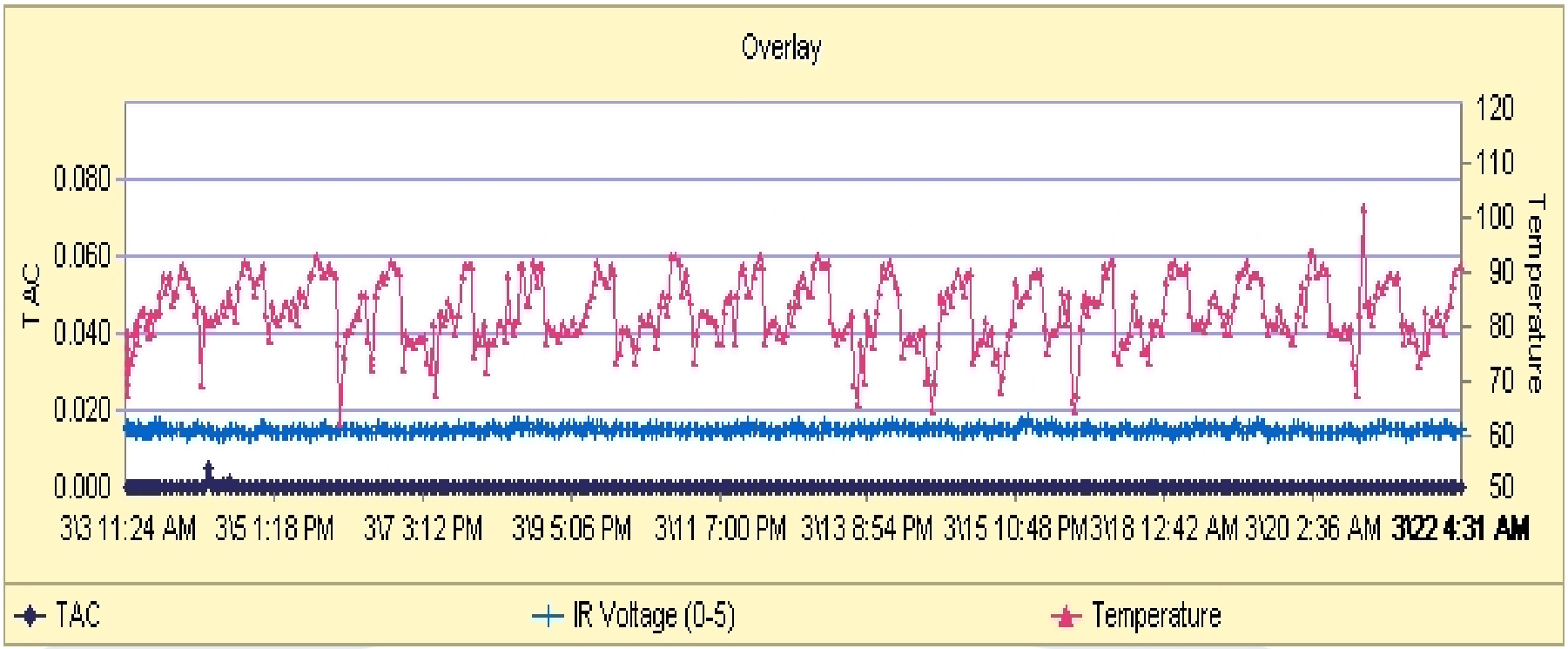
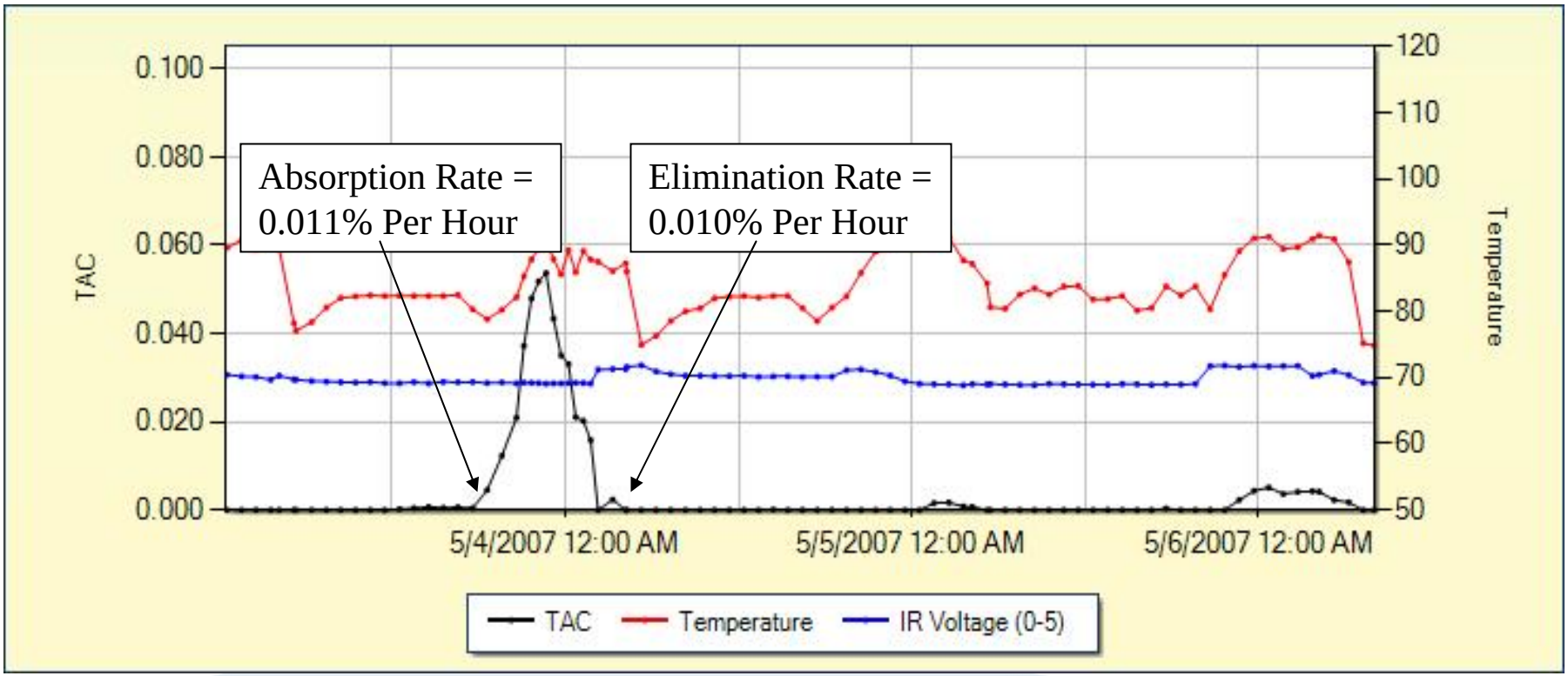
Example: Compliant Subject



Non-Compliant Subject



Subject consumed:

4 Tropical Margaritas in 2 hours from 4:15 pm – 6:15 pm

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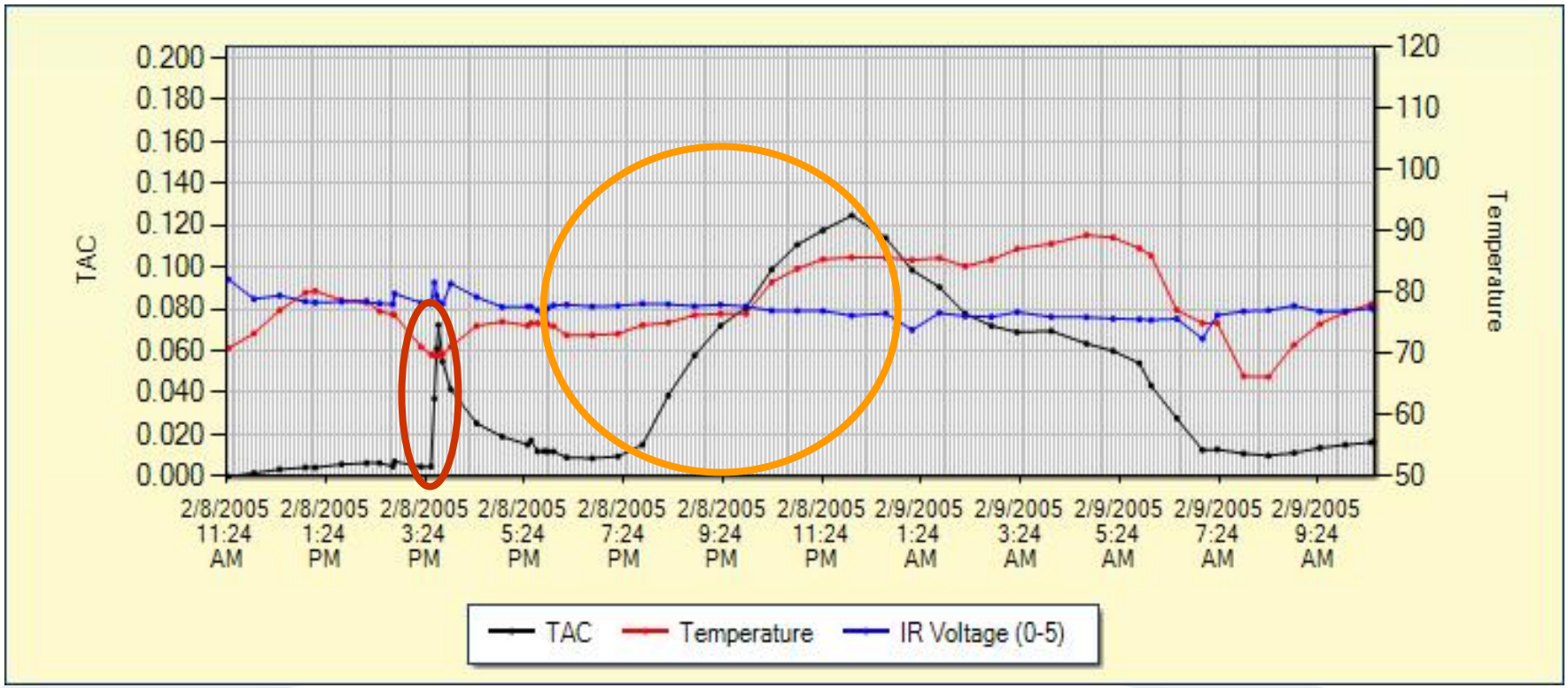
Interferant: “Awesome Cleaner”



Interferant absorption rate = 0.191% per hour

Comparison drinking event absorption rate = 0.022% per hour

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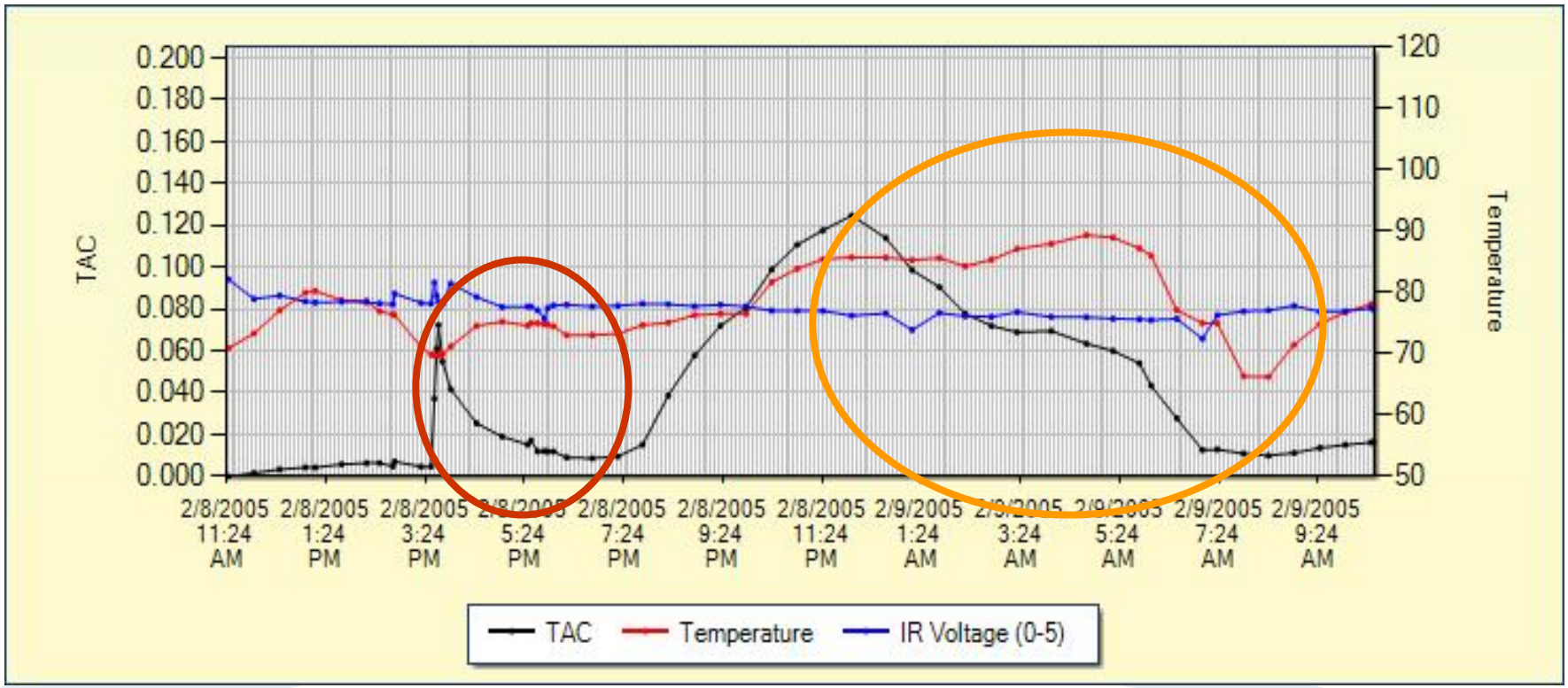
Interferant: “Awesome Cleaner”



Interferant elimination rate = 0.030% per hour

Comparison drinking event elimination rate = 0.014% per hour

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Interferants in the Literature

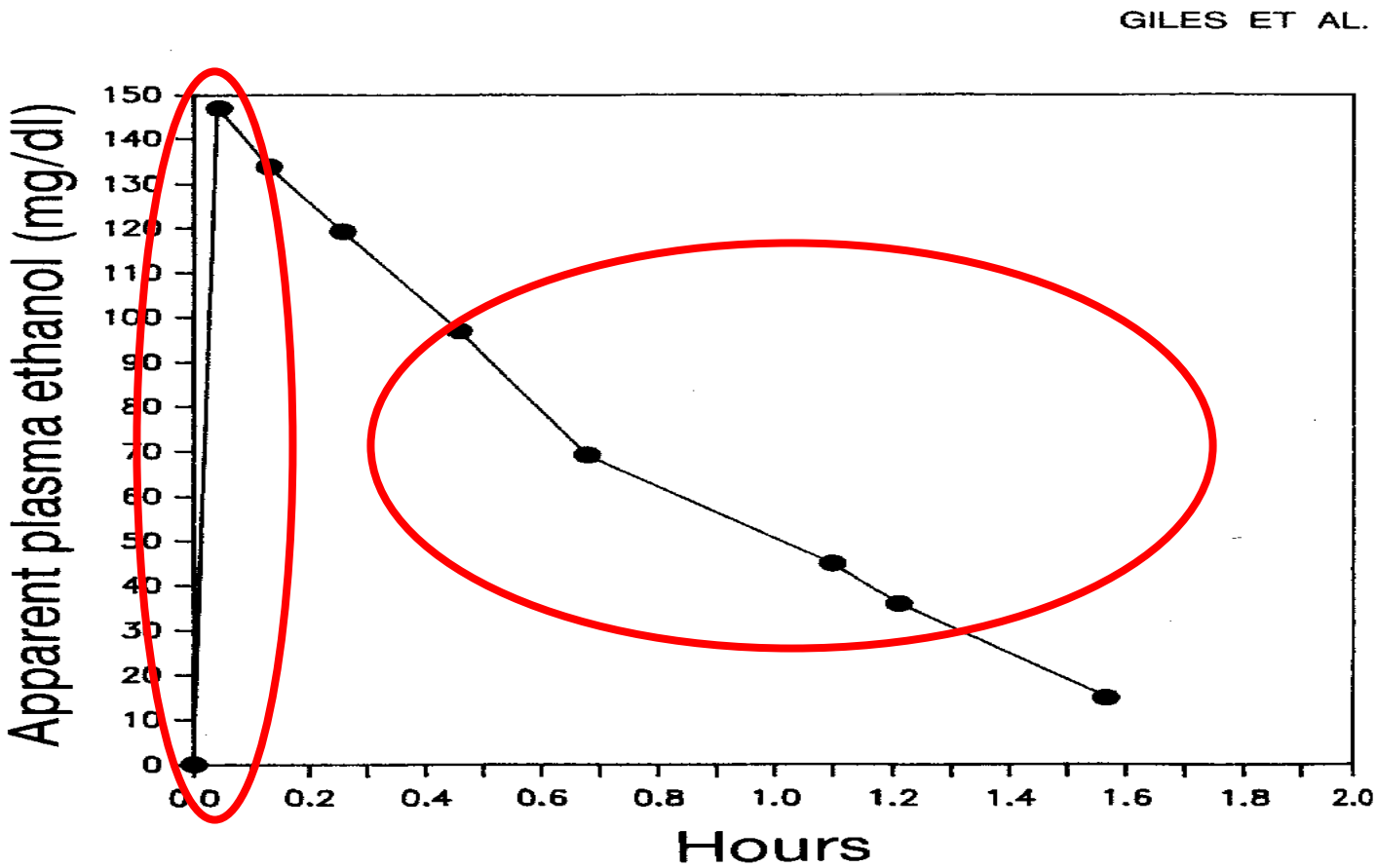

Fig. 4. Skin vapor ethanol profile after the topical administration of ethanol (0.1 ml) to two healthy subjects. *Points* are the means.

Giles H.G., Meggiorini S., Renaud G.E., Thiessen J.J., Vidins E.I., Compton K.V., Saldivia V., Orrego H., and Israel Y. Ethanol vapor above skin: determination by a gas sensor instrument and relationship with plasma concentration. Alcohol Clin. Exp. Res. 1987 Jun; 11(3): 249–253.

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SCRAM Usage

- Alcohol Test Performed: **166,504,980**
- Unique Clients Monitored: **76,067**
- Monitored Days: **6,287,428**
- Highest Daily Number of Monitored Clients: **8,353**
- States with Scram Programs: **46**
- Entities using SCRAM: **1650**

*As of end of September, 2008

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OK, but does this thing really work?

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AMS Internal Study Results

- Total Events = 839
- A “true negative” is assumed to be any 11.3 hour period where there was NO drinking and where a drinking event was NOT confirmed.

		Actual Event	
		Positive	Negative
SCRAM System Result	Positive	True Positive 62	False Positive 1
	Negative	False Negative 58	True Negative 718

“False Positive” Error Rate = 0.12% *
“False Negative” Error Rate = 6.9%

*Commercially Available Drug Kits have a False Positive Rate of 5.0%

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Court Hearings and SCRAM

The vast majority of courts have ruled that SCRAM analysis and testimony meets the Frye and/or Daubert standard(s)

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SCRAM

- Jurisdictions currently use SCRAM to:
  - Assess and/or monitor high risk offenders pretrial
  - Monitor offenders as a condition of probation
  - Determine which convicted offenders can be trusted with ignition interlock licenses
  - De-populate prisons
  - Facilitate re-entry from jail or prison (transition programs)
  - Monitor offenders on parole or conditional release

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Integration

- There is no silver bullet
- Ideally, states should take advantage of all available solutions to create comprehensive solutions that:
  - Are implementable
  - Are appropriate (match offender dangerousness and need)
  - Can work for as many targeted offenders as possible
  - Are standardized
  - But responsive to offender performance
    - Have “carrots and sticks”
    - Allow courts “step up or down”
  - Allow researchers to measure successes and failures so programs can be improved

Integration

- Interlock
  - Monitors vehicles
  - Work on the vehicles they're on
  - Designed to prevent drinking and driving directly
- DWI Courts
  - Treat the problem
  - Monitoring and accountability
- SCRAM
  - Monitors people
  - Manages risk
  - Designed to change a person's drinking habits
- **State's should use all methods where appropriate**
  - **There is NO silver bullet**

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SCRAM in Illinois

- Used in multiple jurisdictions
- DuPage County State's Attorney Policy on SCRAM
  - Requested as a condition of bond in all cases in which there is clear evidence that alcohol played a role
    - 1st DUI: Only where "extremely intoxicated"
    - All repeat DUIs
    - DV cases where the offender was intoxicated or there is a history of abuse
    - Other misdemeanor and felony cases where an offender's "alcohol problem" played a role in the commission of an offense

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Potential Integration in the Law

- Legislative proposal
  - Add teeth to Illinois' DWLS/Monitoring License laws
  - Jail and/or CAM for offenders who drive on DUI suspensions or revocations or violate the state's interlock laws
    - 1st violation: 30 days jail or 100 days CAM
    - 2nd: 60 days jail or 140 days CAM
    - 3rd: 90 days jail or 180 days CAM (now 30d)
    - 4th – 9th: 180 days jail or 60 days jail and 270 CAM (now 180 days jail)
    - 10th or subsequent: Upon release from mandatory sentence, 364 days CAM

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