

THE GREAT SEAL OF THE STATE OF NORTH CAROLINA
MAY 20, 1775
1776
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1842
1868
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1901
1979
2019

NC Department of Health and Human Services

Standardized Field Sobriety Testing and Recognizing Impairment from Drugs


Presiding Over Cases Involving DWI and Related Offenses:
What Magistrates and District Court Judges Need to Know

November 2023

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Presiding Over Cases Involving DWI and Related Offenses:

DWI Detection



The entire process of identifying and gathering evidence to determine if a subject should be arrested for a DWI violation.


What Magistrates and District Court Judges Need to Know

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Presiding Over Cases Involving DWI and Related Offenses:

DWI Detection Phases

- **Phase One: Vehicle in Motion**
 - Should I stop the vehicle?
- **Phase Two: Personal Contact**
 - Should the driver exit?
- **Phase Three: Pre-arrest Screening**
 - Is there probable cause to arrest the suspect for DWI?

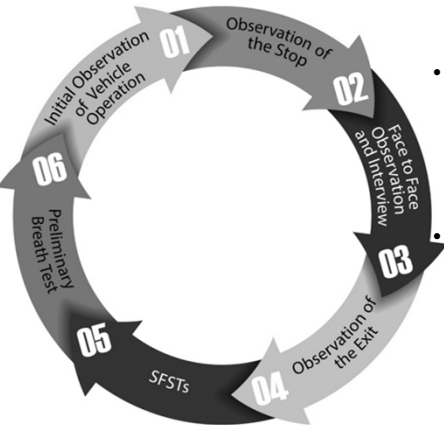


What Magistrates and District Court Judges Need to Know

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The Arrest Decision



- DWI detection process concludes with arrest decision
- Based on all evidence obtained during all three detection phases

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Horizontal Gaze Nystagmus- HGN

Involuntary jerking of the eyes as they gaze from side-to-side

- Reliable
- Involuntary
- Noticeable
- As BAC increases, eyes begin to jerk sooner as they move to the side
- CNS Depressants, Inhalants, and Dissociative Anesthetics cause HGN



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Nystagmus Indications

- Six maximum clues
- Maximum three clues per eye
 - Lack of Smooth Pursuit
 - Distinct & Sustained Nystagmus at Maximum Deviation
 - Onset of Nystagmus prior to 45 degrees
- 88% accurate detecting subjects ≥ 0.08 BAC
- Vertical Gaze Nystagmus



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Divided Attention

Concentrating on more than one thing at a time (mental tasks and physical tasks)



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Typical Simultaneous Capabilities Required for Driving


- Information processing
- Short-term memory
- Judgment/decision making
- Balance
- Steady, sure reactions
- Clear vision
- Small muscle control
- Coordination of limbs

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Presiding Over Cases Involving DWI and Related Offenses:

Two Divided Attention Field Sobriety Tests

Walk and Turn



One Leg Stand



What Magistrates and District Court Judges Need to Know 7-9

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Presiding Over Cases Involving DWI and Related Offenses:

Walk and Turn

- Validated by NHTSA
- 79% accurate detecting 0.08 BAC
- Two stages:
 - Instruction Stage
 - Walking Stage

What Magistrates and District Court Judges Need to Know 7-10

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Presiding Over Cases Involving DWI and Related Offenses:

WAT – Instruction Stage


- Divides subject's attention
 - Balancing
 - Information processing
- Subject stands with feet in heel-to-toe position
- Arms at side
- Listen to instructions

What Magistrates and District Court Judges Need to Know 7-11

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WAT – Walking Stage



- Divides subject's attention
 - Balancing
 - Small muscle control
 - Short term memory

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WAT Test Clues

1. **Cannot keep balance while listening to the instructions**
2. **Starts too soon**
3. **Stops while walking**
4. **Does not touch heel-to-toe**
5. **Steps off the line**
6. **Uses arms to balance**
7. **Improper turn**
8. **Incorrect number of steps**

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One Leg Stand

- **Validated by NHTSA**
- **83% accurate detecting 0.08 BAC**
- **Two stages:**
 - **Instruction Stage**
 - **Balance and Counting Stage**

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OLS – Instruction Stage



- Divides subject's attention
- Balancing
- Information processing

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Balance and Counting Stage

- Divides subject's attention
 - Balancing task
 - Information processing
- 30 second timing is important!

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OLS Test Clues

- 1. Sways while balancing
- 2. Uses arms to balance
- 3. Hopping
- 4. Puts foot down

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Preliminary Breath Test (PBT) or Alcohol Screening Test Device (ASTD)

- Stage in pre-arrest screening
- Recommended to administer after SFSTs
- Demonstrate association of alcohol with observable evidence

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Advantages of ASTD

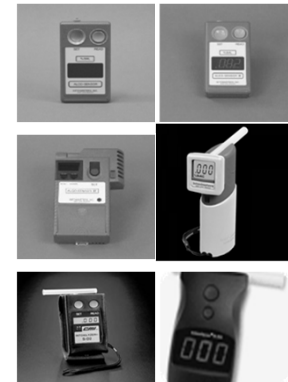
- Corroborate other evidence
- Confirm alcohol as cause of impairment
- Helps to rule out a medical condition
- Can help establish probable cause for DWI arrest

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NCAC 10A: 41B .0503(A)

APPROVED DEVICES

- (1) Alco-Sensor (2 Digit) - Intoximeters
- (2) Alco-Sensor III (3 Digit) - Intoximeters
- (3) Alco-Sensor IV (3 Digit) - Intoximeters
- (4) Alco-Sensor FST (2 Digit)- Intoximeters
- (5) S-D2 (3 Digit) - CMI, Inc.
- (6) S-D5 (3 Digit)- CMI, Inc.



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NCAC 10A: 41B .0503(A)

APPROVED DEVICES


- (7) **Alco-Sensor III (Enhanced w/ SNs 1,200,000 or higher) – Intoximeters**
- (8) **Alco-Sensor FST (Enhanced w/ SNs 1,200,000 or higher) – Intoximeters**
- (9) **LifeLoc FC10 - LifeLoc Technologies, Inc.**
- (10) **Intoxilyzer 500 - CMI, Inc.**
- (11) **AlcoVisor Mercury- PAS International**



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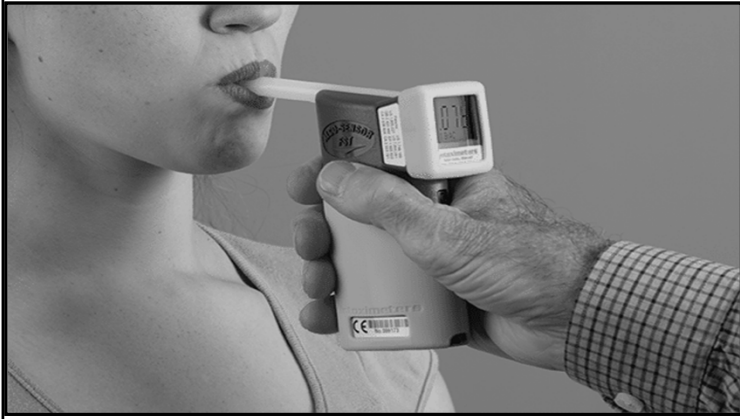
**SFSTS LIVE DEMONSTRATION
WITH DOSED VOLUNTEERS**



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ASTD LIVE DEMONSTRATION



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1-24



**What happens
when an officer comes in contact
with a drug-impaired driver?**

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WHAT IS A “DRUG”?

“Any substance that, when taken into the human body, can impair the ability of the person to operate a vehicle safely.”

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Advanced Roadside Impaired Driving Enforcement (ARIDE)



- Build on SFST skills
- Identify drug-impaired drivers
- Support the DEC Program

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Seven Drug Categories

- ✓ Central Nervous System **D**epressants
- ✓ Central Nervous System **S**timulants
- ✓ **H**allucinogens
- ✓ **D**issociative Anesthetics
- ✓ **N**arcotic Analgesics
- ✓ **I**nhalants
- ✓ **C**annabis

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Lack of Convergence (LOC)

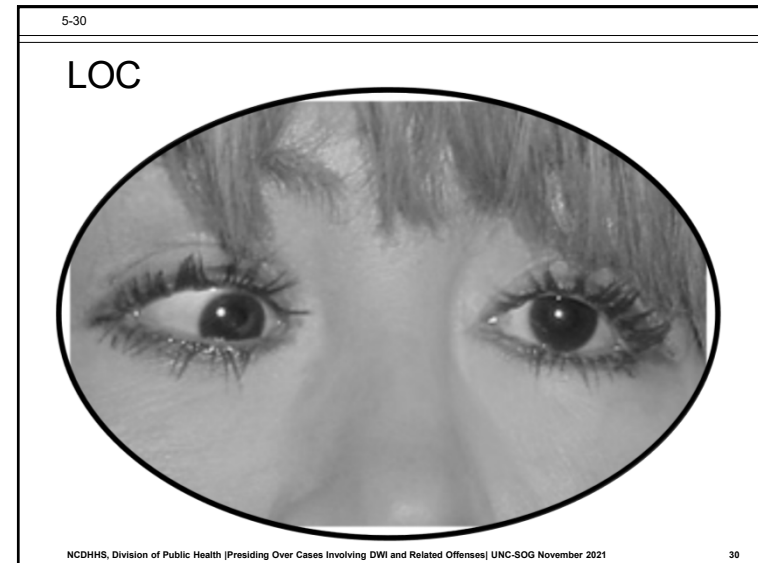
The inability of the person's eyes to converge or cross as the person attempts to focus on a stimulus as it is pushed towards the bridge of the nose.



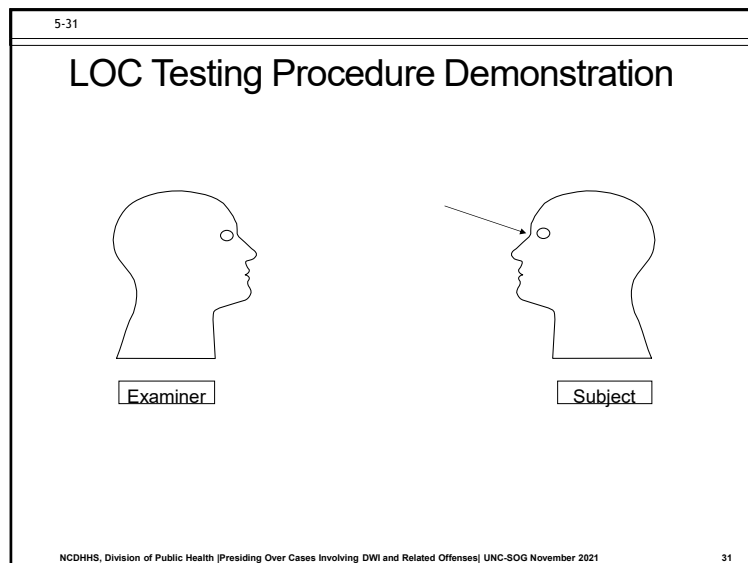
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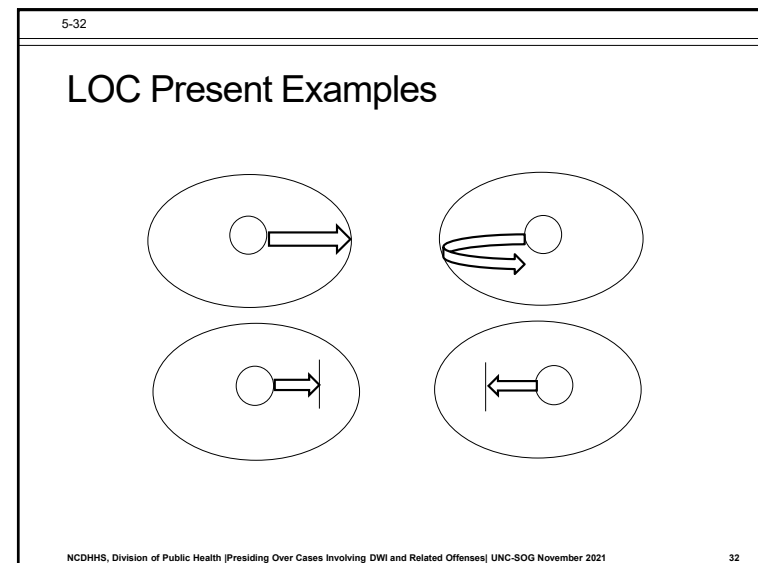
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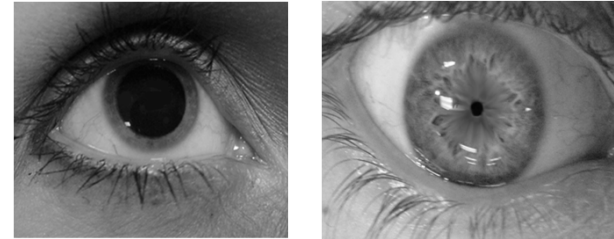
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Drug Categories That Usually Cause LOC

- CNS Depressants
- Inhalants
- Dissociative Anesthetics
- Cannabis

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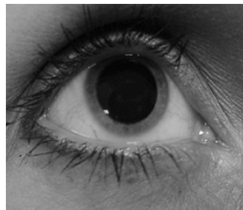
Pupil Size Observations



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Dilated Pupils

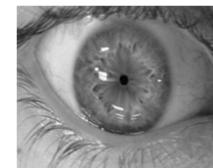
•When pupils are larger than expected for given lighting condition, resulting in a noticeably larger opening (circle) in the center of the eye.



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Constricted Pupils

•When pupils are smaller than expected for given lighting conditions, resulting in a noticeably smaller opening in the center of the eye.



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Modified Romberg Balance Test



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Three Indicators of MRB Test

- Time estimation
- Tremors
- Swaying



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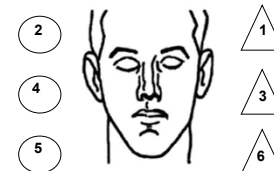
MRB Test Demonstration



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Finger to Nose Test Administrative Procedures

○ Right Left △
Draw lines to spots touched



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Finger to Nose Test Demonstration



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Drug Influence Evaluation 12 Step Process

1. Breath alcohol test
2. Interview of arresting officer
3. Preliminary examination and first pulse
4. Eye examinations
5. Divided attention tests:
 - Modified Romberg Balance
 - Walk and Turn
 - One Leg Stand
 - Finger to Nose

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Drug Influence Evaluation 12 Step Process

6. Vital signs and second pulse
7. Dark room examinations and ingestion examination
8. Check for muscle tone
9. Check for injection sites and third pulse
10. Interrogation, statements and other observations
11. Opinion of evaluator
12. Toxicological examination

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DRE Certification Requirements


- ASTD= 7 hours
- EC/IR II= 35 hours
- SFST= 24 hours
- ARIDE= 16 hours
- DRE Pre-school= 16 hours
DRE School= 64 hours
- FKE~ 8 hours
- Field Cert Evals~ 40 hours
- ~ 210 hours of training to reach DRE

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 MAY 20, 1775
 ANNE B. WILSON
 1785

NC Department of Health and Human Services

Administering Chemical Tests for Alcohol

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The following **operational procedures** shall be followed when administering a test using the Intoximeters, Model Intox EC/IR II and Model Intox EC/IR II (Enhanced with serial number 10,000 or higher):

- (1) Ensure instrument displays time and date;
- (2) Ensure observation period requirements have been met;
- (3) Initiate breath test sequence;
- (4) Enter information as prompted by the instrument;
- (5) Verify instrument accuracy;
- (6) When "PLEASE BLOW" appears, collect breath sample;
- (7) When "PLEASE BLOW" appears, collect breath sample; and
- (8) Print test record.

If the alcohol concentrations differ by more than 0.02, a third or fourth breath sample shall be collected when "PLEASE BLOW" appears. **Sequential tests shall be administered as soon as feasible by repeating steps (1) through (8), as applicable.**

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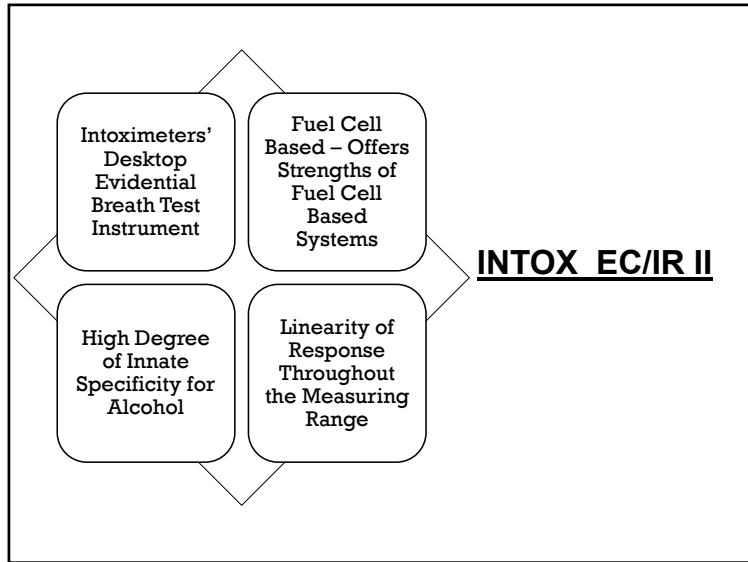
INTOX EC/IR II

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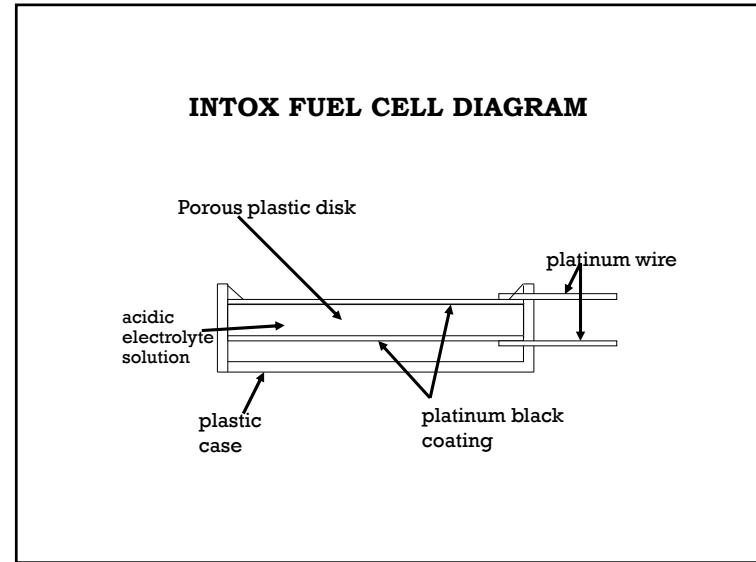
INTOX EC/IR II

- Name Derived from 2 Major Analytical Components
 - EC= Electrochemical Cell (Fuel Cell)
 - IR = Infrared Energy Absorption
 - II = 2nd Generation

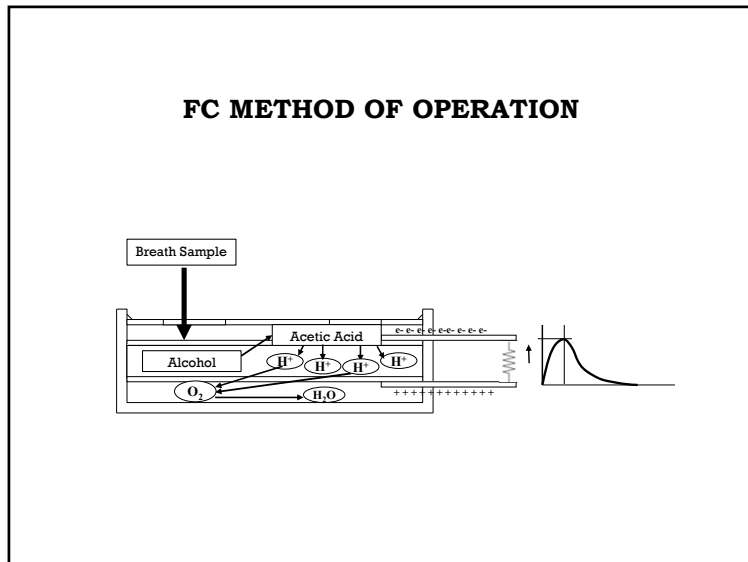
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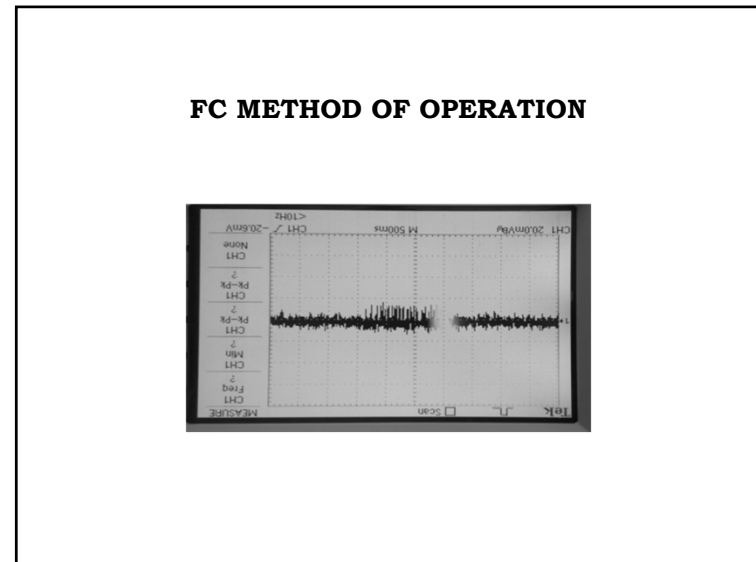
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ELECTROCHEMICAL FUEL CELL RECAP

- Deep Lung Breath Sample is Captured
- **Electrochemical Reaction** in the Fuel Cell is **Directly Related to the Alcohol Concentration** in the Sample
- Nonalcohol Compounds, (INTERFERENTS), **DO NOT REACT WITH** Fuel Cell
- Fuel Cell is **SPECIFIC FOR ALCOHOL**

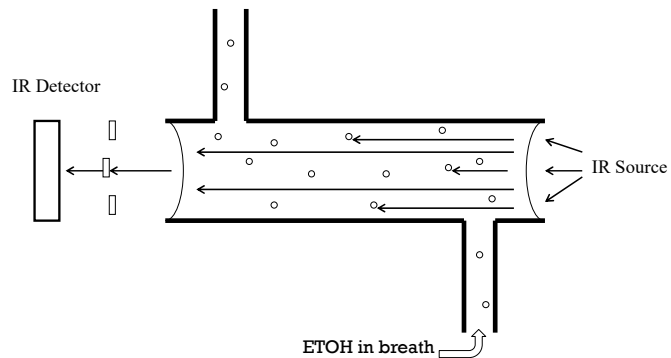
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INTOXIMETER EC/IR II INFRARED ANALYSIS

The EC/IR II
monitors both EtOH
and CO₂ to
determine Breath
Sample Quality

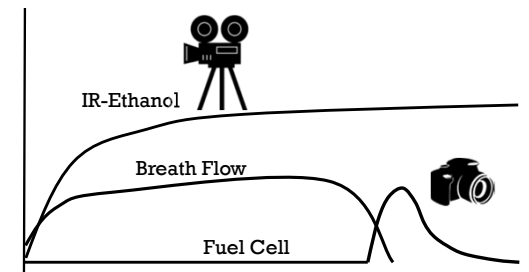
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Ethanol absorbs the light energy as it passes through the sample, reducing the amount of infrared energy that strikes the detector.



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SENSOR TIMING



Hermuda Intox ECIR II Technical Training, rev 0, DSD, 06/05/2019

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**NORTH CAROLINA CUSTOM PROGRAM
MODE SEQUENCE**

- North Carolina Custom Programmed Mode Sequence
“DAAABABA”
 - **D** – Diagnostic–checks all system functions

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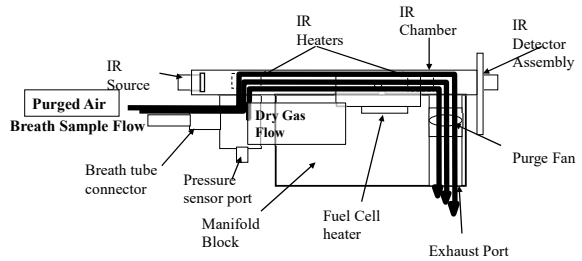
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**NORTH CAROLINA CUSTOM PROGRAM
MODE SEQUENCE**

- North Carolina Custom Programmed Mode Sequence
“DAAABABA”
 - **D** – Diagnostic– Pass
 - **A** – Air Blank– Purges chamber/breath tube

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**NORTH CAROLINA CUSTOM PROGRAM
MODE SEQUENCE**

- North Carolina Custom Programmed Mode Sequence
“DAAABABA”
- **D** – Diagnostic– Pass
 - **A** – Air Blank–

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.00


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**NORTH CAROLINA CUSTOM PROGRAM
MODE SEQUENCE**

- North Carolina Custom Programmed Mode Sequence "**DAAABABA**"
 - **D** – Diagnostic– PASS
 - **A** – Air Blank– .00
 - **A** – Accuracy check – .08



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VERIFY INSTRUMENT ACCURACY

10A NCAC 41B .0101(9)..When procedures are followed and result specified is obtained, the instrument shall be deemed accurate.

If expected result (0.08) or 0.01 less (0.07)

If NOT, then OUT OF TOLERANCE!

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NORTH CAROLINA CUSTOM PROGRAM MODE SEQUENCE

• North Carolina Custom Programmed Mode Sequence
“DAAABABA”

- **D** – Diagnostic– Pass
- **A** – Air Blank– .00
- **A** – Accuracy check – .08
- **A** – Air Blank–

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NORTH CAROLINA CUSTOM PROGRAM MODE SEQUENCE

• North Carolina Custom Programmed Mode Sequence
“DAAABABA”

- | | | |
|-------------------------------|------|----|
| • D – Diagnostic– | Pass | |
| • A – Air Blank– | .00 | -1 |
| • A – Accuracy check – | .08 | -2 |
| • A – Air Blank– | .00 | -3 |
| • B – Breath – | .08 | -4 |
| • A – Air Blank – | .00 | -5 |
| • B – Breath – | .08 | -6 |
| • A – Air blank – | .00 | -7 |

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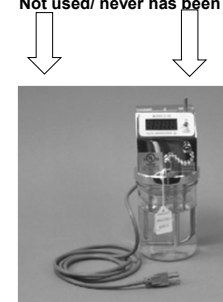
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WHICH ONE IS CURRENTLY USED FOR ACCURACY VERIFICATIONS WITH INTOX EC/IR II?

Ethanol Dry Gas canister
expires by date or low gas
≤50 PSI



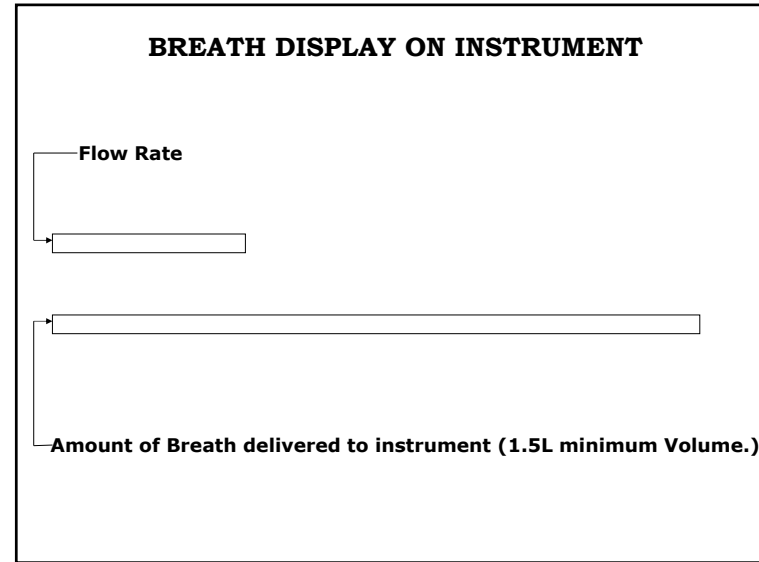
Alcoholic Breath Simulator
125 tests and or 4 months
Not used/ never has been



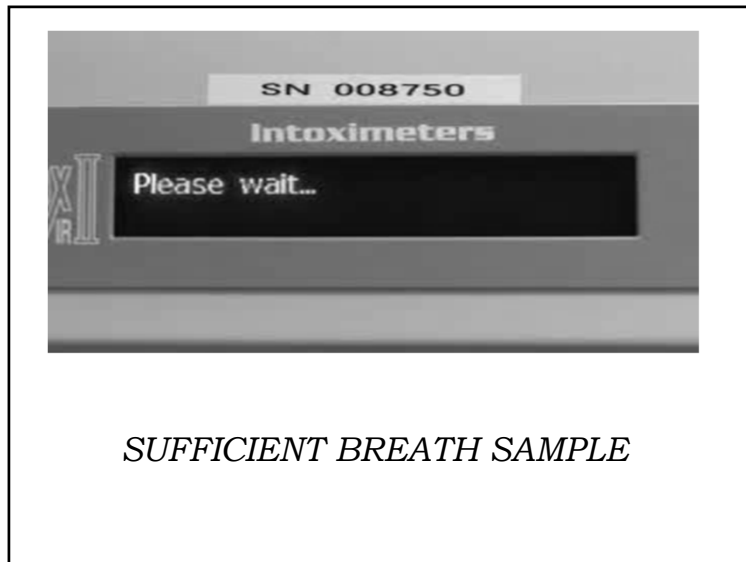
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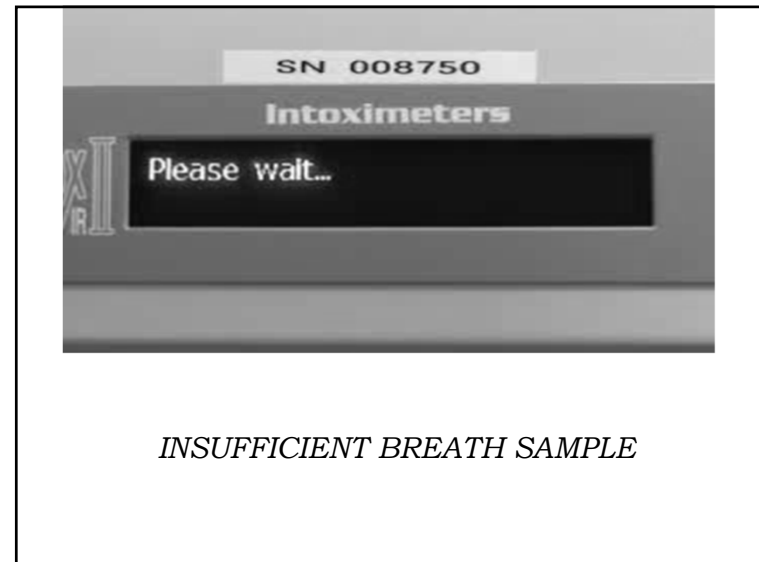
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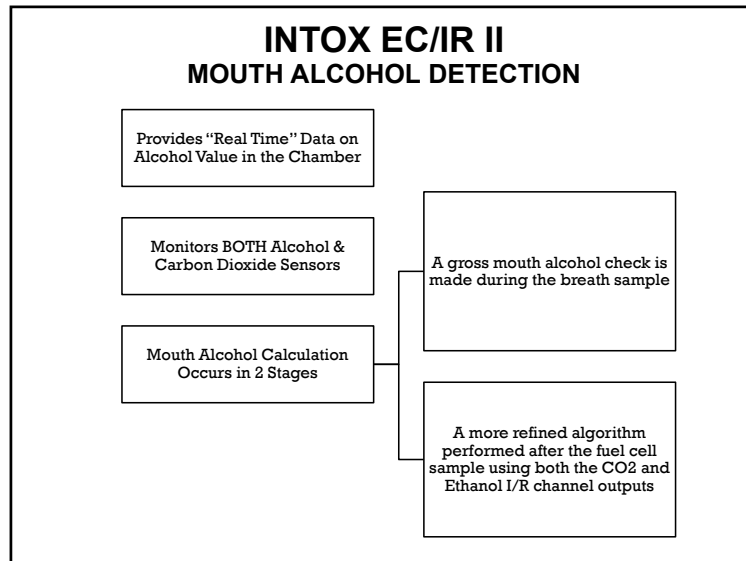
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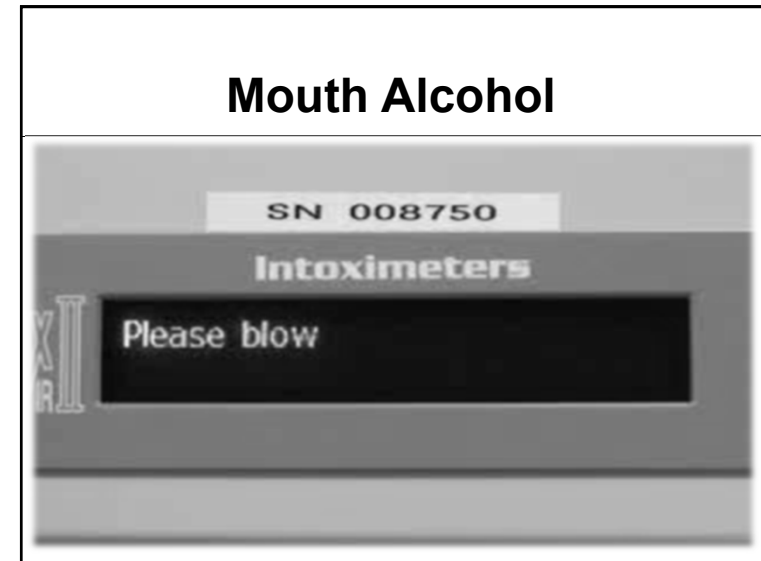
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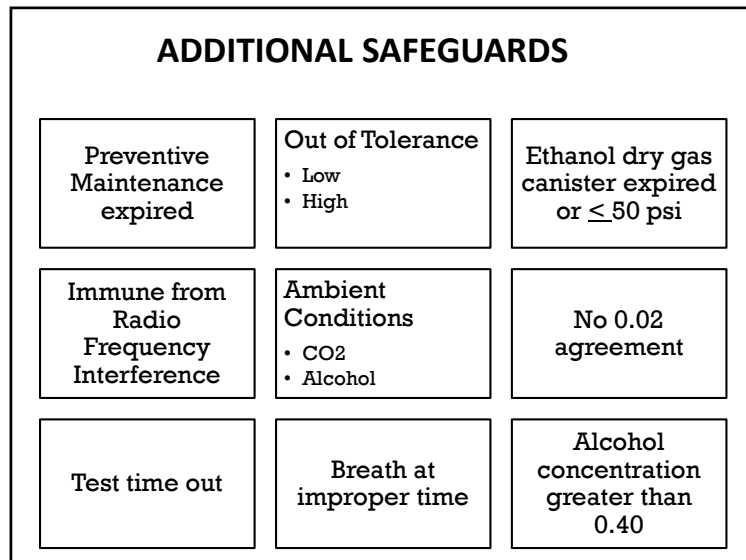
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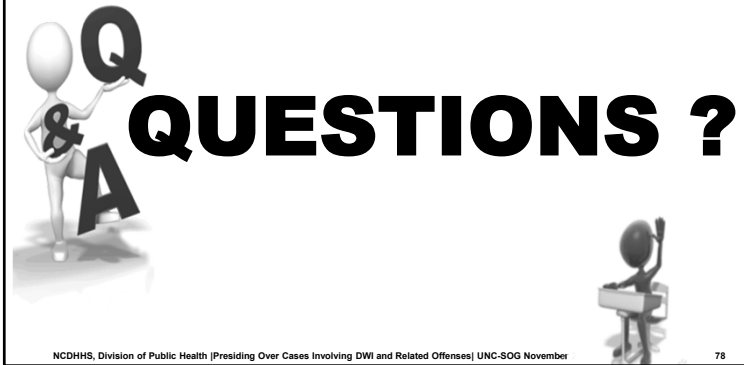
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EC/IR II Test Live Demonstration



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I thank each of you for your valuable time



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