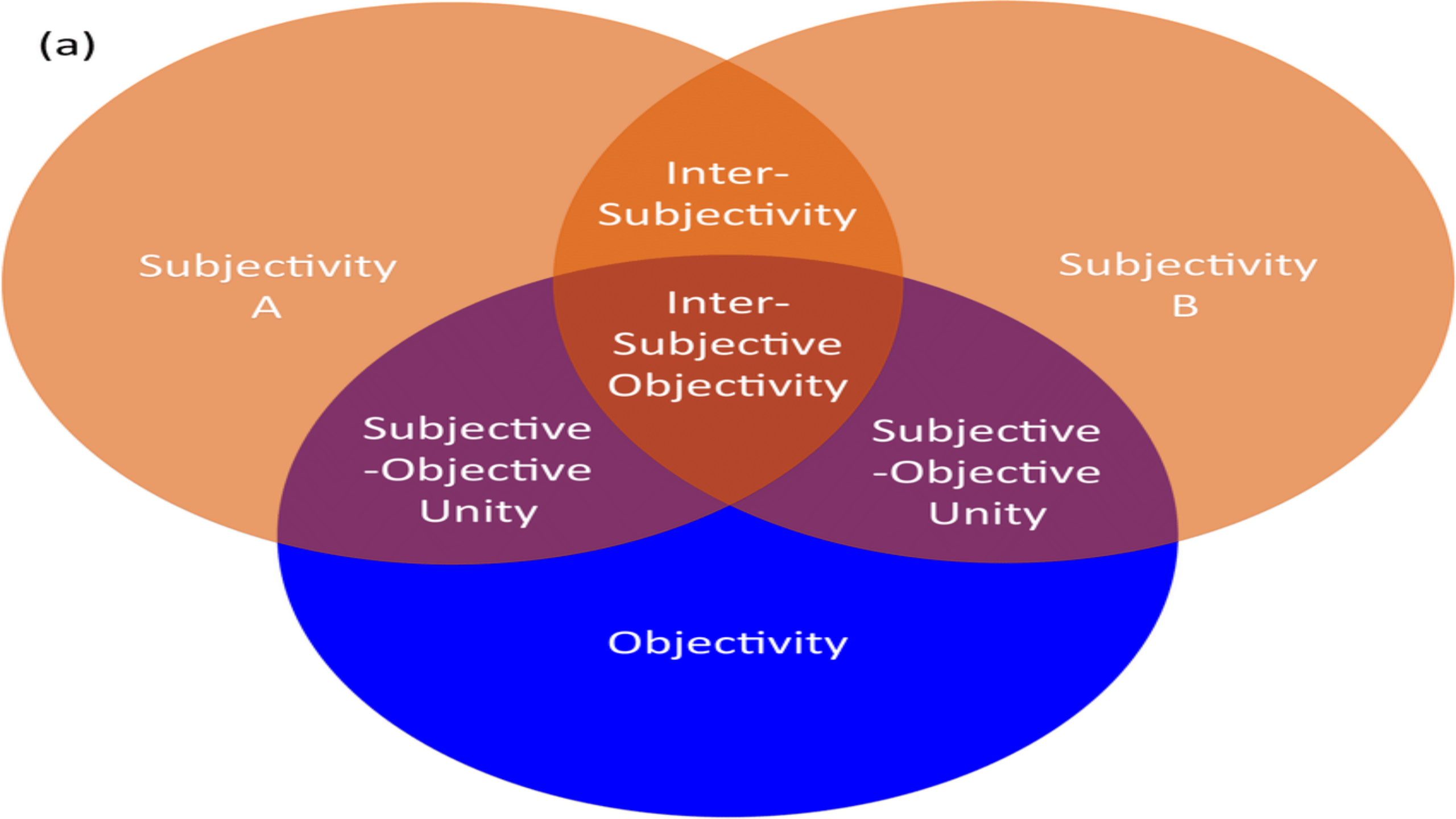
Breath Testing History

Garden State CLE - September 20, 2023


(a)
Subjectivity
A
Inter-
Subjectivity
Subjectivity
B
Inter-
Subjective
Objectivity
Subjective
-Objective
Unity
Subjective
-Objective
Unity
Objectivity

BREATH TESTING HISTORY


FAREWELL
18TH
AMENDMENT

Dr. Frederick E. Anstie
(1833-1874)

1874:

- British physician
- Observed that small amounts of alcohol were excreted in breath

Dr. Wm. Duncan McNally

(1882-1961)

1927:

- Chief chemist, Cook County Dept. of Public Health and Medical Examiner's Office
- Invented an early breath testing device
- Chemicals in water changed color with alcohol
- Recommended for housewives to test husbands for drinking

Dr. Rolla Neil Harger

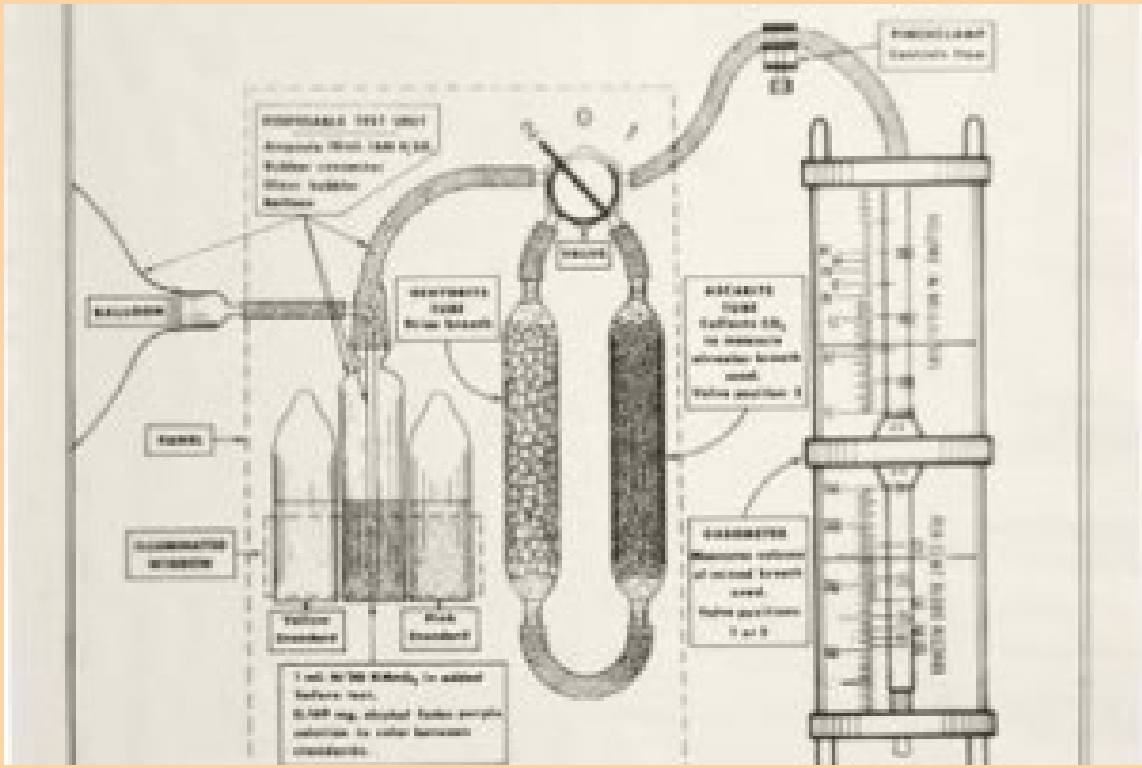
(1890-1983)

- Chairman, Biochemistry and Pharmacology Department, Indiana University School of Medicine (1933-1956)
- Professor, Professor, Biochemistry and Toxicology (1922-1960).

Harger Drunkometer

- Invented: 1931
- Patented: 1936
- Marketed: Stephenson Corp. (Red Bank, NJ)
- First used: 1938
  New Year's Eve
  (Indianapolis P.D.)


HARGER
BREATH TEST
DRUNKOMETER



How the Drunkometer Worked

Color change in a sulfuric acid – potassium permanganate solution

Robert Frank Borkenstein
(1912-2002)

1936:

Indiana State Police Criminology Laboratory

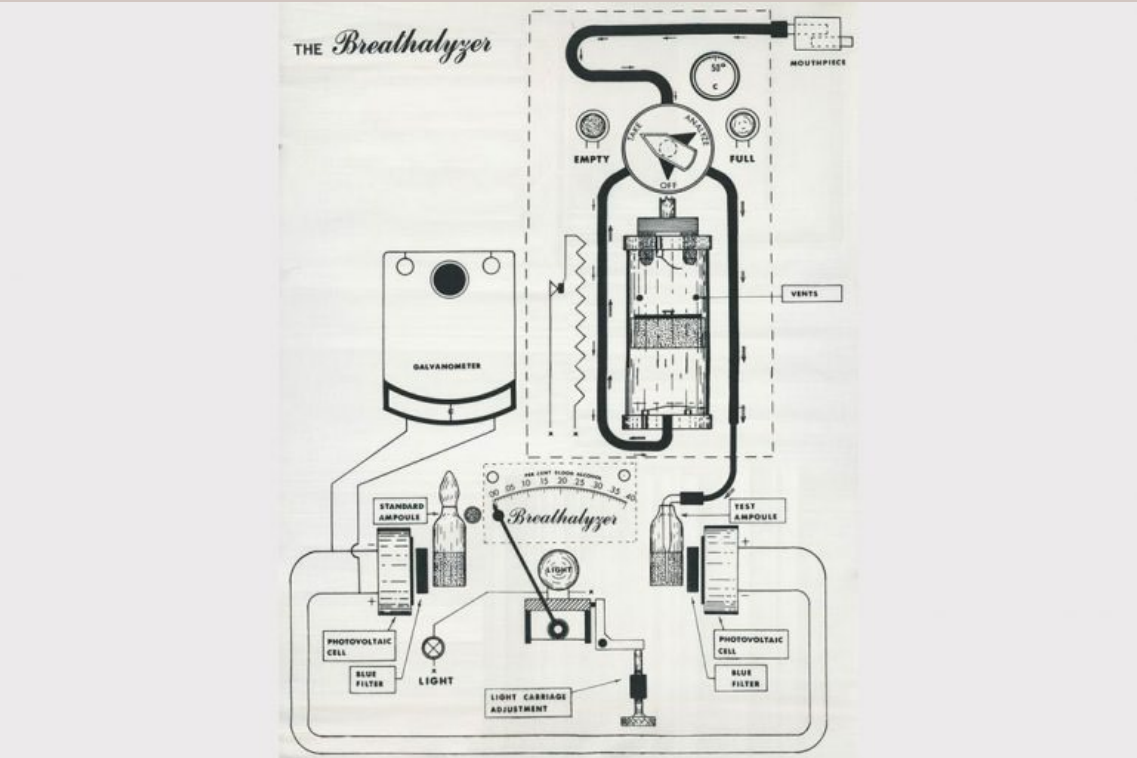
- Clerk
- Captain in charge

Robert Borkenstein

- In State Police, develops a relationship with Harger
- Drunkometer was complicated, low reliability
- Decided to develop a more reliable device

1954:
Borkenstein Breathalyzer

- While attending Indiana University, he created the Breathalyzer, a more compact, more easily operated device.
- Commercially produced, first by Stephenson, then Smith & Wesson, then Drager
- Adopted by law enforcement worldwide.



How the Breathalyzer Worked

No balloons

Color change in a sulfuric acid – potassium dichromate solution

From Law Enforcement to Academia

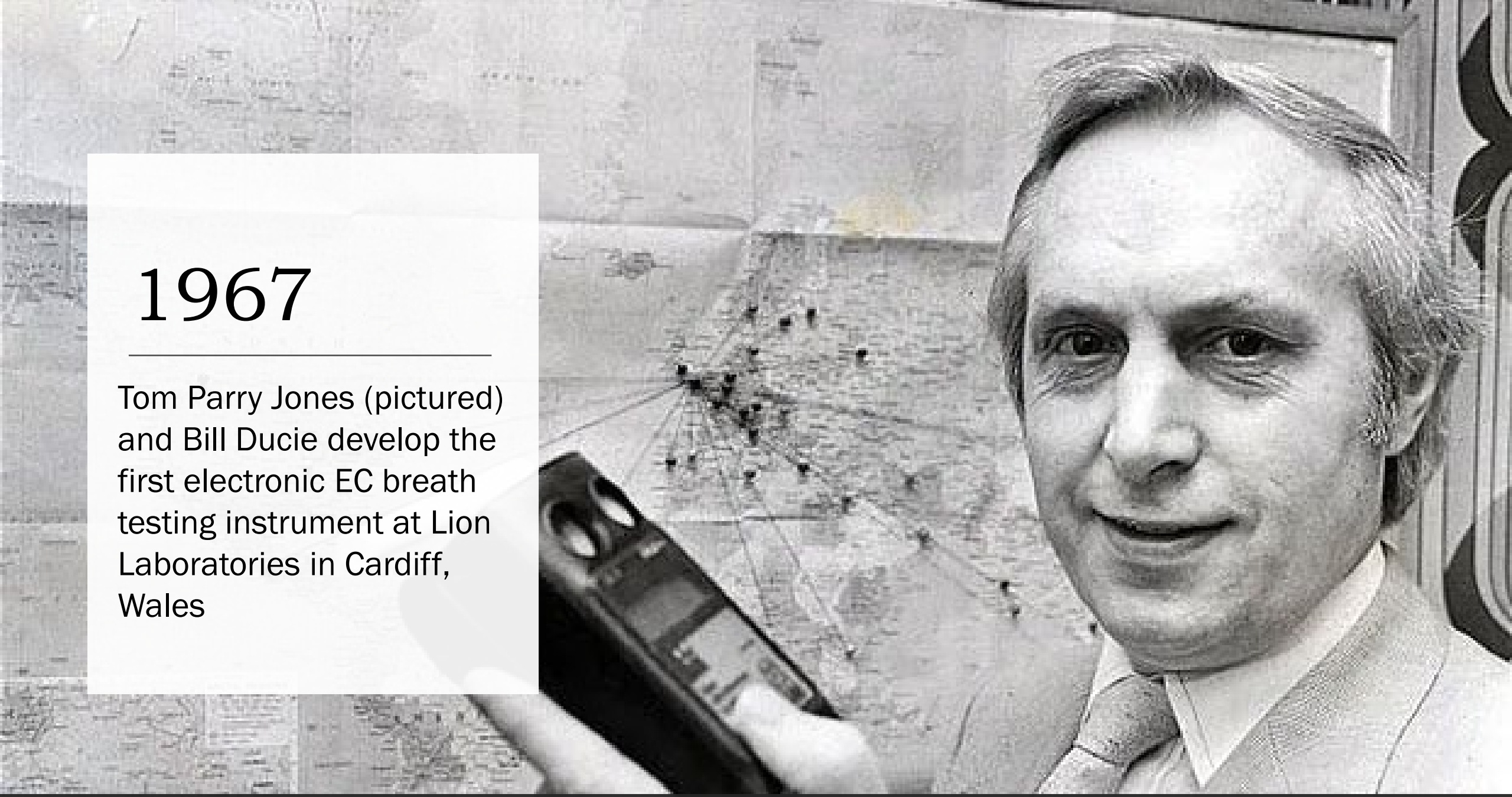
- Graduates from Indiana University
- Retires from Indiana State Police
- Joins IU faculty as Chairmen of new Dept. of Police Administration

1958

- "Robert F. Borkenstein Course on Alcohol and Highway Safety"
- For forensic science, law enforcement, and criminal justice professionals
- Frequently required for law enforcement officers in many jurisdictions—*e.g.*, NJSP Breath Test Coordinator Instructors

1967

Tom Parry Jones (pictured) and Bill Ducie develop the first electronic EC breath testing instrument at Lion Laboratories in Cardiff, Wales



1972

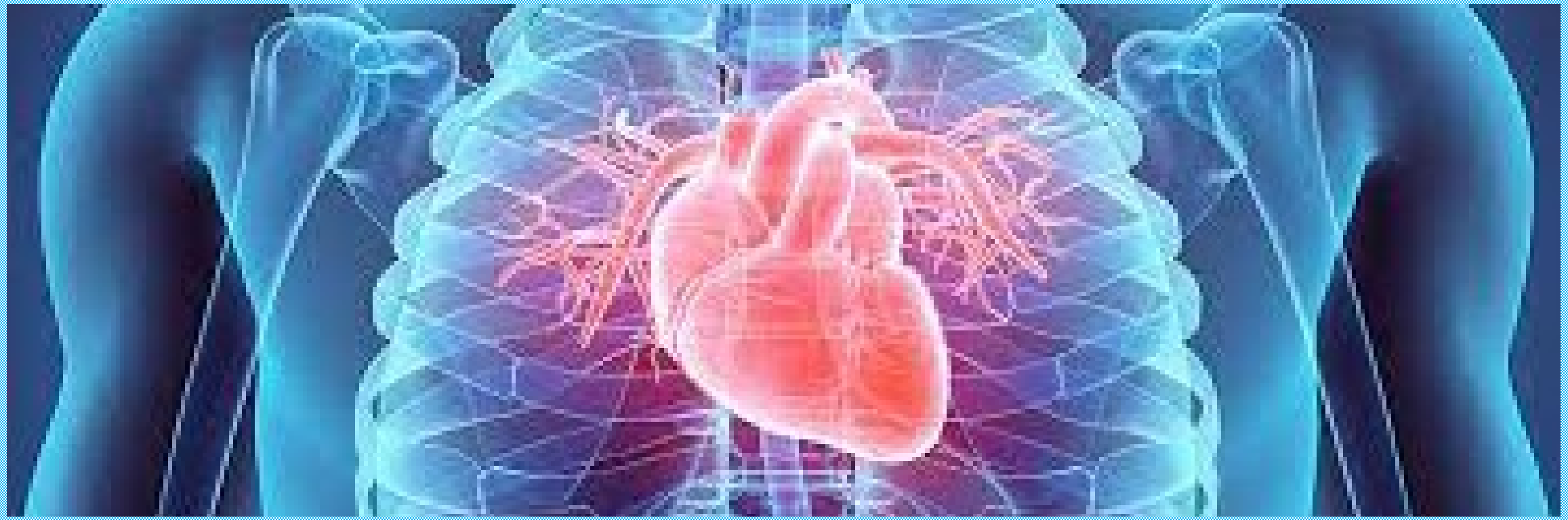
Omicron Systems Corp.

- Intoxilyzer 4011 -- first IR instrument
- Later acquired by CMI, Inc.
- Upgraded to 5000 and beyond

Dräger

Intoximeters Inc.
World Leader in Breath Alcohol Testing Since 1945.

CMI INC.
Intoxilyzer®

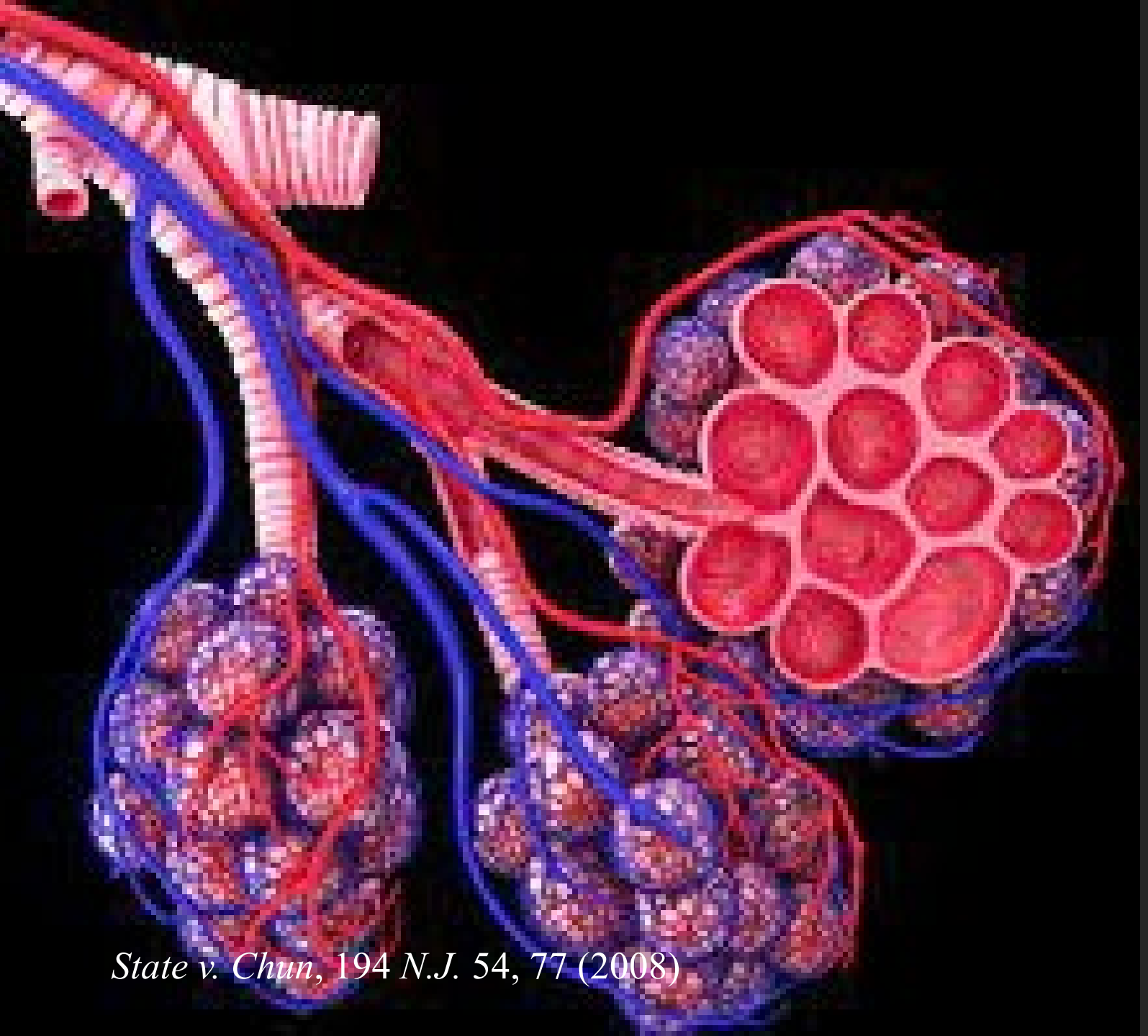


Physiological Assumptions

STATE V. CHUN, 194 *N.J.* 54, 77 (2008)

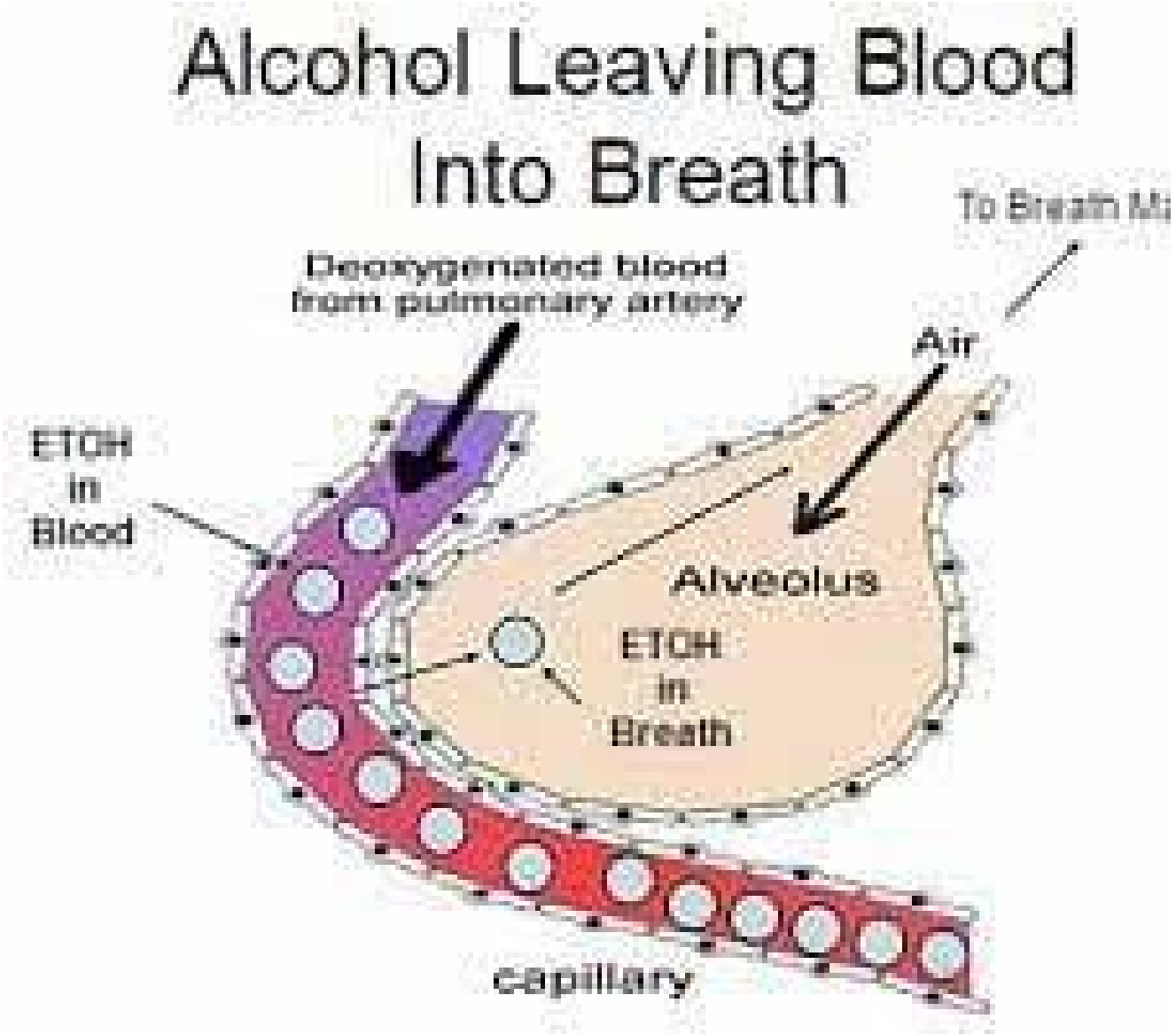
State v. Chun, 194 *N.J.* 54, 77 (2008)

All vapor in a breath sample comes from the lungs



State v. Chun, 194 *N.J.* 54, 77 (2008)

Alcohol exchanges from blood to breath in the avioli



Constant Partition Ratio

2100 : 1

- *State v. Chun*, 194 *N.J.* 54, 95 (2008).
- *State v. Downie*, 117 *N.J.* 450, 460-63 (1990).

Mouth temperature 34 degrees Celsius

- 34° C = 94° F
- 1° Celsius = 1.8° F

State v. Chun, 194 *N.J.* 54, 104 (2008).

Reasonable Time

- BrAC within a reasonable time of operation
- BrAC at time of operation

State v. Tischio, 107 *N.J.* 504, 506, 522 (1987)

Wayne Alan Jones. Ph.D.

- Body Mass
- GERD
- Elimination
- Interferents
- Diabetes

Michael P. Hlastala, Ph.D.

- *Does ethanol exchange occur exclusively at the aveoli?*
- *Is there validity to the concept of blood-breath ratio?*

How Is *Per Se* Defined?

Blood Alcohol Content	Breath Alcohol Content
BAC	BrAC
Most States	Some States and National Park Service

N.J.S.A. 39:4-50(a)

"A person who ... operates a motor vehicle with a **blood alcohol concentration** of 0.08% or more by weight of alcohol in the defendant's blood ... shall be subject [to punishment]."

32 *C.F.R.* sec. 4.23

(a) Operating or being in actual physical control of a motor vehicle is prohibited while:

****

(2) The alcohol concentration in the operator's **blood or breath** is 0.08 grams or more of alcohol per 100 milliliters of blood or 0.08 grams or more of alcohol per 210 liters of breath....

Sampling Patterns A B A B C

- *Pretest deprivation-observation period*
- *Blank tests before each specimen*
- *Two separate consecutive specimens 2-10 minutes apart*
- *Control test with every subject test*

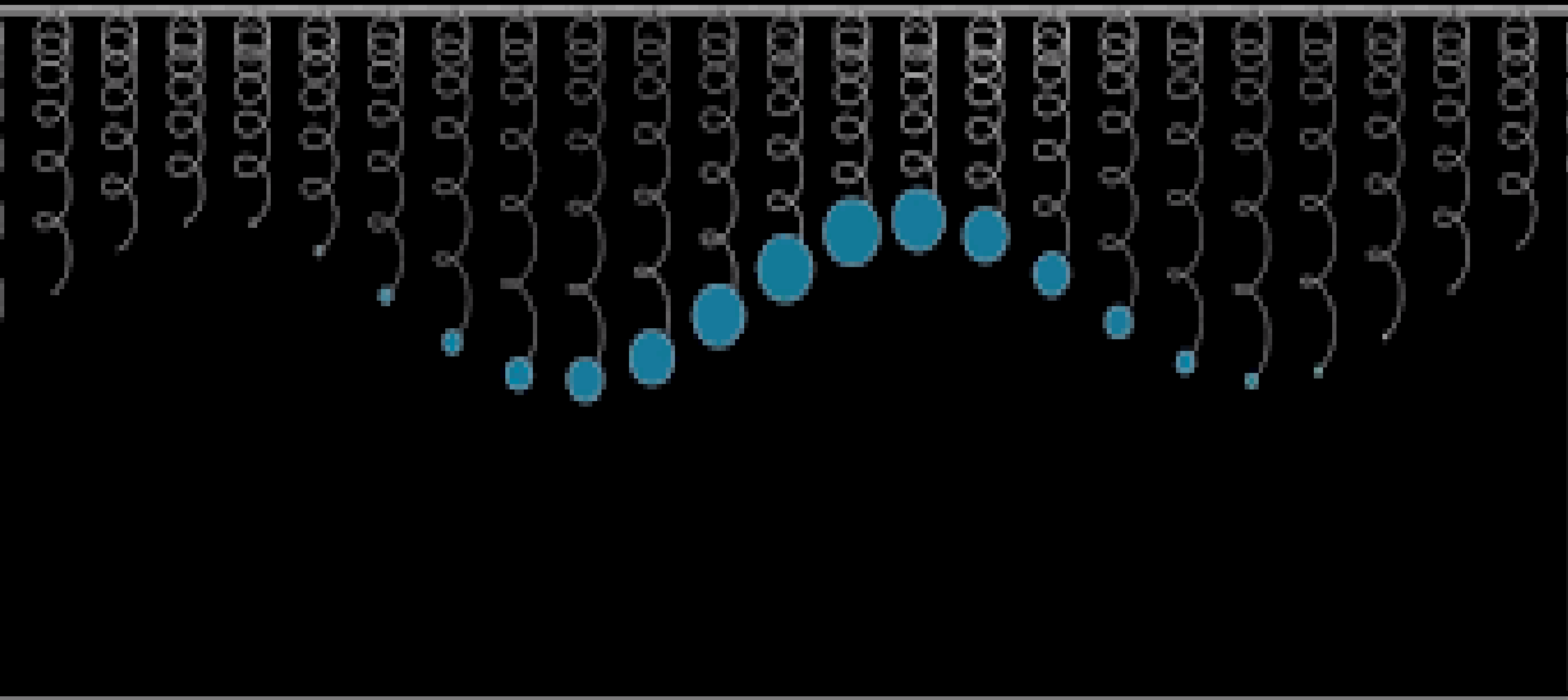
-- *18 J.Anal.Toxicology* 270 (Oct. 1994)

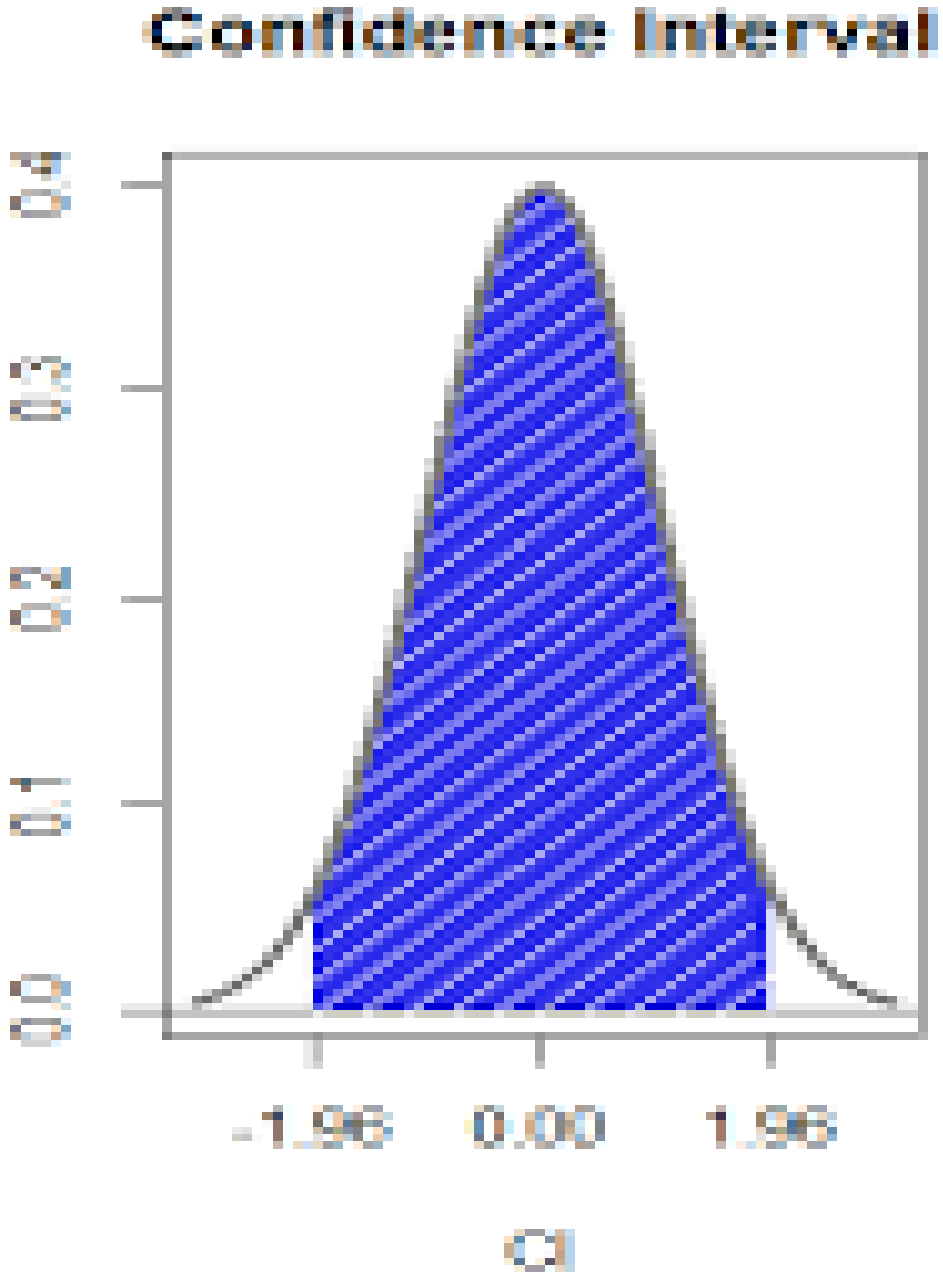
ABAB

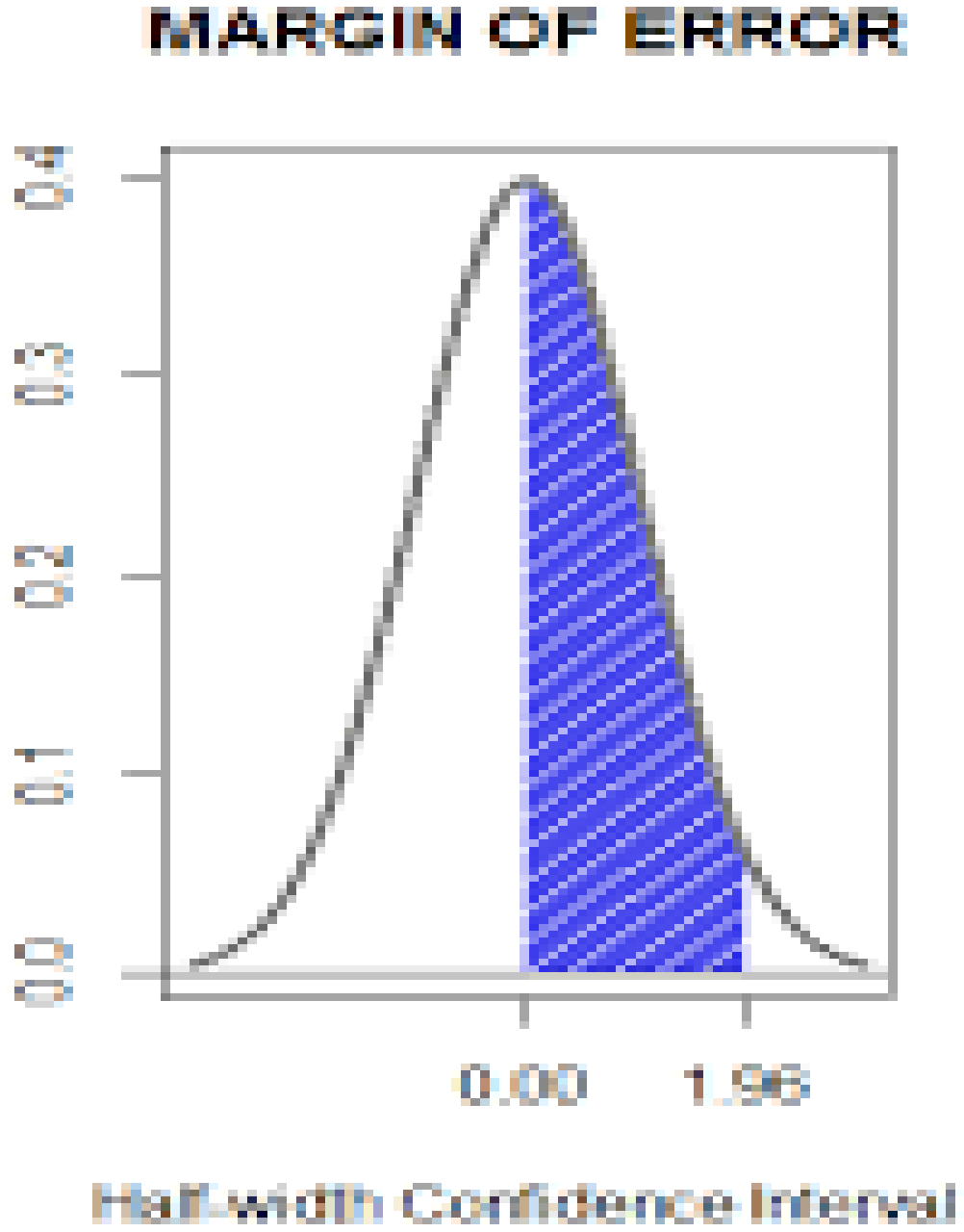
A B A B C


ACA BAB ACA

ACA BAAB ACA




Confidence Interval
0.0
0.1
0.2
0.3
0.4
-1.96
0.00
1.96
CI


MARGIN OF ERROR
0.0
0.1
0.2
0.3
0.4
0.00
1.96
Half-width Confidence Interval

State v. Cassidy, 235 *N.J.Super.* 482 (2018)

"It is not such uncertainty itself that is problematic; rather, for a measurement to be scientifically reliable, the amount of uncertainty must be known so the error rate of a given...measurement can be determined."

Accuracy and Uncertainty

TOLERANCE

+ | -

5%

RANGE

{10%}

Traceability

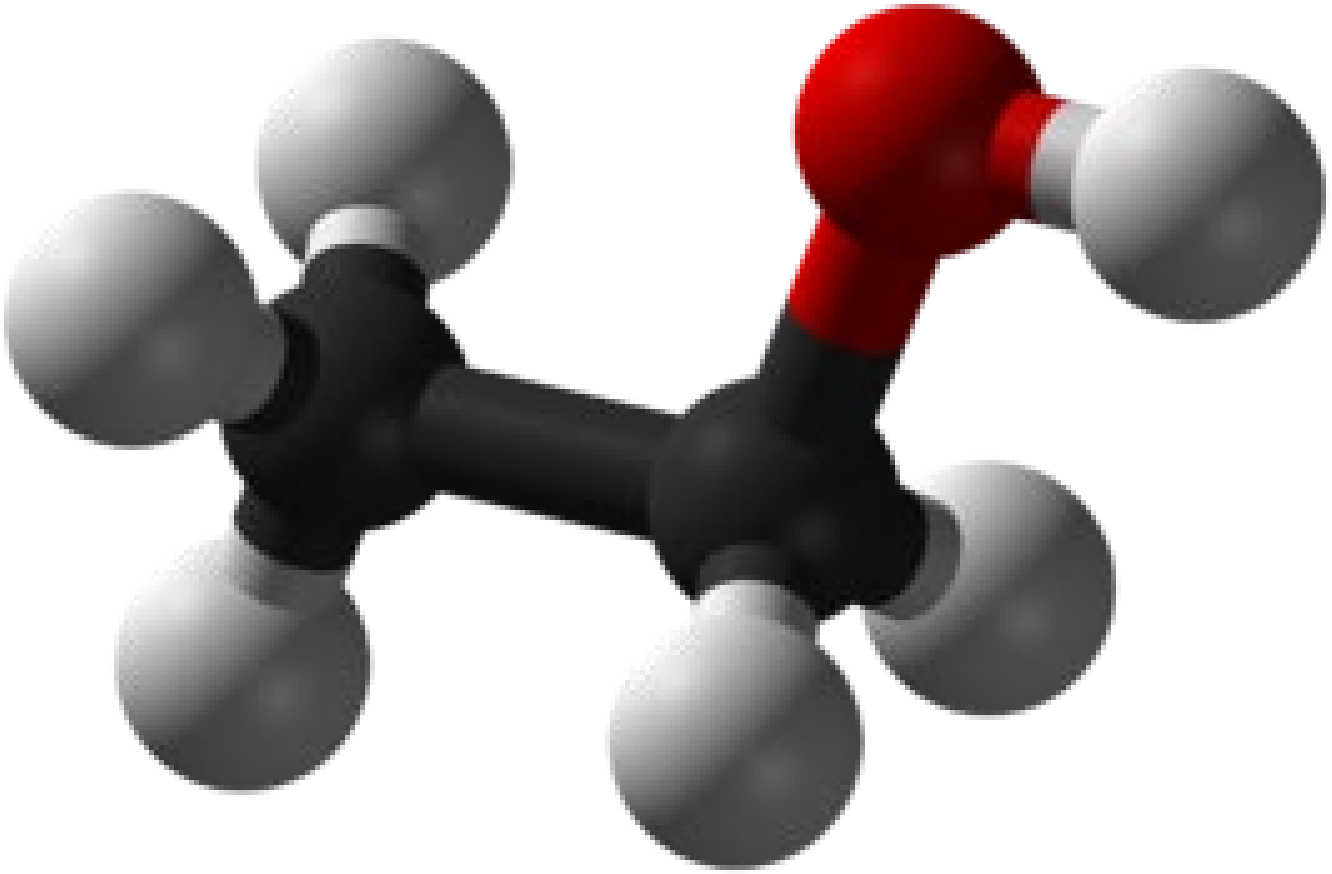
Traceable Measurements

Weight

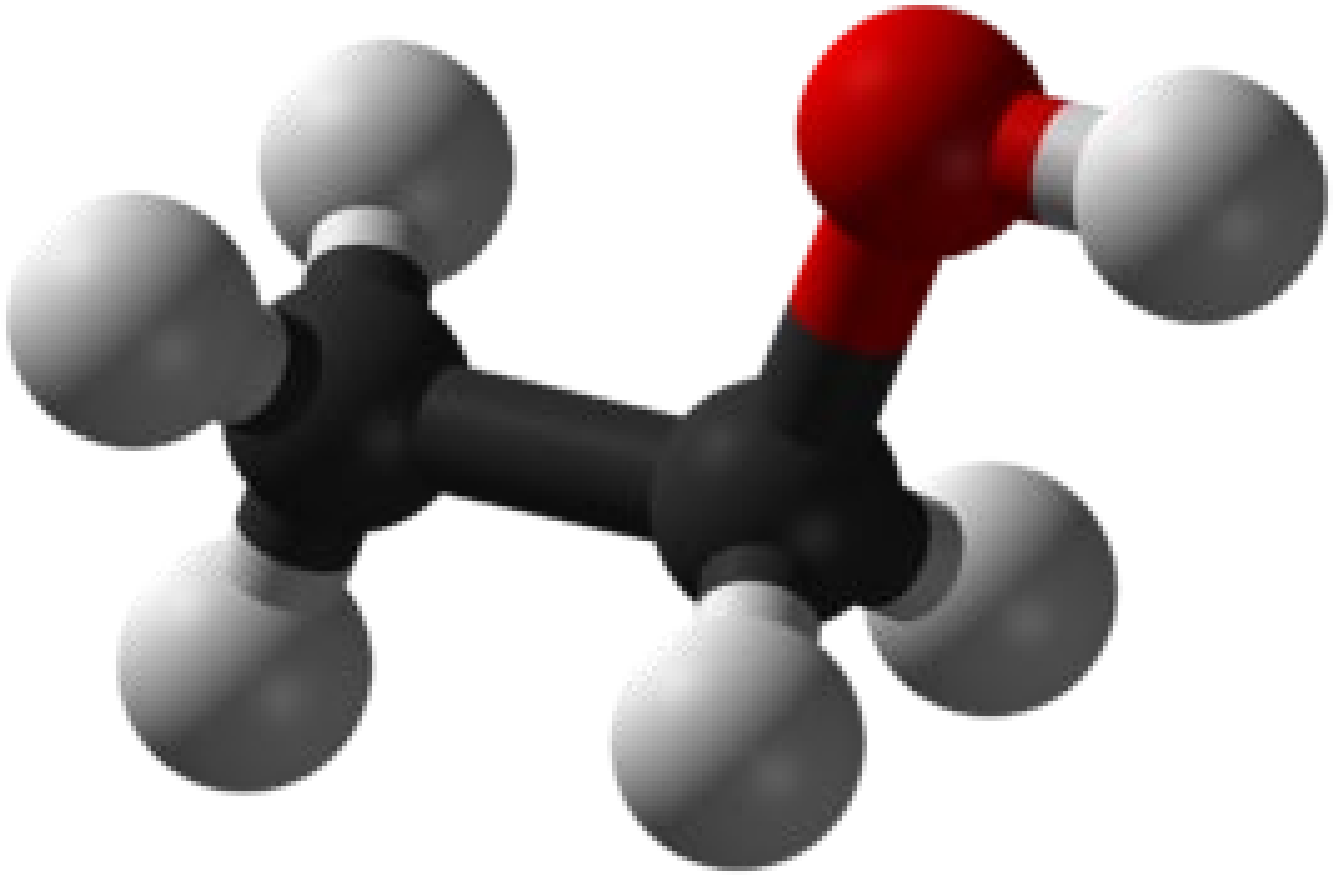
Temperature

Concentration

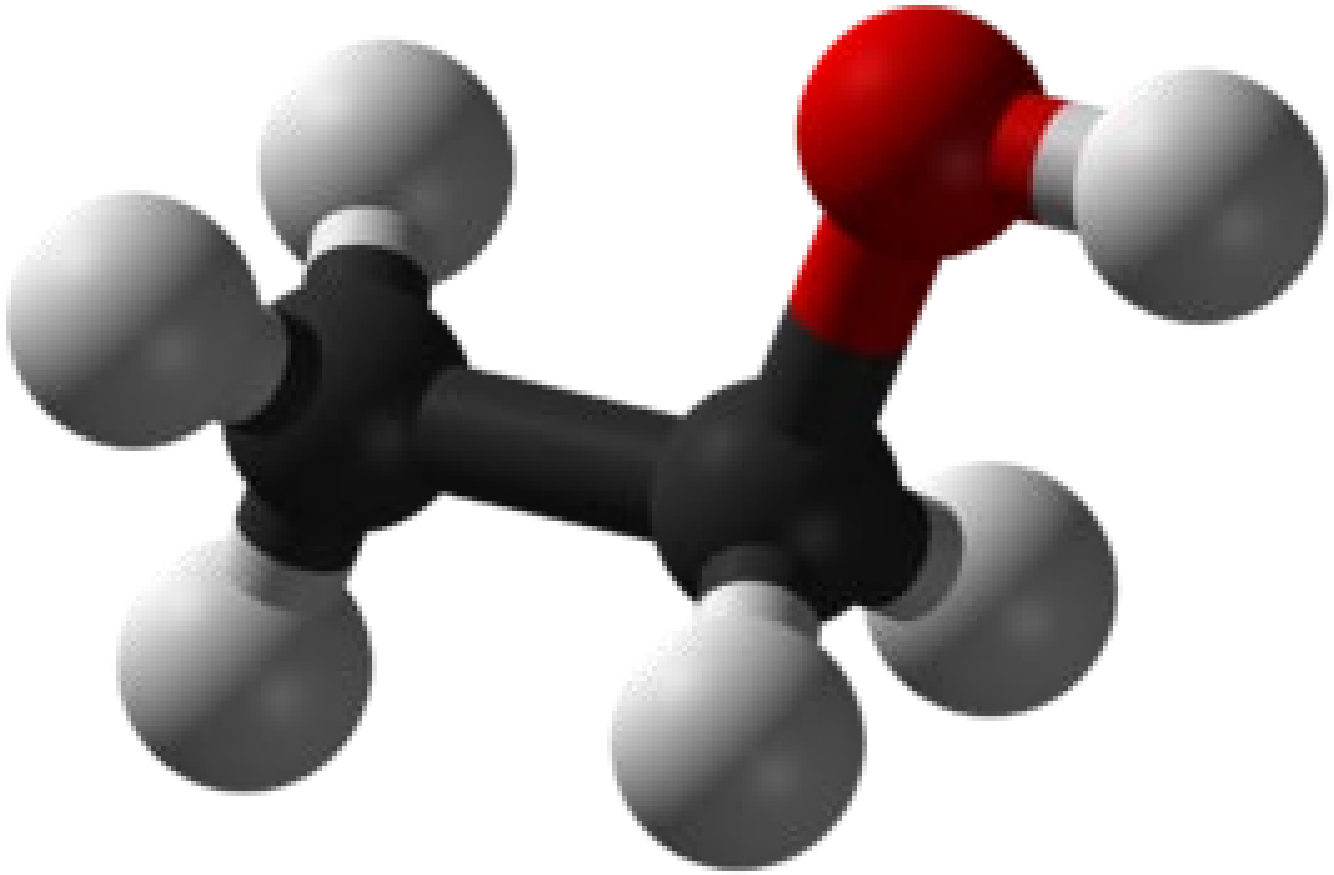
Specificity



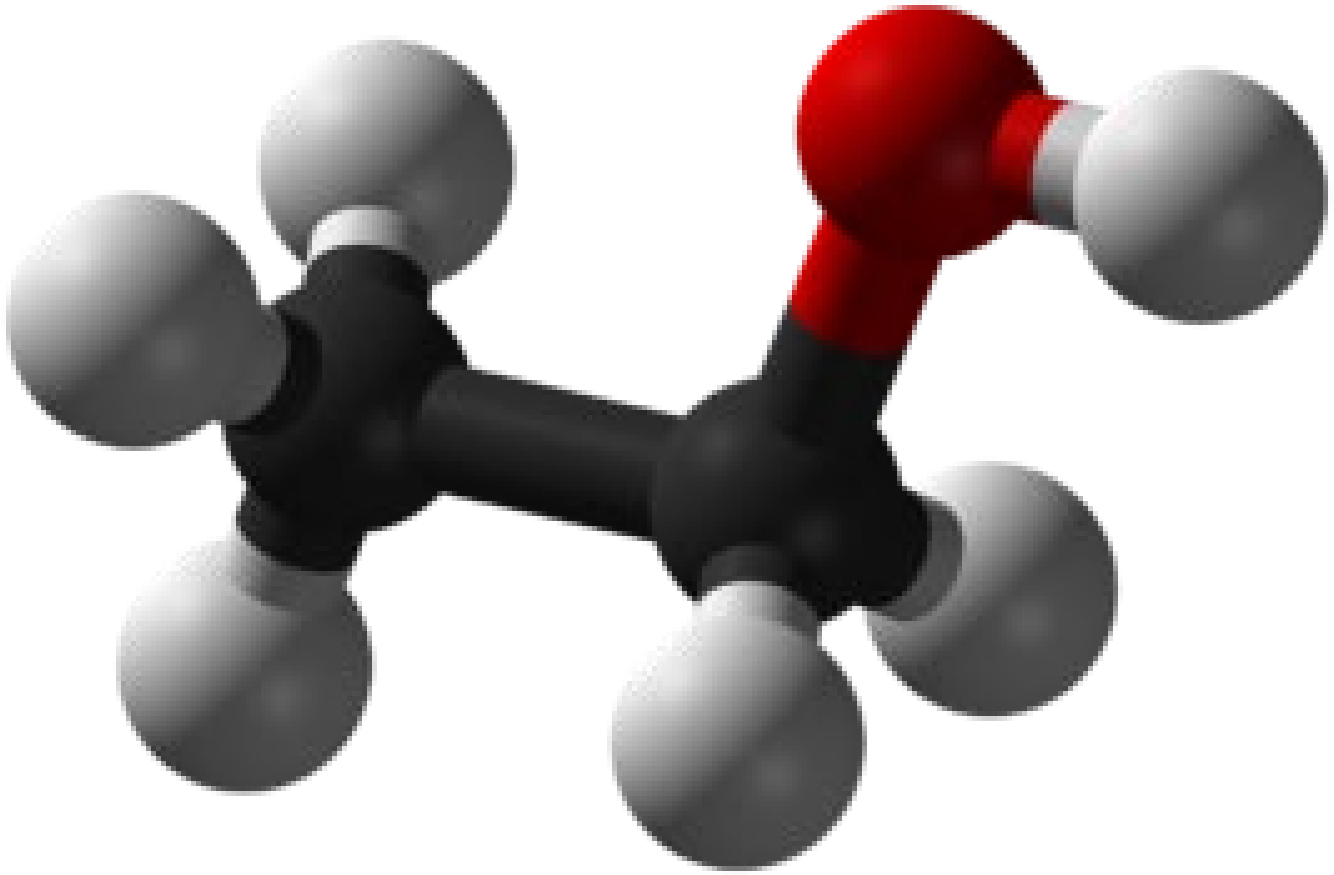
Ethanol



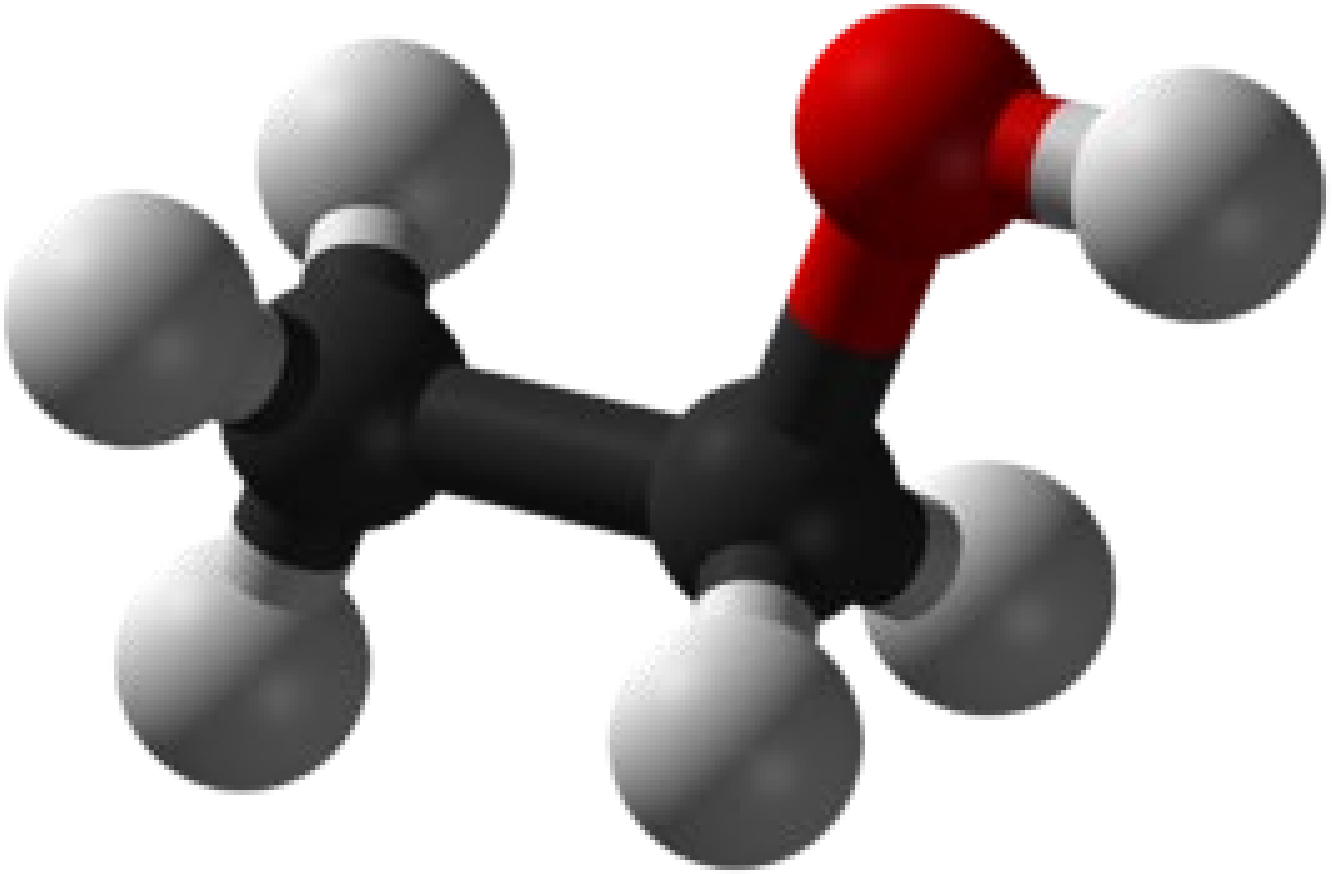
C_2H_6O



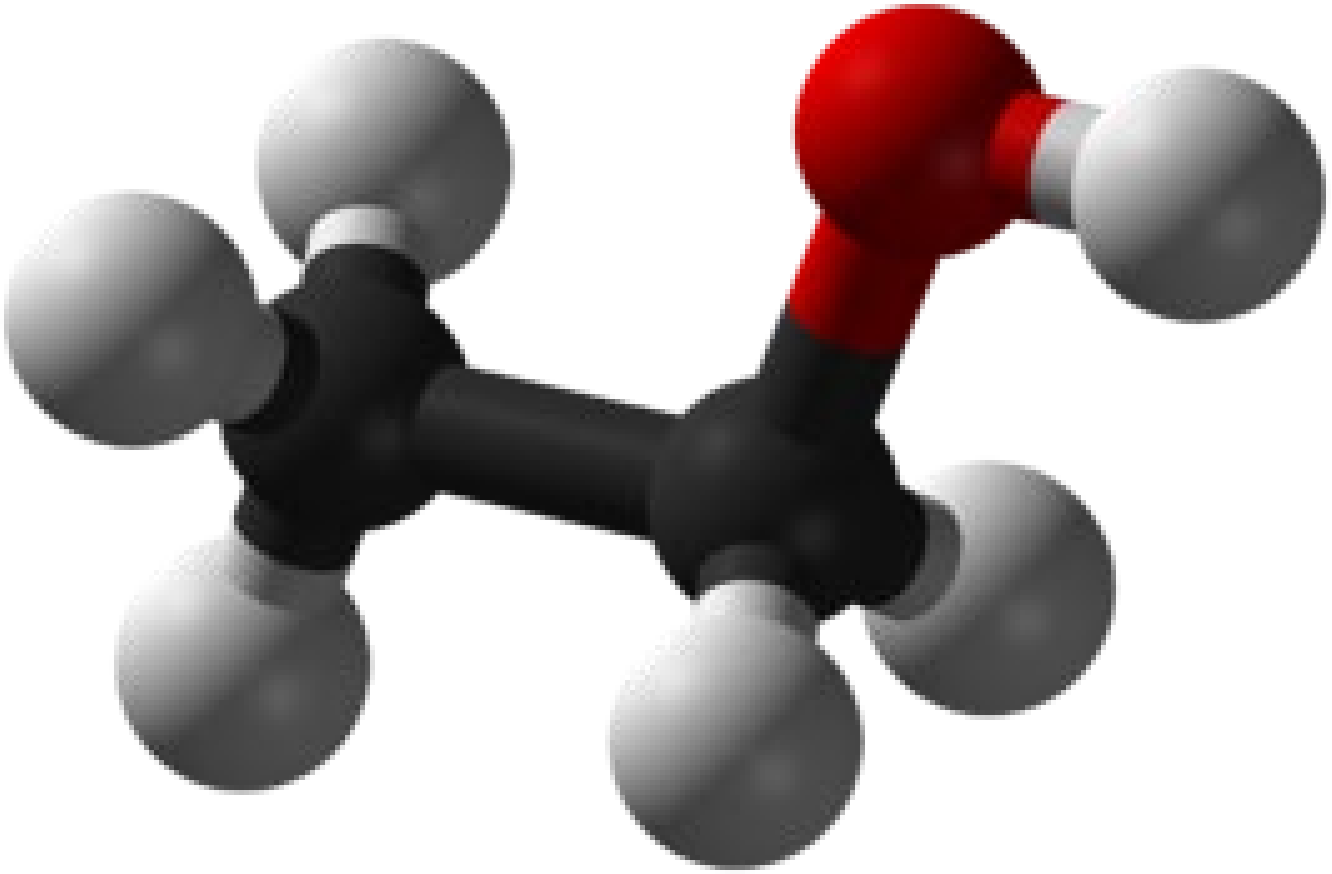
C_2H_5OH



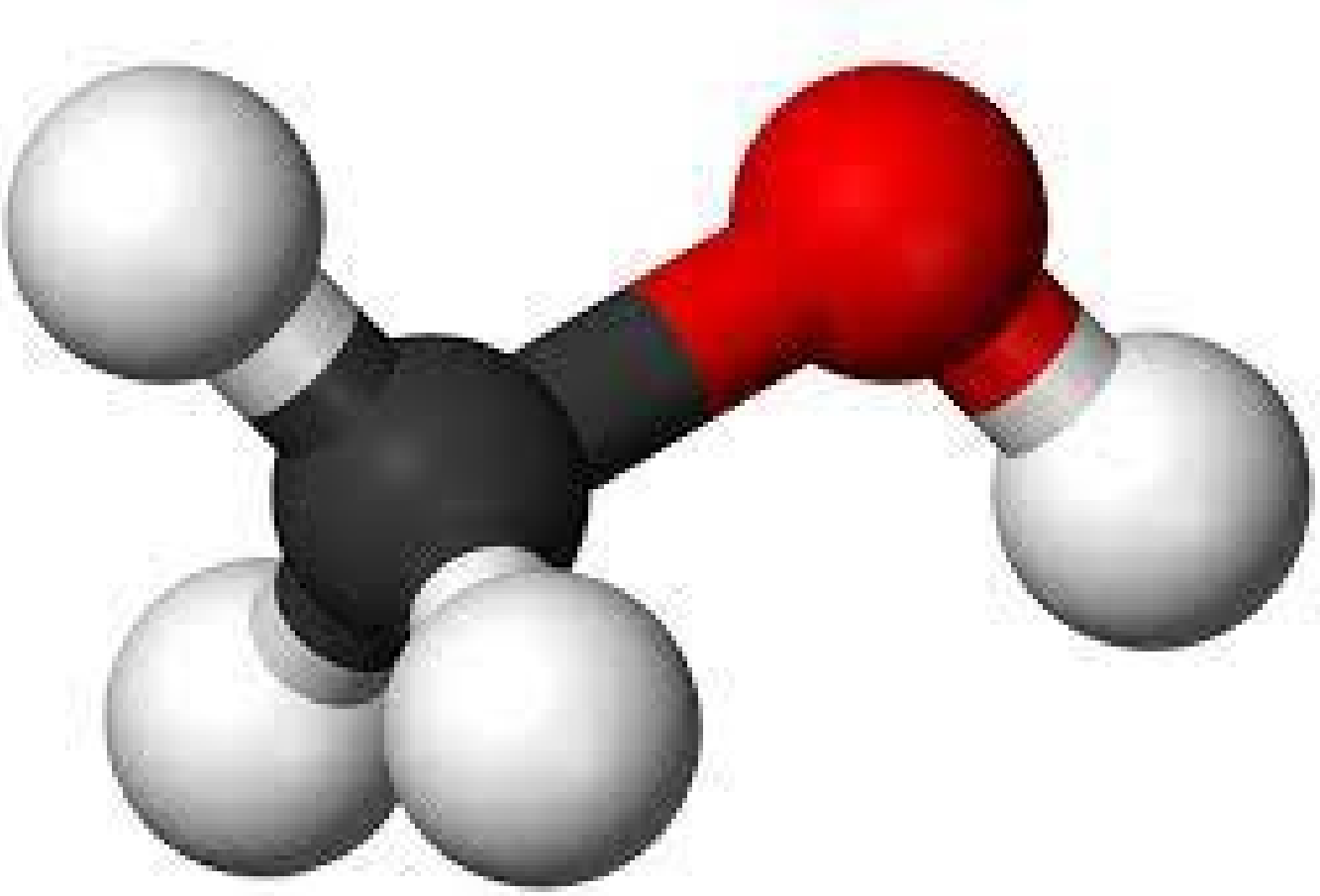
CH_3CH_2OH



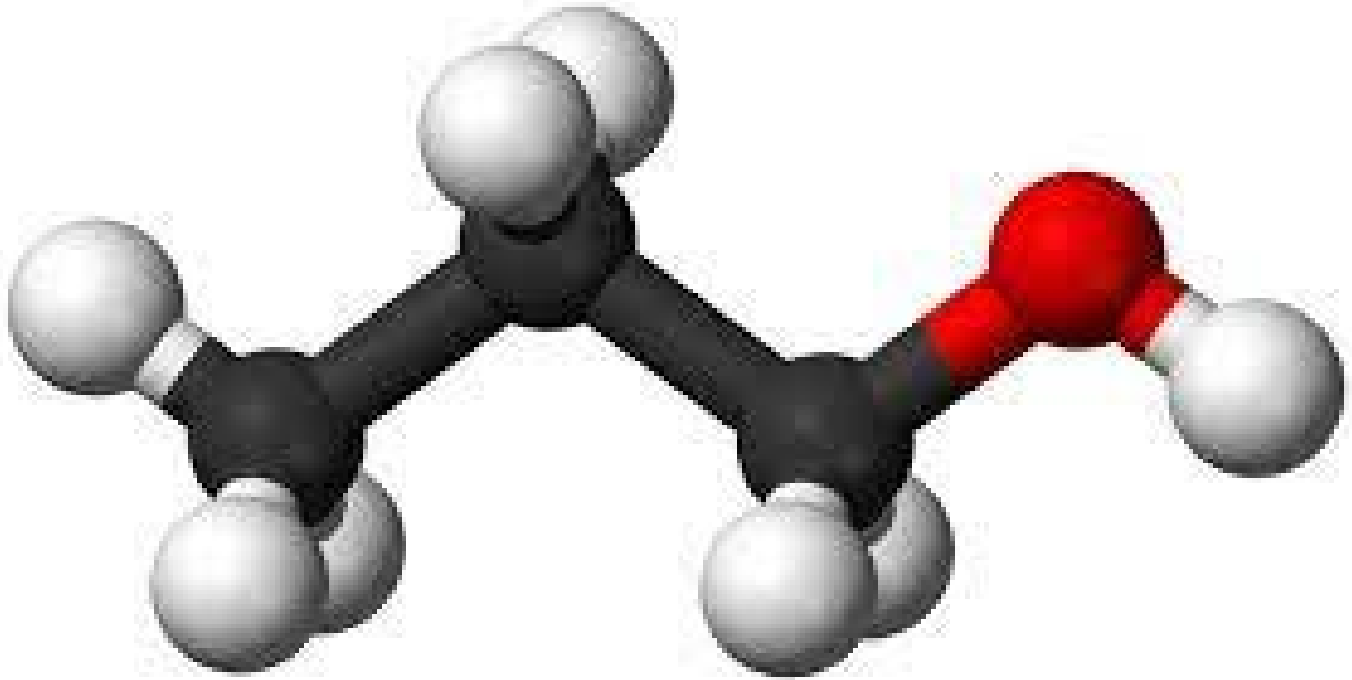
HH
HCCOH
HH



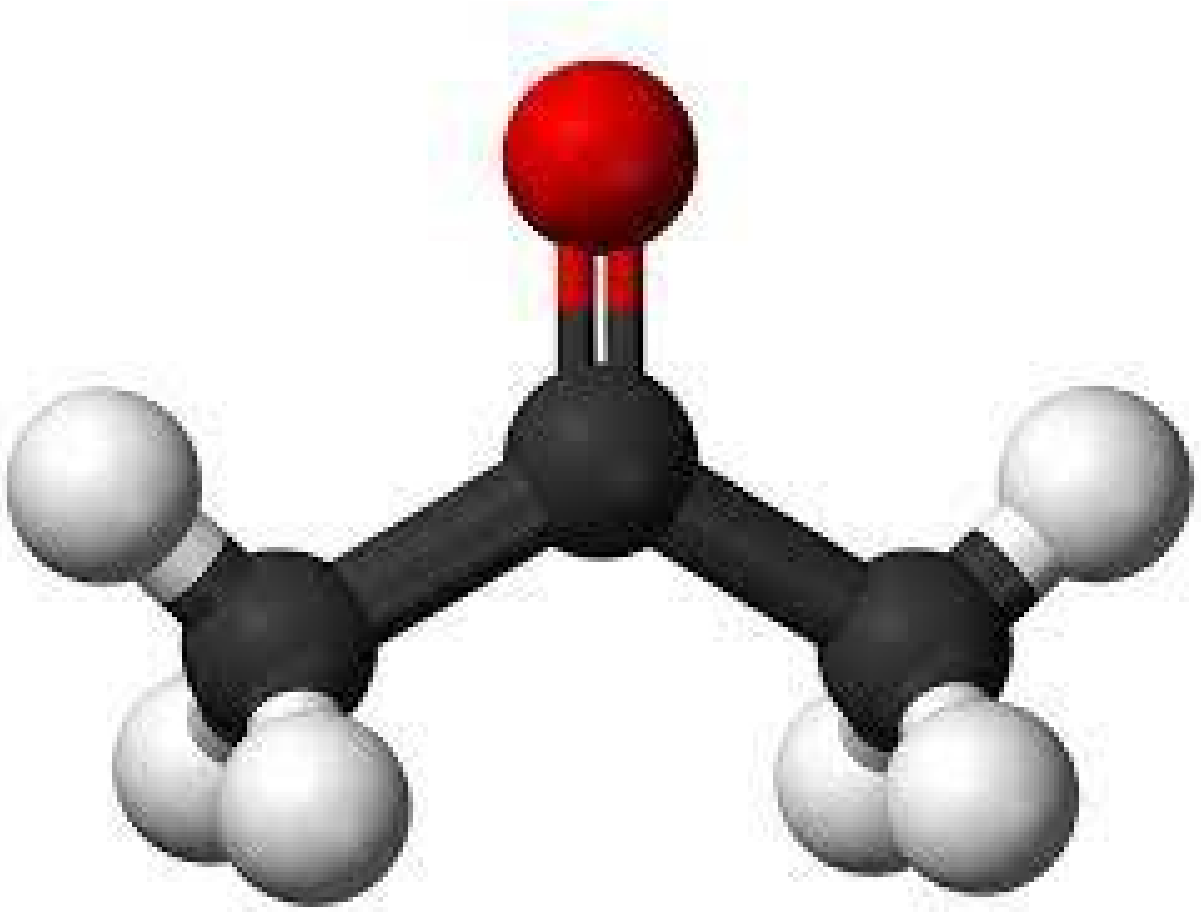
Ethanol



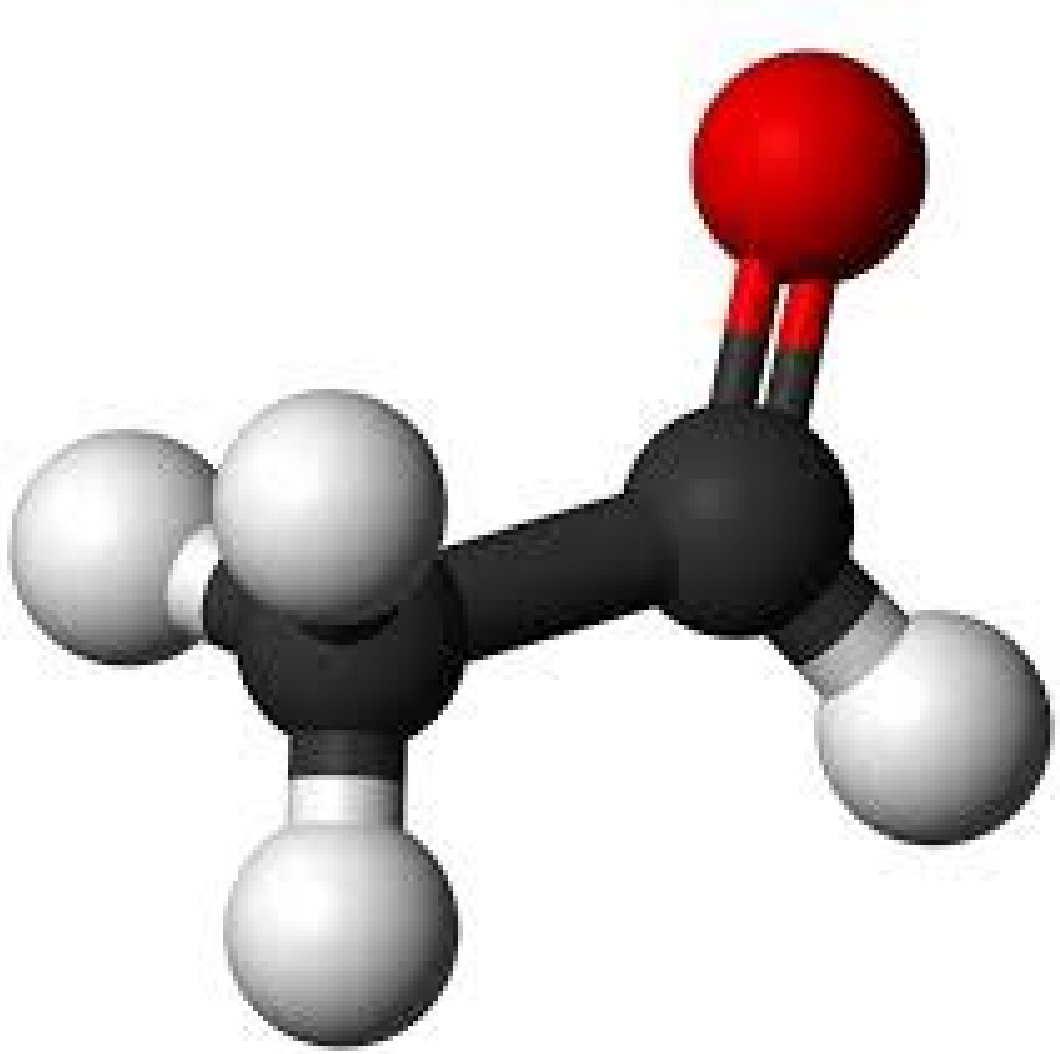
Methanol



Isopropanol



Acetone



Acetaldehyde

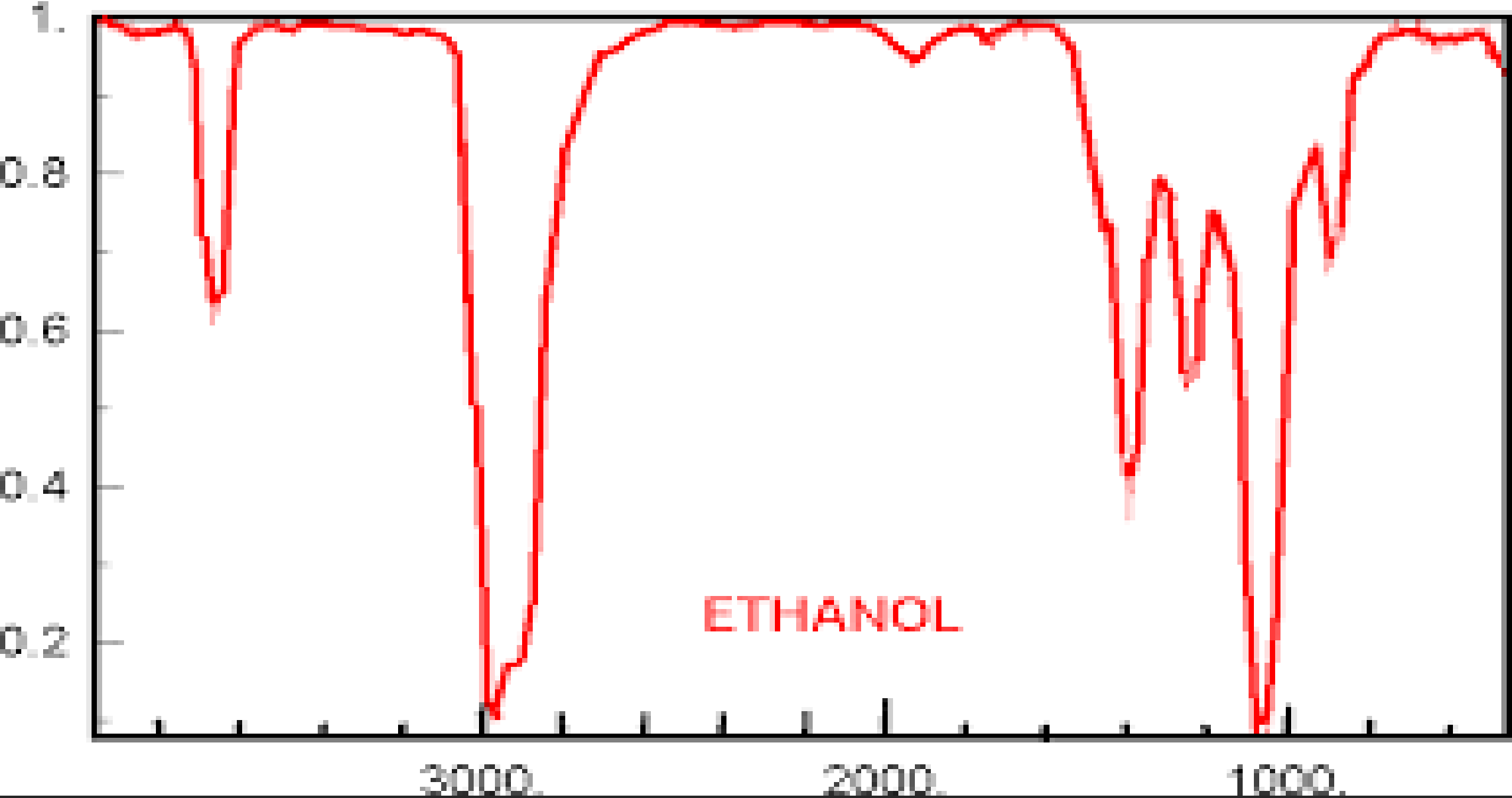
Two Technologies

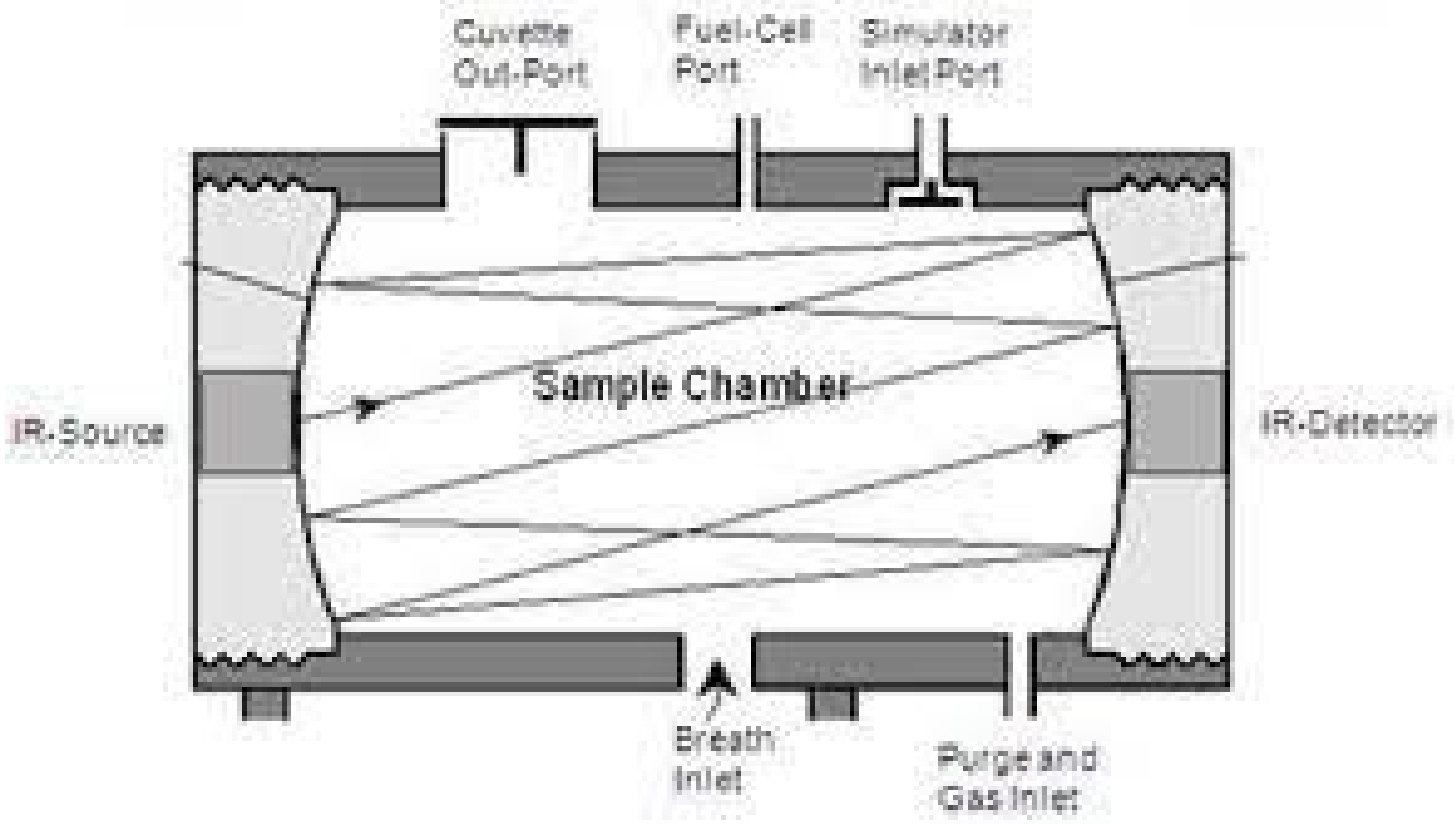
IR

Infrared Spectroscopy

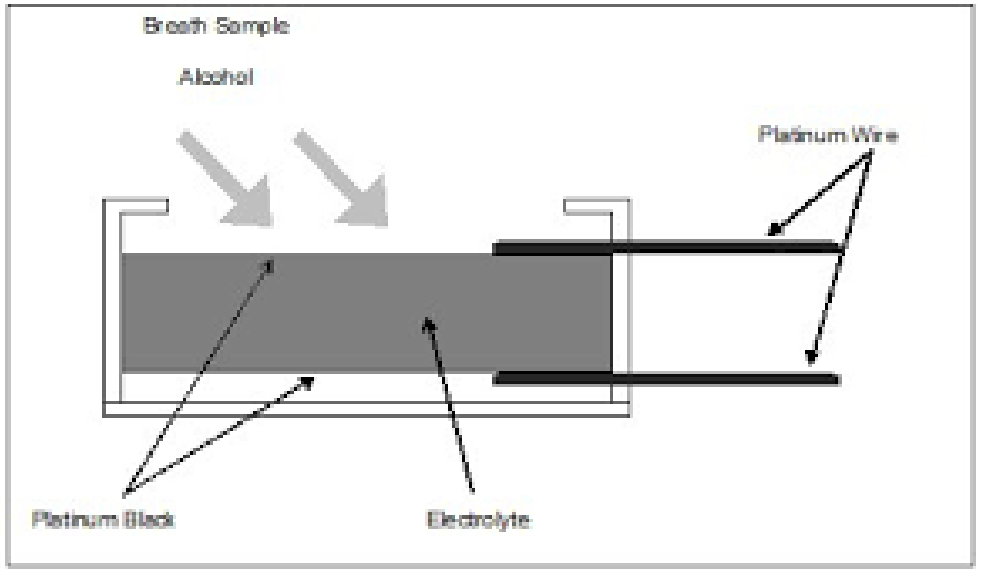
EC

Electrochemical Fuel Cell


1.
0.8
0.6
0.4
0.2
ETHANOL
3000.
2000.
1000.


Cuvette
Out-Port
Fuel-Cell
Port
Simulator
Inlet Port
Sample Chamber
IR-Source
IR-Detector
Breath
Inlet
Purge and
Gas Inlet

Alcotest


Breath Sample
Alcohol
Platinum Wire
Platinum Black
Electrolyte

EC Fuel Cell

Two Technologies

EC

Electrochemical Fuel Cell

IR

Infrared Spectroscopy

Alcotest 7110

Electro-Chemical [“EC”] “Fuel Cell”

Infrared [“IR”] Absorption (9.5 microns)

Used in NJ, replacing the Breathalyzer 900/900A

Alcotest 9510

EC

IR (9.5 microns)

Replacing the Alcotest 7110

DataMaster CDM

IR (3.44, 3.37, 3.50 microns)

DataMaster DMT

IR (3.37, 3.44, 3.50 microns)

Intoxilyzer 5000

IR (3.4 microns)

Intoxilyzer 8000

IR (3.4, 9.36 microns)

Intoxilyzer 9000

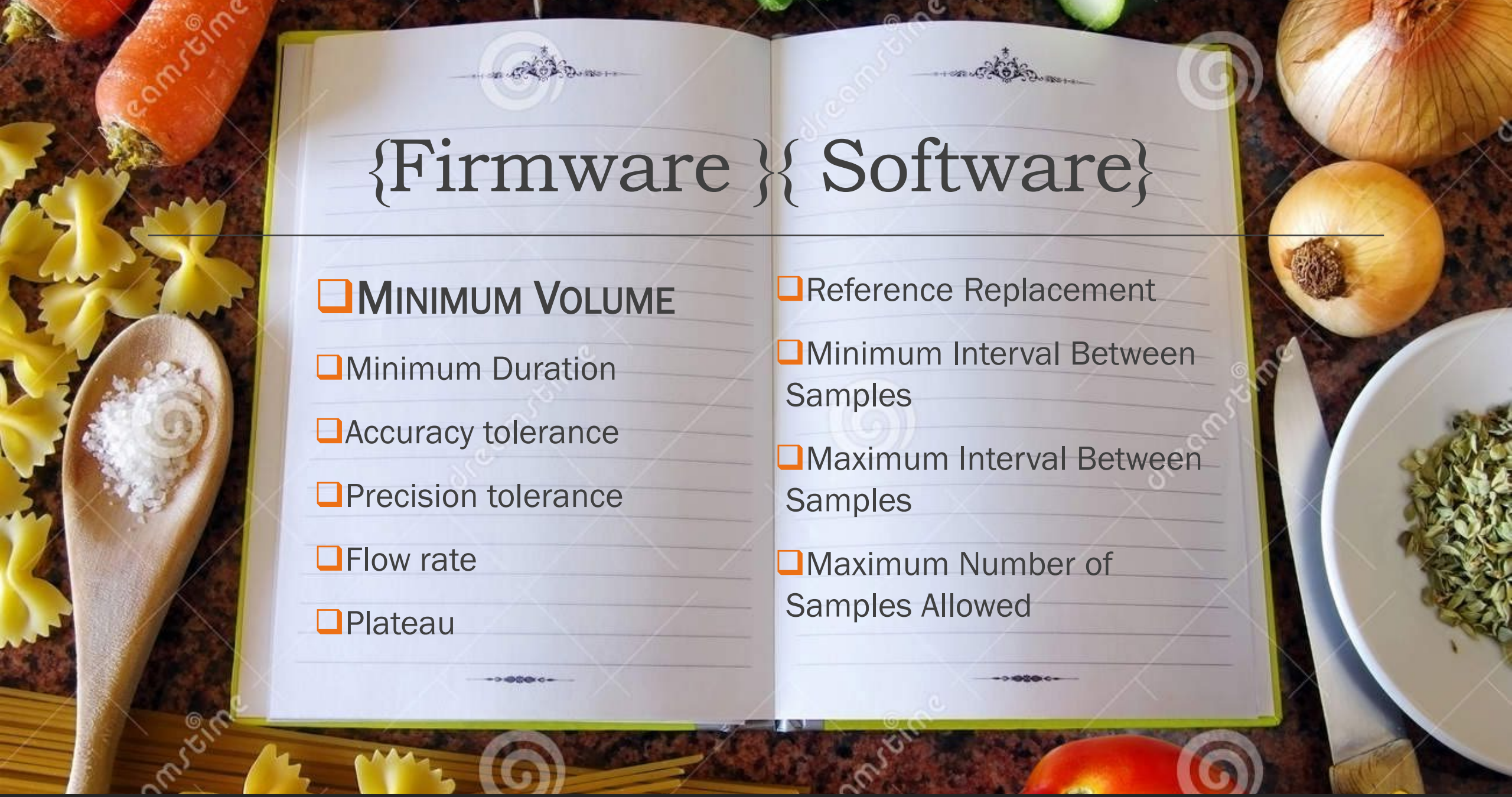
IR (4 wavelengths)

Intoximeter EC/IR

EC for evidential breath test result

IR for slope detection

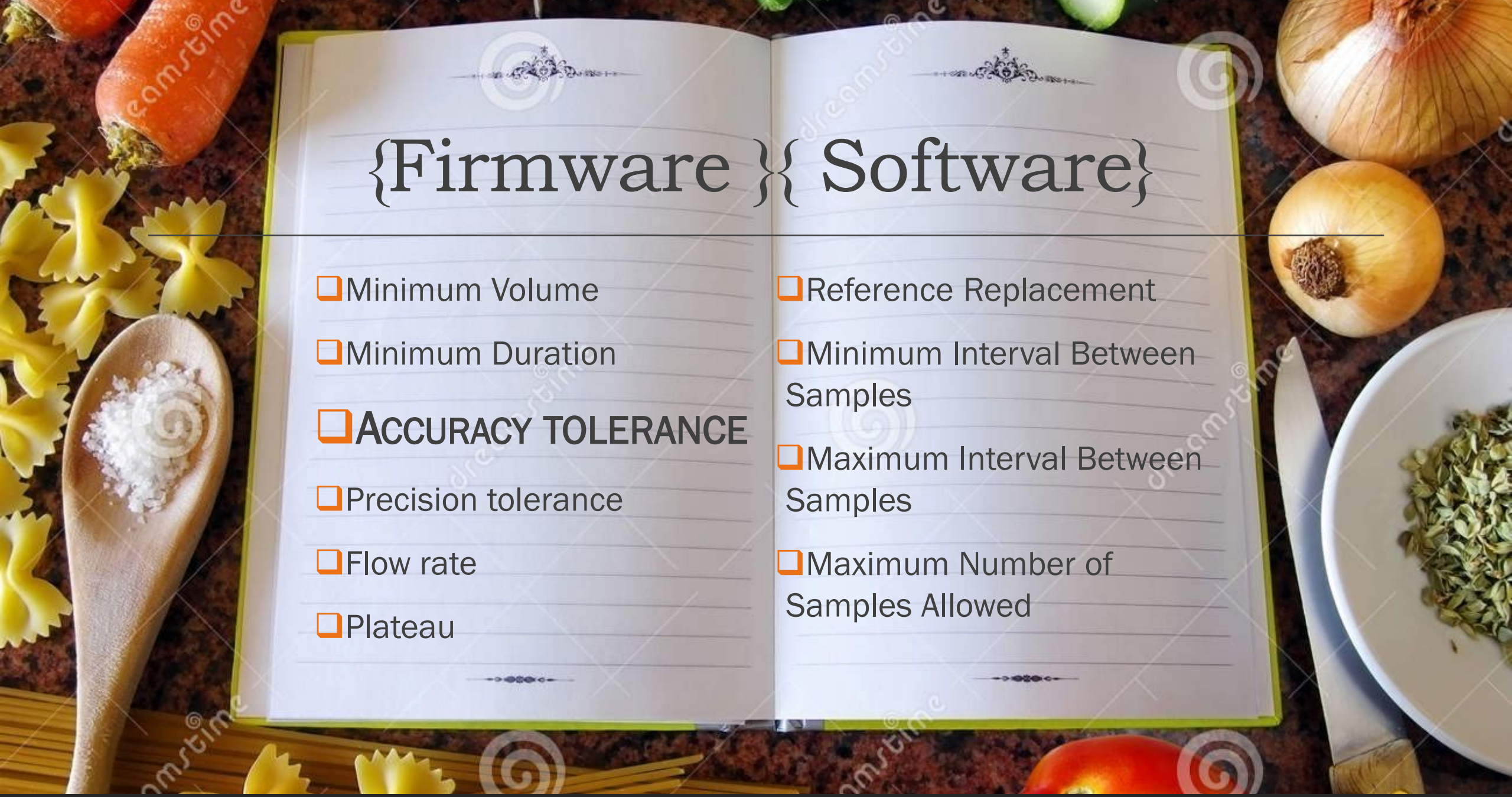

{Firmware }{ Software}
Minimum Volume
Minimum Duration
Accuracy tolerance
Precision tolerance
Flow rate
Plateau
Reference Replacement
Minimum Interval Between Samples
Maximum Interval Between Samples
Maximum Number of Samples Allowed

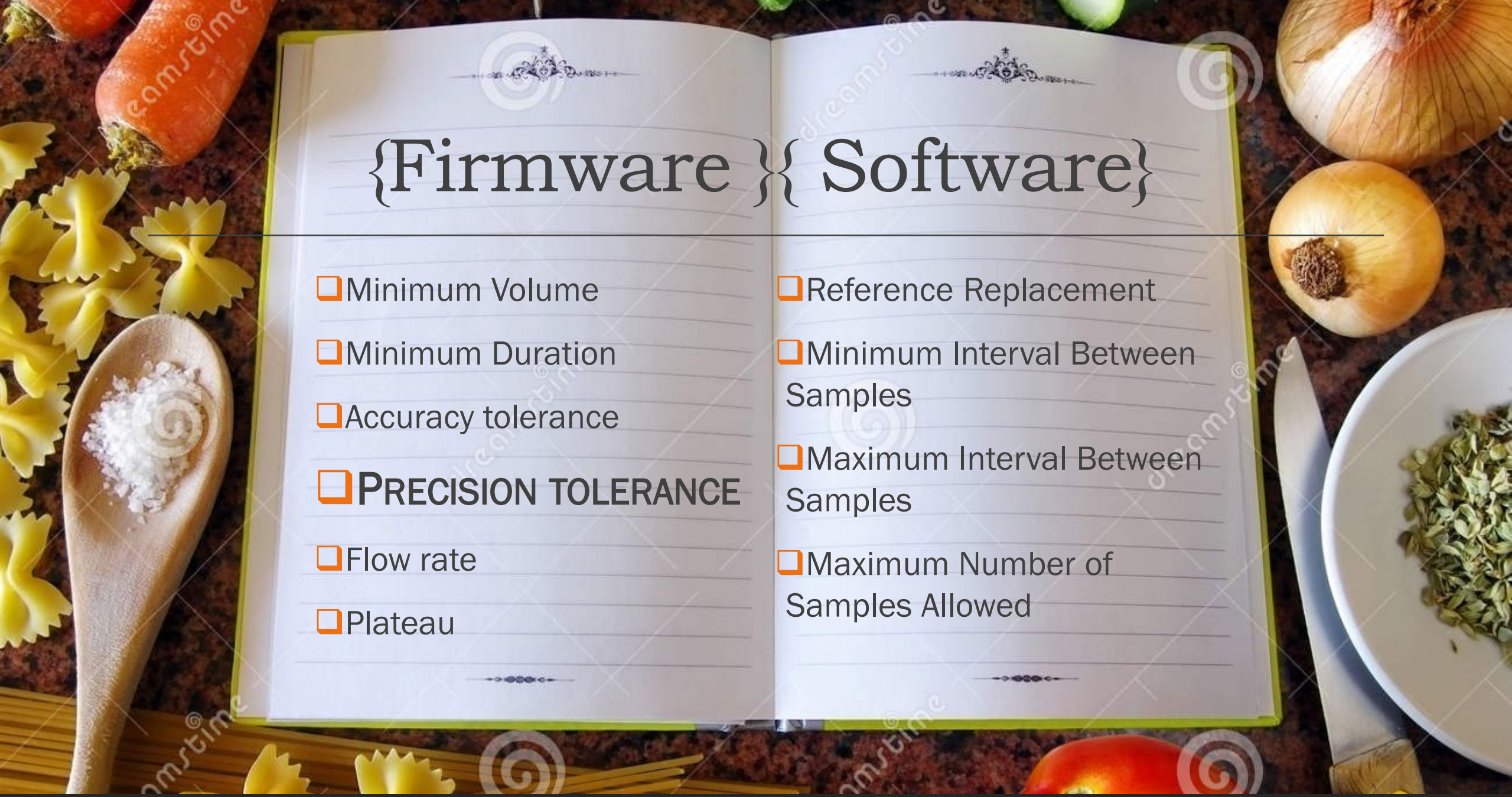

{Firmware }{ Software}
Minimum Volume
Minimum Duration
Accuracy tolerance
Precision tolerance
Flow rate
Plateau
Reference Replacement
Minimum Interval Between Samples
Maximum Interval Between Samples
Maximum Number of Samples Allowed

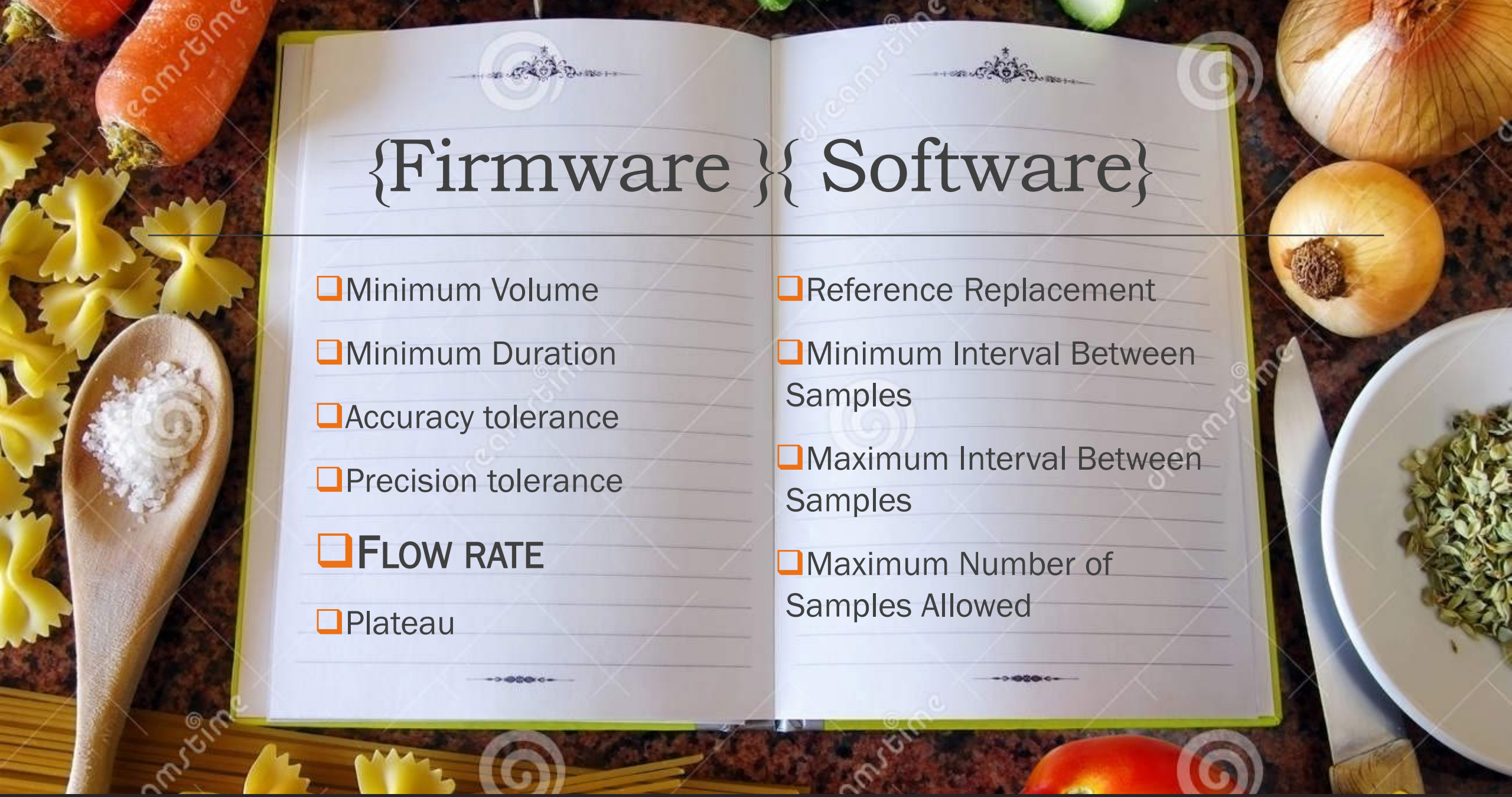
{Firmware }{ Software}

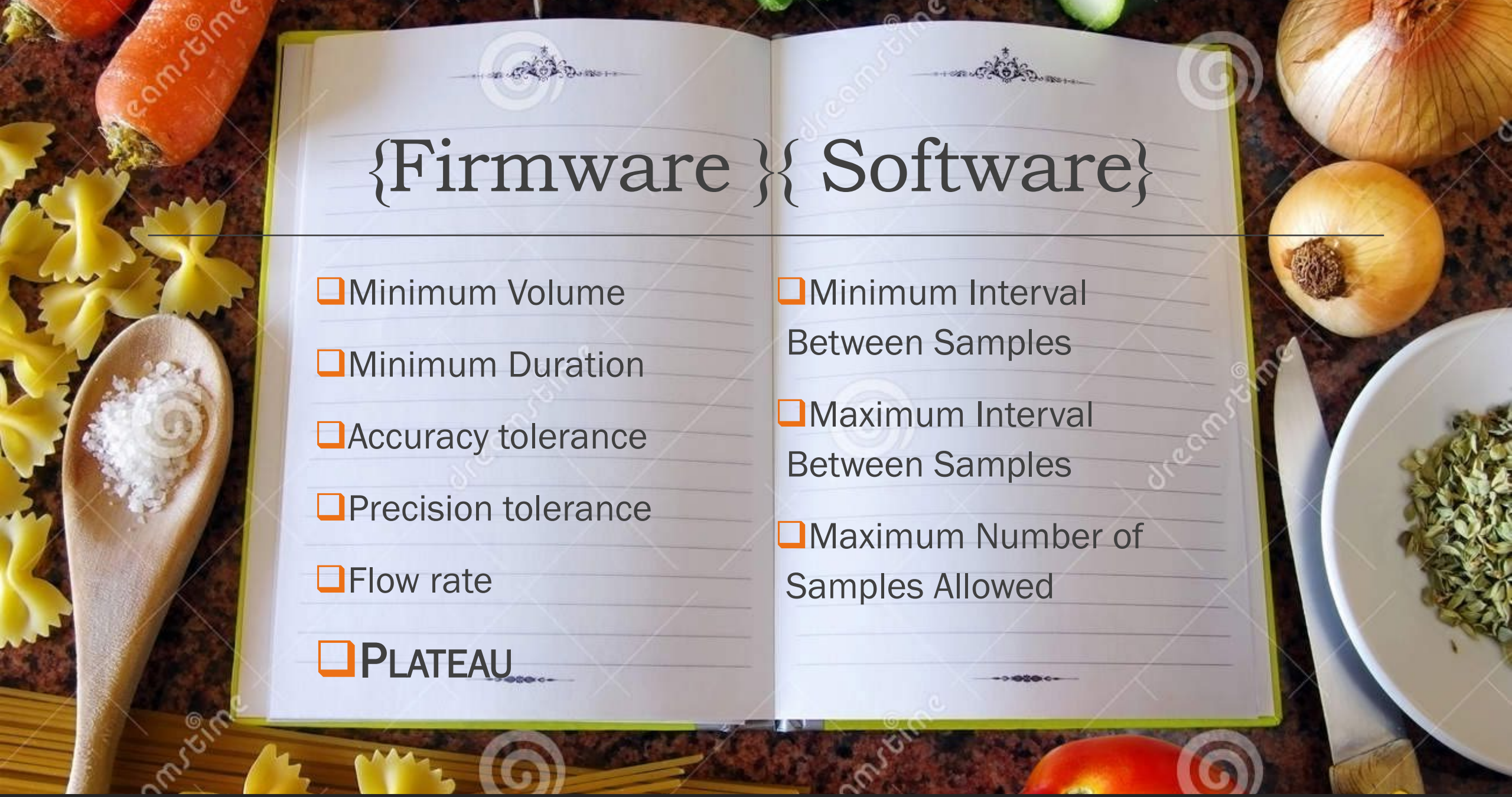
- Minimum Volume
- **MINIMUM DURATION**
- Accuracy tolerance
- Precision tolerance
- Flow rate
- Plateau

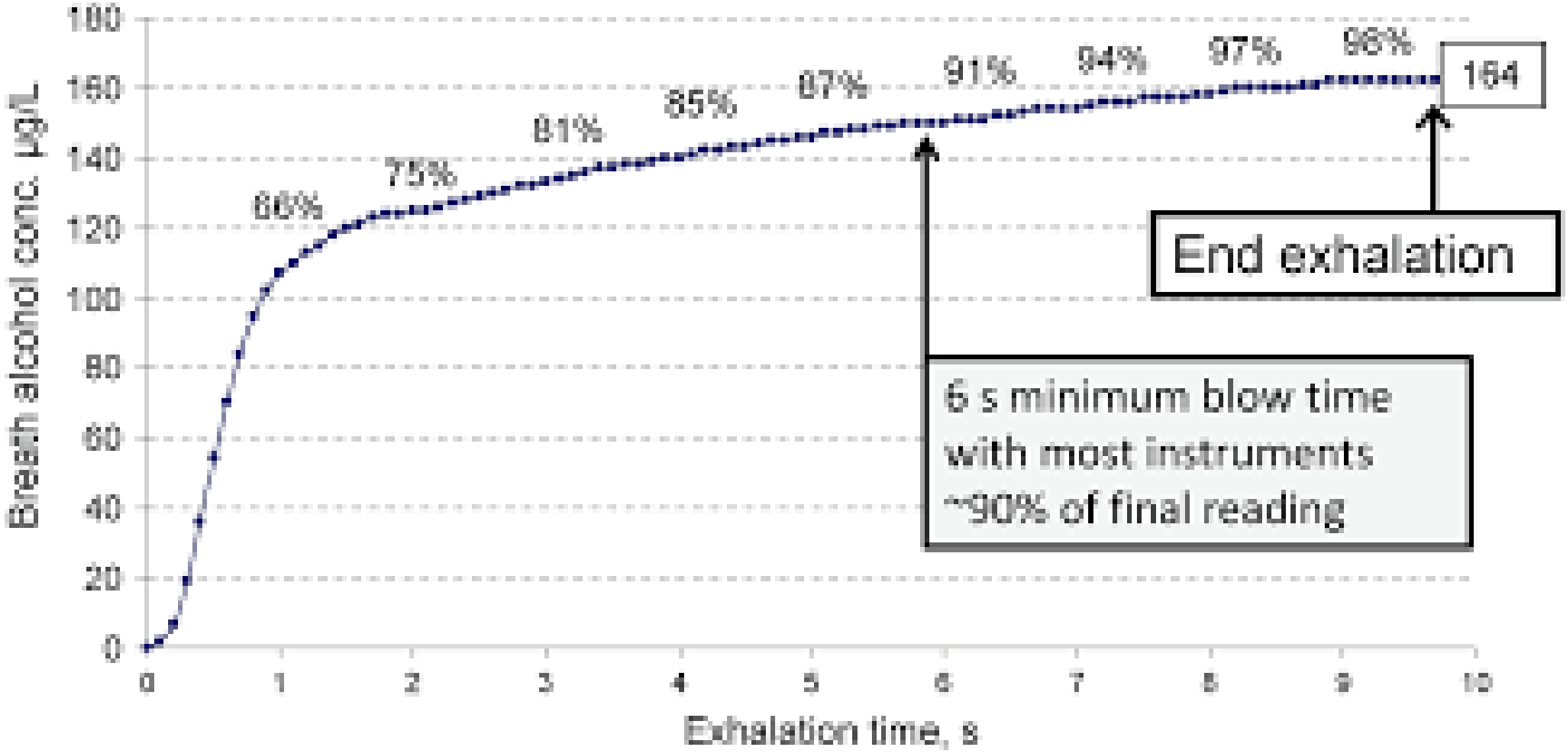
- Reference Replacement
- Minimum Interval Between Samples
- Maximum Interval Between Samples
- Maximum Number of Samples Allowed

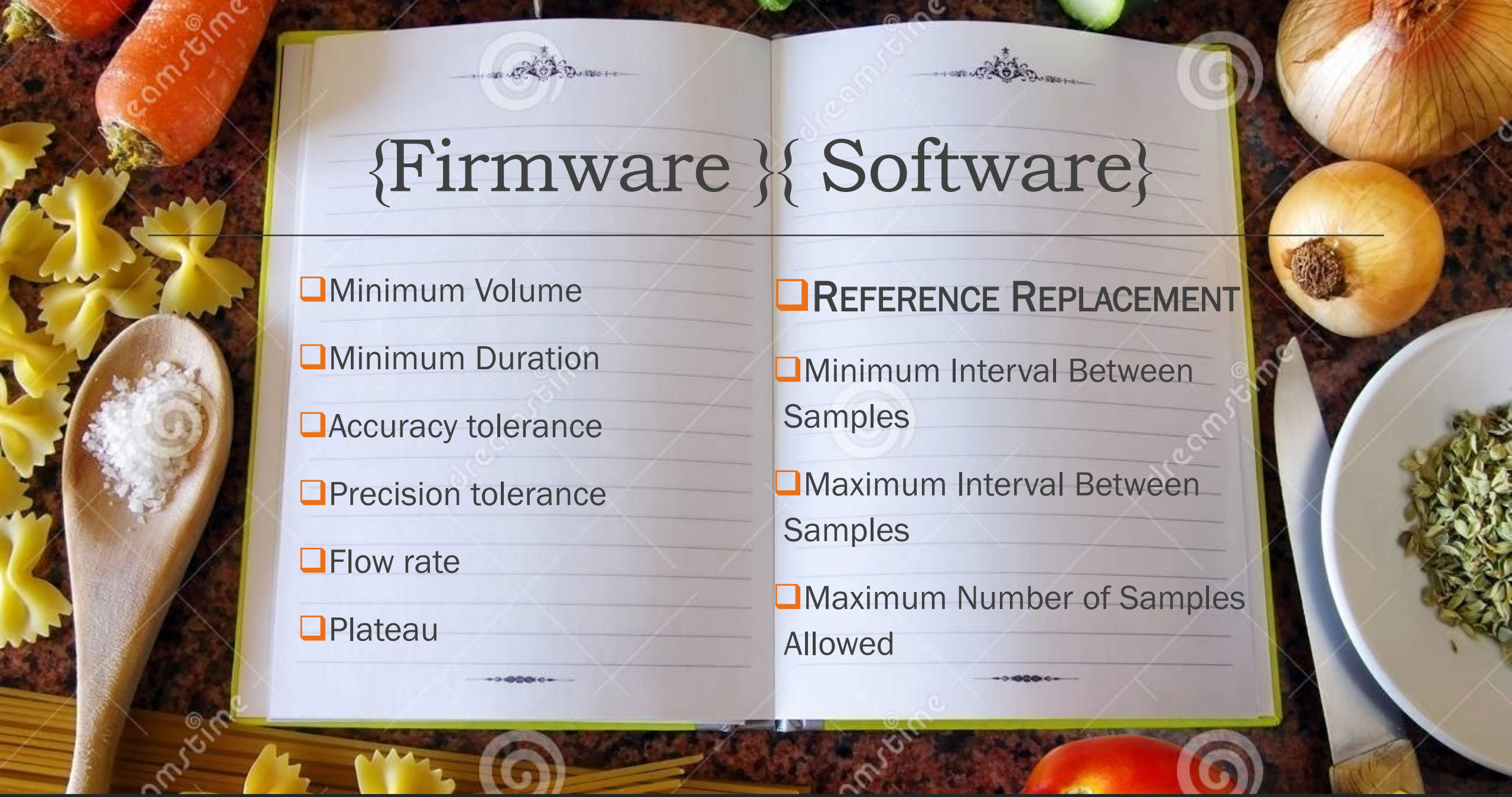

{Firmware }{ Software}
Minimum Volume
Minimum Duration
ACCURACY TOLERANCE
Precision tolerance
Flow rate
Plateau
Reference Replacement
Minimum Interval Between Samples
Maximum Interval Between Samples
Maximum Number of Samples Allowed


{Firmware }{ Software}
Minimum Volume
Minimum Duration
Accuracy tolerance
PRECISION TOLERANCE
Flow rate
Plateau
Reference Replacement
Minimum Interval Between Samples
Maximum Interval Between Samples
Maximum Number of Samples Allowed


{Firmware }{ Software}
Minimum Volume
Minimum Duration
Accuracy tolerance
Precision tolerance
FLOW RATE
Plateau
Reference Replacement
Minimum Interval Between Samples
Maximum Interval Between Samples
Maximum Number of Samples Allowed


{Firmware }{ Software}
Minimum Volume
Minimum Duration
Accuracy tolerance
Precision tolerance
Flow rate
PLATEAU
Minimum Interval Between Samples
Maximum Interval Between Samples
Maximum Number of Samples Allowed

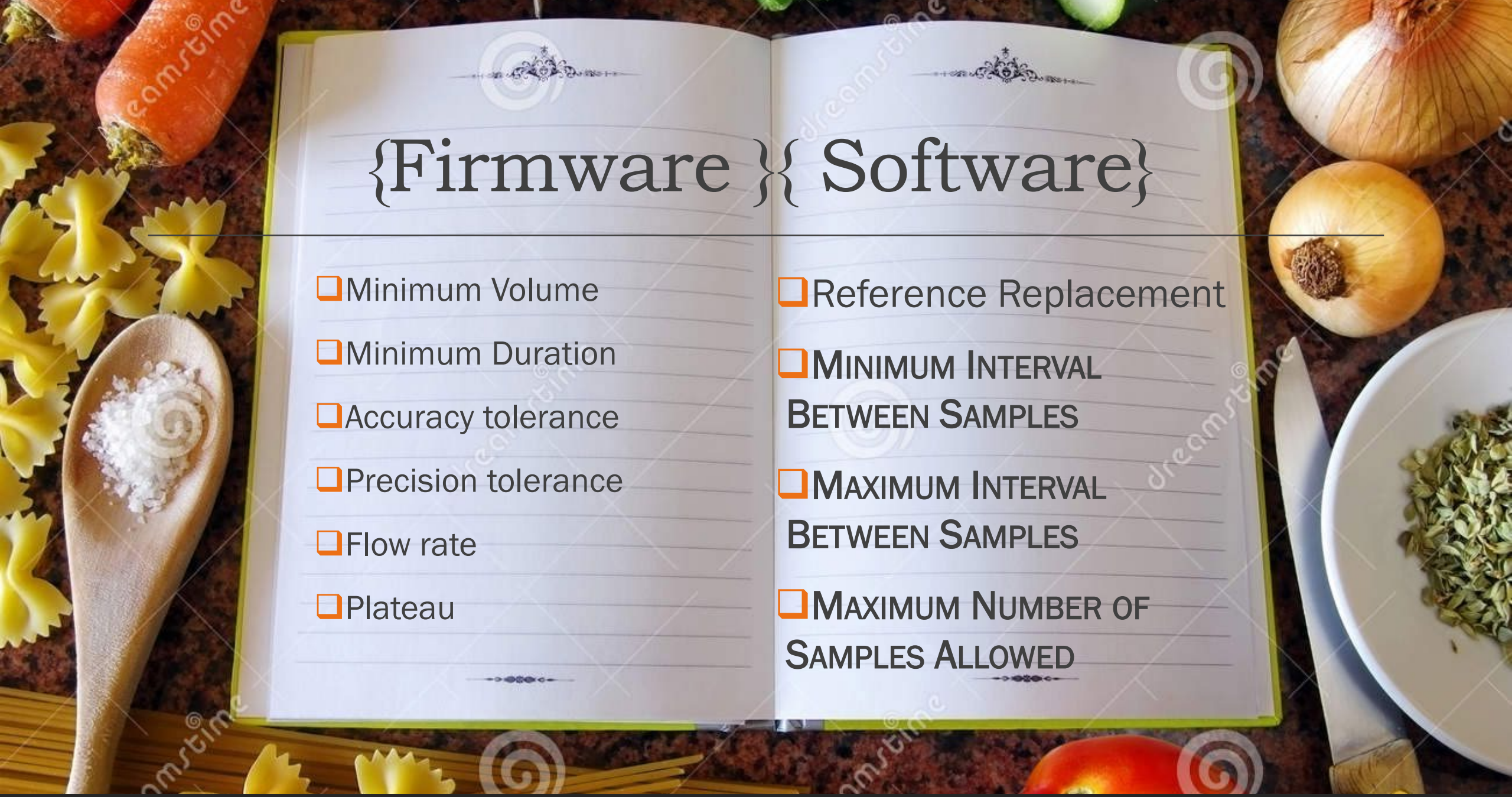

Breath alcohol conc. µg/L
180
160
140
120
100
80
60
40
20
0
0
1
2
3
4
5
6
7
8
9
10
Exhalation time, s
66%
75%
81%
85%
87%
91%
94%
97%
98%
154
End exhalation
6 s minimum blow time
with most instruments
~90% of final reading



{Firmware }{ Software}

- Minimum Volume
- Minimum Duration
- Accuracy tolerance
- Precision tolerance
- Flow rate
- Plateau

- **REFERENCE REPLACEMENT**
- Minimum Interval Between Samples
- Maximum Interval Between Samples
- Maximum Number of Samples Allowed



{Firmware }{ Software}

- Minimum Volume
- Minimum Duration
- Accuracy tolerance
- Precision tolerance
- Flow rate
- Plateau

- Reference Replacement
- Minimum Interval Between Samples
- Maximum Interval Between Samples
- Maximum Number of Samples Allowed

Prompts and Error Messages

Minimum Volume Not Achieved

Blowing Time Too Short

Plateau Not Achieved

Blowing Not Allowed

Test Not Within +/- Tolerance

Mouth Alcohol

Interference

Control Test Failed

Ambient Air Check Error

Memory Full

Purging Error

“Late for Dinner”

Prompts and Error Messages

MINIMUM VOLUME NOT ACHIEVED

Blowing Time Too Short

Plateau Not Achieved

Blowing Not Allowed

Test Not Within +/- Tolerance

Mouth Alcohol

Interference

Control Test Failed

Ambient Air Check Error

Memory Full

Purging Error

“Late for Dinner”

Prompts and Error Messages

Minimum Volume Not Achieved

BLOWING TIME TOO SHORT

Plateau Not Achieved

Blowing Not Allowed

Test Not Within +/- Tolerance

Mouth Alcohol

Interference

Control Test Failed

Ambient Air Check Error

Memory Full

Purging Error

“Late for Dinner”

Prompts and Error Messages

Minimum Volume Not Achieved

Blowing Time Too Short

PLATEAU NOT ACHIEVED

Blowing Not Allowed

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Memory Full

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Prompts and Error Messages

Minimum Volume Not Achieved

Blowing Time Too Short

Plateau Not Achieved

BLOWING NOT ALLOWED

Test Not Within +/- Tolerance

Mouth Alcohol

Interference

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Ambient Air Check Error

Memory Full

Purging Error

“Late for Dinner”

Prompts and Error Messages

Minimum Volume Not Achieved

Blowing Time Too Short

Plateau Not Achieved

Blowing Not Allowed

TEST NOT WITHIN +/- TOLERANCE

Mouth Alcohol

Interference

Control Test Failed

Ambient Air Check Error

Memory Full

Purging Error

“Late for Dinner”

Prompts and Error Messages

Minimum Volume Not Achieved

Blowing Time Too Short

Plateau Not Achieved

Blowing Not Allowed

Test Not Within +/- Tolerance

MOUTH ALCOHOL

INTERFERENCE

Control Test Failed

Ambient Air Check Error

Memory Full

Purging Error

“Late for Dinner”

Prompts and Error Messages

Minimum Volume Not Achieved

Blowing Time Too Short

Plateau Not Achieved

Blowing Not Allowed

Test Not Within +/- Tolerance

Mouth Alcohol

Interference

CONTROL TEST FAILED

AMBIENT AIR CHECK ERROR

MEMORY FULL

PURGING ERROR

“Late for Dinner”

Prompts and Error Messages

Minimum Volume Not Achieved

Blowing Time Too Short

Plateau Not Achieved

Blowing Not Allowed

Test Not Within +/- Tolerance

Mouth Alcohol

Interference

Control Test Failed

Ambient Air Check Error

Memory Full

Purging Error

"LATE FOR DINNER"

ALCOHOL INFLUENCE REPORT FORM, ALCOTEST 7110 MKIII-C
OFS / QA LABORATORY

Department Case No.: 123
Summons No(s): 123
Sequential File No.: 00534

Subject

Last Name: First Name: MI:
D.O.B.: Age: 39 Gender: MALE Ht: 6 ft. 03 in. Wt: 215 lbs.
Driver License Number: 12345 Issuing State:

Arresting Officer

Last Name: GARDNER First Name: DAVID MI: W
Badge No.: 0000 Arrest Date: 11/01/2009 Arrest Time: 00:30D Municipal Code/Arrest Loc.: 0412

Instrument

Alcotest 7110 MKIII-C Firmware: NJ3.12AQ Serial No.: ARNK-0035
Location: OFS / QA LABORATORY

Calibration File No.:	00471	Calib. Date: 04/23/2010	Calib. No.: 00013
Certification File No.:	00472	Cert. Date: 04/23/2010	Cert. No.: 00006
Linearity File No.:	00473	Lin. Date: 04/23/2010	Lin. No.: 00005
Solution File No.:	00533	Soln. Date: 06/30/2010	Soln. No.: 00069
Sequential File No.:	00534	File Date: 11/01/2009	

Calibrating Unit:	WET	Model No.: CU-34	Serial No.: DDUKS3-0137
Control Solution Lot:	09D065	Bottle No.: 1216	Soln. %: 0.100%
Probe Serial No.:	DDXAP2-021	Probe Value: 103	Soln. Exp.: 04/22/2011

Breath Test Information

Date of Test: 11/01/2009

Function	Result %BAC	Time HH:MM	Volume (L)	Duration Sec (s)	Temp. Sim.(°C)	Error Message
Ambient Air Blank	0.000%	01:54D				
Control Test 1					34.0°C	
EC Result	0.096%	01:55D				
IR Result	0.098%	01:55D				
Ambient Air Blank	0.000%	01:55D				
Breath Test 1			3.6L	12.7s		
EC Result	0.000%	01:56D				
IR Result	0.000%	01:56D				
Ambient Air Blank	0.000%	01:57D				
Breath Test 2			3.5L	11.4s		
EC Result	0.000%	01:00S				
IR Result	0.000%	01:00S				
Ambient Air Blank	0.000%	01:01S				
Control Test 2					34.0°C	
EC Result	0.095%	01:01S				
IR Result	0.099%	01:01S				
Ambient Air Blank	0.000%	01:01S				

REPORTED BREATH TEST RESULT: 0.00% BAC

Breath Test Operator

Last Name: First Name: MI: W
Badge No.: 0000
Signature: _____ Date: 11/01/2009

Copy Given to Subject

Breath Test Device Functions

- “Calibration” - actually a calibration check
- “Control” – checking the ability of the device to read SAC accurately and precisely.
- “Linearity” – checking the instrument’s ability to measure SACs at different levels.
- “Reference” – checking the present SAC used as a control during the breath test.
- “Subject Breath Test”

Breath Test Identification

- “Sequential file number” for each time a function is run with date.
- “Cycle number” for each time a particular function is run with date.
- Breath testing instrument serial number.
- Simulator serial number.
- Calibrator identifiers (serial numbers, lot numbers, etc.)

Breath Test Foundation

Certified Operator

Proper Administration

Proper Working Condition

Certified Operator

A. **Operator who conducted tests "shall be made available to testify and shall produce the documents evidencing his or her training...."**

B. Foundational documents shall be offered into evidence to demonstrate the proper working order of the device:

(1) most recent Calibration Report prior to defendant's test, including control tests, linearity tests, and **CREDENTIALS OF COORDINATOR WHO DID THE CALIBRATION CHECK;**

****

State v. Chun, 94 *N.J.* 54, 154 (2008)

DEPARTMENT OF

Law and Public Safety

This is to certify that

Brian C. Stahl
Brielle Borough

IS QUALIFIED AND COMPETENT TO CONDUCT CHEMICAL BREATH ANALYSES PURSUANT TO CHAPTER 142 OF THE LAWS OF 1966 IN THE OPERATION OF THE **Alcotest 7110 MKIII-C**
A METHOD TO DETERMINE INTOXICATION.
GIVEN UNDER MY HAND AT TRENTON, NEW JERSEY THIS **2nd** DAY OF **April**
TWO THOUSAND AND **Fifteen**

SUPERINTENDENT
NEW JERSEY STATE POLICE

ACTING ATTORNEY GENERAL
STATE OF NEW JERSEY

ORIGINAL COURSE DATES _____

	DATE	Refresher Course PLACE	INSTRUCTOR
1.	1/18/17	LAKEHURST	Adam Stahl
2.	2/19/19	LAKEHURST	Adam Stahl
3.			
4.			
5.			
6.			
7.			
8.			
9.			

S.P. 2938 (Rev. 06/13)

DEPARTMENT OF

Law and Public Safety

This is to certify that

Dennis J. Lutz

Breath Test Coordinator/Instructor

IS QUALIFIED AND COMPETENT TO CONDUCT CHEMICAL BREATH ANALYSES PURSUANT TO CHAPTER 142 OF THE LAWS OF 1966 IN THE OPERATION OF THE Alcotest 7110 MKIII-C A METHOD TO DETERMINE INTOXICATION.

GIVEN UNDER MY HAND AT TRENTON, NEW JERSEY THIS 29th DAY OF Jaanary TWO THOUSAND AND Nineteen

COLONEL, NEW JERSEY STATE POLICE

ATTORNEY GENERAL, STATE OF NEW JERSEY

ORIGINAL COURSE DATES _____

	DATE	Refresher Course PLACE	INSTRUCTOR
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			

S.P. 2938 (Rev. 01/19)

DEPARTMENT OF

Law and Public Safety

This is to certify that

Dennis J. Lutz

New Jersey State Police

IS QUALIFIED AND COMPETENT TO CONDUCT CHEMICAL BREATH ANALYSES PURSUANT TO CHAPTER 142 OF THE LAWS OF 1966 IN THE OPERATION OF THE Alcotest 7110 MKIII-C A METHOD TO DETERMINE INTOXICATION.

GIVEN UNDER MY HAND AT TRENTON, NEW JERSEY THIS 1st DAY OF October TWO THOUSAND AND Nine

COLONEL, NEW JERSEY STATE POLICE

ATTORNEY GENERAL, STATE OF NEW JERSEY

ORIGINAL COURSE DATES _____

	DATE	Refresher Course PLACE	INSTRUCTOR
1.	2-3-11	OCPA	Wm Lyons
2.	1/24/13	OCPA	Adam Stanley
3.	11-23-15	OCPA	M. Gonsalves
4.	4/6/17	LAKEWOOD PST	Adam Stanley
5.	8/22/19	NJSP Galloway	
6.			
7.			
8.			
9.			

S.P. 2938 (Rev. 01/19)

Breath Test Operators Must Testify.

[T]he operator should be available to testify in a contested matter. Notwithstanding this reduced role to be played by the operator as relates to the ultimate BAC results reported, requiring that he or she be made available for cross-examination is an important constitutional safeguard. We, therefore, consistent with our longstanding practice..., can ensure that each defendant has the opportunity to confront the witness who has potentially relevant testimony.

--*State v. Chun, supra*, 194 *N.J.* 54,140-41 (2008)

Remove Portable Electronics from the Testing Area

- Cellphones
- Radios
- Smart watches
- Cameras
- Hearing Aids

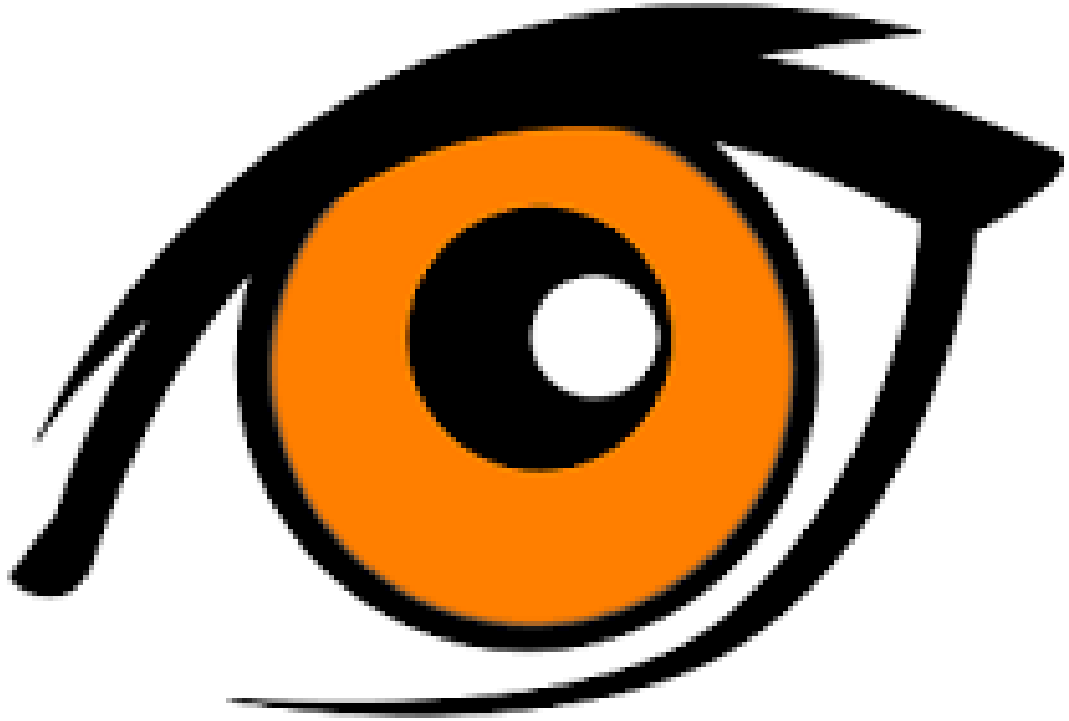
Check Mouth

- On top of the tongue
- Underneath the tongue
- Alongside the cheeks
- Under the palate
- Behind the teeth

Observe Subject for 15-20 Minutes

- Uninterrupted
- Continuous
- Immediately before taking samples

State v. Ugrovics, 410 *N.J.Super*. 482 (App.Div. 2009), *certif.den*. 202 *N.J.* 346 (2010)



NO

- Burping
- Belching
- Regurgitation
- Ingestion

New Mouthpiece Before Each Sample

- Prevent cross contamination
- Additional safeguard

Alcotest 7110

B. FOUNDATIONAL DOCUMENTS SHALL BE OFFERED INTO EVIDENCE TO DEMONSTRATE THE PROPER WORKING ORDER OF THE DEVICE:

(1) most recent Calibration Report prior to defendant's test, including control tests, linearity tests, and credentials of coordinator who did the calibration check;

(2) most recent New Standard Solution Report prior to defendant's test;

(3) Certificate of Analysis of 0.10 Simulator Solution in defendant's control tests.

> *State v. Chun*, 94 *N.J.* 54, 154 (2008)

Alcotest 7110 Discovery Documents

State v. Chun, 194 *N.J.* 54, 153 (2008)

- ❑ New Standard Solution Report – pre-AIR
- ❑ Credentials of operator who performed that change
- ❑ Certificate of Analysis - 0.10% solution in pre-AIR solution report
- ❑ Drager Certificates of Accuracy for simulators
- ❑ Drager Certificates of Accuracy for temperature probes
- ❑ Drager Certificates of Accuracy NIST traceable temperature probe
- ❑ Drager Certificate of Accuracy for Alcotest 7110 Instrument
- ❑ Calibration Records, including control and linearity tests
- ❑ Coordinator credentials
- ❑ Simulator Solution Certificates of Analysis
  - ❑ 0.10, 0.04, 0.08, 0.12, 0.10
- ❑ Drager Safety Ertco-Hart/Control Company Calibration Report
  - ❑ *See State v. Holland*, 423 *N.J.Super*. 309 (App.Div. 2011)

Alcotest 7110 Discovery Documents

- Alcotest Operator Certification replica card (operator)
- Alcohol Influence Report
- Tolerance Worksheet
- NIST Traceable Digital Thermometer Readings

Alcotest 7110 Repair Records

State v. Chun, 194 *N.J.* 54, 145, n.48 (2008)
State v. Maricic, 417 *N.J.Super.* 280, 285 (App.Div. 2010)

- ❑NJSP Breath Testing Instrumentation Service Report [out]
- ❑Document prompting removal
- ❑Drager Return and Repair Form
- ❑Drager Certificate of Accuracy
- ❑Delivery Receipt and Service Note | Drager Packing Slip
- ❑Invoice
- ❑NJSP Breath Testing Instrumentation Service Report [in]
- ❑Calibration, Control, Linearity, Solution Change Reports when instrument was placed back into service

STATE OF NEW JERSEY
DEPARTMENT OF LAW AND PUBLIC SAFETY
DIVISION OF STATE POLICE

BREATH TESTING INSTRUMENTATION SERVICE REPORT

1. Department:	2. Contact:	4. Date:
Brielle Boro. Police Dept. 601 Union Lane Brielle, NJ 08730	Ptlm. R. Sofield	7/6/18
	3. Phone Number:	5. County:
	732-528-5056	Monmouth

6. Alcotest Instrument Serial Number:	7. Simulator Component Serial Number:	8. Temperature Probe Component Serial Number:
ARWM-0073	N/A	N/A

9. Reason for Service:

I responded to Brielle Boro. Police Department to complete the semi-annual recalibration of the Alcotest 7110. While conducting the Linearity Tests, I was conducing the first 0.080% attempt when the screen read 9.232% BRAC instead of 0.080 % BRAC, resulting in a Control Test Failure. The second attempt, the screen read 0.080 % BRAC correctly, resulting in a successful attempt.

10. Comments:

This instrument was placed out of service and returned to Draeger Safety Diagnostics for evaluation.

Last Known Sequential File #: 00755

☐ 11. The above Instrument/Component has been found to be in satisfactory working condition; no further action required.

☒ 12. The above Instrument/Component is placed out of service pending further evaluation.

☐ 13. The above Instrument/Component is placed back in service.

"I have been certified by the Attorney General as a Breath Test Coordinator/Instructor pursuant to N.J.A.C. 13:51, et. seq. In my official capacity as a Breath Test Coordinator/Instructor I perform inspections of evidential breath test devices and related components of evidential breath test systems. I have inspected the evidential breath test device listed on this report in my official capacity. The results of my inspection are recorded on this form. I certify that the forgoing statements made by me are true and accurate to the best of my knowledge. I am aware that if any of the forgoing statements made by me are willingly false, I am subject to punishment."

Tpr. A. Pavlosky #7330
Name & Badge Number (Print)

Signature 7330

7/6/18
Date

S.P. 343 (Rev. 01/10) (S.O.P. F26)

[illegible]	732-528-3050	Monmouth

6. Alcotest Instrument Serial Number:	7. Simulator Component Serial Number:	8. Temperature Probe Component Serial Number:
ARWM-0073	N/A	N/A

9. Reason for Service:

I responded to Brielle Boro. Police Department to complete the semi-annual recalibration of the Alcotest 7110. While conducting the Linearity Tests, I was conducing the first 0.080% attempt when the screen read 9.232% BRAC instead of 0.080 % BRAC, resulting in a Control Test Failure. The second attempt, the screen read 0.080 % BRAC correctly, resulting in a successful attempt.

10. Comments:

This instrument was placed out of service and returned to Draeger Safety Diagnostics for evaluation.

Last Known Sequential File #: 00755

☐ 11. The above Instrument/Component has been found to be in satisfactory working condition; no further action required.

☒ 12. The above Instrument/Component is placed out of service pending further evaluation.

☐ 13. The above Instrument/Component is placed back in service.

"I have been certified by the Attorney General as a Breath Test Coordinator/Instructor pursuant to N.J.A.C. 13:51, et. seq. In my official capacity as a Breath Test Coordinator/Instructor I perform inspections of evidential breath test devices and related components of evidential breath test systems. I have inspected the evidential breath test device listed on this report in my official

RETURN AND REPAIR FORM

Dräger

Customer Information

B: S:

Company Name: Brielle Boro. P.D., Brielle, NJ

Date Received: 07/13/2018 **Date given to service:** 07/13/2018

Carrier: ☐ FedEx ☐ UPS ☐ USPS **Shipping Method:** ☐ GRD ☐ 3DAY ☐ 2DAY ☐ NDA-PRI ☐ NDA-STD

Product:
- ☐ 6510
- ☒ 7110
- ☐ 7510
- ☐ 7410 Upper-half
- ☐ 7410 Whole
- ☐ 6810
- ☐ 8610
- ☐ DT5000
- ☐ 9510

Serial Number: AR WM-0073

Printer Serial#: AR

Sim Serial#: DD

Probe Serial#: DD

Warranty Expires:

Description: ☐ A ☐ B ☐ Plus ☐ Demo ☐ Screener ☐ Trade In

Accessories

- ☐ 110V A/C Adapter
- ☐ Mouthpieces
- ☐ Dry Gas
- ☐ Regulator
- ☐ 9510 Stylus
- ☐ Other (please specify)
- ☐ Printer Ribbon
- ☐ 9510 Top Cover
- ☐ Printer Paper
- ☐ Carrying Case

Repair Information: **Test#:**

Part Number	Description	Qty	Total Cost
4414161	Calibration	1	
4414166	Labor	4	
8315075	Alcotest 7110 Motherboard	1	

Repair Notes: Replaced defective motherboard.

Motherboard was changed due to unit giving wrong solution value during Linearity Testing.

CAL W/QC AND OPS CHECK

Service Technician BS Date: 08/06/2018

Dräger

Alcotest 7110

CERTIFICATE OF ACCURACY

This is to certify that the Alcotest 7110 has been tested for accuracy and found to be in compliance with the National Highway Traffic Safety Administration Standard for evidential breath testing devices. The Alcotest MKIII-C is compliant as a "mobile" and "nonmobile" EBT with 49 FR 48854, 49 FR 48864, and 58 FR 48705. The manufacturer recommends accuracy verification of this instrument within 12 months of the calibration date below, or sooner, according to your state's specifications.

Certification Date: 8-6-18

Serial Number: ARWM-0073

Draeger, Inc. BS

STATE OF NEW JERSEY
DEPARTMENT OF LAW AND PUBLIC SAFETY
DIVISION OF STATE POLICE

BREATH TESTING INSTRUMENTATION SERVICE REPORT

1. Department:	2. Contact:	4. Date:
Brielle Boro. Police Department **601 Union Lane** **Brielle, NJ 08730**	**Ptlm. R. Sofield**	**8/13/2018**
	3. Phone Number:	5. County:
	732-528-5056	**Monmouth**

6. Alcotest Instrument Serial Number:	7. Simulator Component Serial Number:	8. Temperature Probe Component Serial Number:
ARWM-0073	**N/A**	**N/A**

9. Reason for Service:

The above Alcotest was returned from outside evaluation and/or repair and placed back in service.

10. Comments:

See Draeger Return and Repair Form.

Last Known Sequential File #: N/A

☐ 11. The above Instrument/Component has been found to be in satisfactory working condition; no further action required.

☐ 12. The above Instrument/Component is placed out of service pending further evaluation.

☒ 13. The above Instrument/Component is placed back in service.

"I have been certified by the Attorney General as a Breath Test Coordinator/Instructor pursuant to N.J.A.C. 13:51, et. seq. In my official capacity as a Breath Test Coordinator/Instructor I perform inspections of evidential breath test devices and related components of evidential breath test systems. I have inspected the evidential breath test device listed on this report in my official capacity. The results of my inspection are recorded on this form. I certify that the forgoing statements made by me are true and accurate to the best of my knowledge. I am aware that if any of the forgoing statements made by me are willingly false, I am subject to punishment."

Tpr. A. Pavlosky #7330
Name & Badge Number (Print)

Signature

8/13/18
Date

S.P. 343 (Rev. 01/10) (S.O.P. F26)

Last Known Sequential File #: N/A

☐ 11. The above Instrument/Component has been found to be in satisfactory working condition; no further action required.

☐ 12. The above Instrument/Component is placed out of service pending further evaluation.

☒ 13. The above Instrument/Component is placed back in service.

"I have been certified by the Attorney General as a Breath Test Coordinator/Instructor pursuant to N.J.A.C. 13:51, et. seq. In my official capacity as a Breath Test Coordinator/Instructor I perform inspections of evidential breath test devices and related components of evidential breath test systems. I have inspected the evidential breath test device listed on this report in my official capacity. The results of my inspection are recorded on this form. I certify that the forgoing statements made by me are true and accurate to the best of my knowledge. I am aware that if any of the forgoing statements made by me are willingly false, I am subject to punishment."

Alcotest 7110 Calibration Record

Equipment	Alcotest 7110 MKIII-C			Serial No.:	ARWM-0073
Location:	BRIELLE POLICE DEPT.				
Calibration File No.:	00753	Calib. Date:	07/06/2018	Calib. No.:	00026
Certification File No.:	00721	Cert. Date:	01/19/2018	Cert. No.:	00021
Linearity File No.:	00722	Lin. Date:	01/19/2018	Lin. No.:	00021
Solution File No.:	00746	Soln. Date:	06/10/2018	Soln. No.:	00156
Sequential File No.:	00753	File Date:	07/06/2018		
Calibrating Unit:	WET	Model No.:	CU-34	Serial No.:	DDXA S3-0052
Control Solution %:	0.100%			Expires:	08/07/2019
Solution Control Lot:	17230			Bottle No.:	1015

Coordinator

Last Name: PAVLOSKY First Name: ALLISON MI: M.

Signature: T 7330 Badge No.: 7330

Date: 07/06/2018

*Black Key Temperature Probe Serial.....# DDXK P2-3988

*Digital NIST Temperature Measuring System Serial.....# 170428364

Pursuant to law, and the "Chemical Breath Testing Regulations" N.J.A.C. 13:51, I am a duly appointed Breath Test Coordinator/Instructor. In my official capacity, and consistent with "Calibration Check Procedure for Alcotest 7110," as established by the Chief Forensic Scientist of the Division of State Police, I perform calibration checks on approved instruments employing infrared analysis and electrochemical analysis, when utilized in a single approved instrument as a dual system of chemical breath testing. Pursuant to, and consistent with, the current "Calibration Check Procedure for Alcotest 7110,"as established by the Chief Forensic Scientist, I performed a Calibration Check on the approved instrument identified on this certificate. The results of my Calibration Check are recorded on this certificate, which consists of two parts on two pages: Part I - Control Tests; and Part II - Linearity Tests. I certify that the foregoing statements made by me are true. I am aware that if any of the foregoing statements made by me are wilfully false, I am subject to punishment.

Alcotest 7110 Calibration Certificate

Part I - Control Tests

Equipment	Alcotest 7110 MKIII-C			Serial No.:	ARWM-0073
Location:	BRIELLE POLICE DEPT.				
Calibration File No.:	00753	Calib. Date:	07/06/2018	Calib. No.:	00026
Certification File No.:	00754	Cert. Date:	07/06/2018	Cert. No.:	00022
Linearity File No.:	00722	Lin. Date:	01/19/2018	Lin. No.:	00021
Solution File No.:	00746	Soln. Date:	06/10/2018	Soln. No.:	00156
Sequential File No.:	00754	File Date:	07/06/2018		
Calibrating Unit:	WET	Model No.:	CU-34	Serial No.:	DDXA S3-0052
Control Solution %:	0.100%			Expires:	08/07/2019
Solution Control Lot:	17230			Bottle No.:	1015

Function	Result %BAC	Time HH:MM	Temperature Simulator (°C)	Comment(s) or Error(s)
Ambient Air Blank	0.000%	07:25D		
Control 1 EC	0.099%	07:25D	34.0°C	*** TEST PASSED ***
Control 1 IR	0.099%	07:25D	34.0°C	*** TEST PASSED ***
Ambient Air Blank	0.000%	07:26D		
Control 2 EC	0.099%	07:26D	34.0°C	*** TEST PASSED ***
Control 2 IR	0.099%	07:26D	34.0°C	*** TEST PASSED ***
Ambient Air Blank	0.000%	07:27D		
Control 3 EC	0.099%	07:28D	34.0°C	*** TEST PASSED ***
Control 3 IR	0.099%	07:28D	34.0°C	*** TEST PASSED ***
Ambient Air Blank	0.000%	07:28D		

All tests within acceptable tolerance.

Coordinator

Last Name: PAVLOSKY First Name: ALLISON MI: M.

Signature: T 7330 Badge No.: 7330

Date: 07/06/2018

Pursuant to law, and the "Chemical Breath Testing Regulations" N.J.A.C. 13:51, I am a duly appointed Breath Test Coordinator/Instructor. In my official capacity, and consistent with "Calibration Check Procedure for Alcotest 7110," as established by the Chief Forensic Scientist of the Division of State Police, I perform calibration checks on approved instruments employing infrared analysis and electrochemical analysis, when utilized in a single approved instrument as a dual system of chemical breath testing. Pursuant to, and consistent with, the current "Calibration Check Procedure for Alcotest 7110, as established by the Chief Forensic Scientist, I performed a Calibration Check on the approved instrument identified on this certificate. The results of my Calibration Check are recorded on this certificate, which consists of two parts on two pages: Part I - Control Tests; and Part II - Linearity Tests. I certify that the foregoing statements made by me are true. I am aware that if any of the foregoing statements made by me are wilfully false, I am subject to punishment.

Alcotest 7110 Calibration Certificate

Part II - Linearity Tests

Equipment	Alcotest 7110 MKIII-C			Serial No.:	ARWM-0073
Location:	BRIELLE POLICE DEPT.				
Calibration File No.:	00753	Calib. Date:	07/06/2018	Calib. No.:	00026
Certification File No.:	00754	Cert. Date:	07/06/2018	Cert. No.:	00022
Linearity File No.:	00755	Lin. Date:	07/06/2018	Lin. No.:	00022
Solution File No.:	00746	Soln. Date:	06/10/2018	Soln. No.:	00156
Sequential File No.:	00755	File Date:	07/06/2018		
Calibrating Unit:	WET	Model No.:	CU-34	Serial No.:	DDRK S3-0012
Control Solution %:	0.040%			Expires:	08/10/2019
Solution Control Lot:	17240			Bottle No.:	0122
Calibrating Unit:	WET	Model No.:	CU-34	Serial No.:	DDRK S3-0015
Control Solution %:	9.232%			Expires:	08/15/2019
Solution Control Lot:	17250			Bottle No.:	0772
Calibrating Unit:	WET	Model No.:	CU-34	Serial No.:	DDRK S3-0025
Control Solution %:	0.160%			Expires:	08/21/2019
Solution Control Lot:	17260			Bottle No.:	1063

Function	Result %BAC	Time HH:MM	Temperature Simulator (°C)	Comment(s) or Error(s)
Ambient Air Blank	0.000%	07:37D		
Control 1 EC	0.041%	07:37D	33.9°C	*** TEST PASSED ***
Control 1 IR	0.040%	07:37D	33.9°C	*** TEST PASSED ***
Ambient Air Blank	0.000%	07:39D		
Control 2 EC	0.041%	07:39D	33.9°C	*** TEST PASSED ***
Control 2 IR	0.039%	07:39D	33.9°C	*** TEST PASSED ***
Ambient Air Blank	0.000%	07:41D		
Control 3 EC	0.082%	07:41D	34.0°C	CONTROL TEST FAILED
Control 3 IR	0.079%	07:41D	34.0°C	CONTROL TEST FAILED
Ambient Air Blank	0.000%	07:43D		
Control 4 EC	0.081%	07:44D	34.0°C	*** TEST PASSED ***
Control 4 IR	0.079%	07:44D	34.0°C	*** TEST PASSED ***
Ambient Air Blank	0.000%	07:45D		
Control 5 EC	0.161%	07:46D	34.0°C	*** TEST PASSED ***
Control 5 IR	0.159%	07:46D	34.0°C	*** TEST PASSED ***
Ambient Air Blank	0.000%	07:47D		
Control 6 EC	0.161%	07:48D	34.0°C	*** TEST PASSED ***
Control 6 IR	0.160%	07:48D	34.0°C	*** TEST PASSED ***
Ambient Air Blank	0.000%	07:49D		

Test results are not within acceptable range.

Coordinator

Last Name: PAVLOSKY First Name: ALLISON MI: M.

Signature: T 7330 Badge No.: 7330

Date: 07/06/2018

Service note

Customer no.
150061056

Number of report
303552363
Please reference on inquiries

Date of receiving
07/06/2018

Customer
BOROUGH OF BRIELLE
ATTN: FINANCE DEPARTMENT
PO Box 445
BRIELLE NJ 08730-0445

Consignee
BRIELLE BOROUGH POLICE DEPARTMENT
ATTN: PTL. RONALD SOFIELD
601 UNION LANE
BRIELLE NJ 08730-1494

Your order
Date of order:

Your reference:
18-01072

NL-Text
Maintenance device list

Your contact person
Natasha Suber
800-437-2437 #5
natasha.suber@draeger.com

Page 1

Item	Quantity	Part no.	Description
			Service Order: 119673460
			COE002742
			Eq.No. : 1024506477 SN: ARWM-0073
			Material: 8314246 ALCOTEST 7110 MK III USA
			Inv.No. :
			Location:
			COE002742
	4.0 H		R018 Repair time - Core
	1 EA		8315075 Best. LP MYC USA, A7110 MKIII

Draeger Inc.
Our Tax ID: 23-1699096
3135 Quarry Road, Telford, PA 18969

Remit to:
LOCKBOX (Standard USPS)
Draeger, Inc.

Remit to:
LOCKBOX (Overnight)
FIS Lockbox Processing

Remit US Wire Transfers to:
Account Name: Draeger Inc.
Account Number: 00-494-936

Delivery receipt

Customer no.
150061056

Number of report
303552363
Please reference on inquiries

Date of receiving
/ /

Delivery receipt date
08/06/2018

Consignee, 150061057
BRIELLE BOROUGH POLICE DEPARTMENT
ATTN: PTL. RONALD SOFIELD
601 UNION LANE
BRIELLE NJ 08730-1494

Customer, 150061056
BOROUGH OF BRIELLE
ATTN: RON SOFIELD
PO Box 445
BRIELLE NJ 08730-0445

Your order
Date of order:

Purch.ord.no.:
18-01072

Branch text

Draeger contact person
Natasha Suber
800-437-2437 #5
natasha.suber@draeger.com

Page 1

Quantity	Description	Part no.	Equipment - No.	Serial - No.
001	ALCOTEST 7110 MK III USA	8314246	1024506477	ARWM-0073

Draeger Inc.
Our Tax ID: 23-1699096
3135 Quarry Road, Telford, PA 18969
An Equal Opportunity Employer M / F / V / H
Telephone 800-437-2437
http://www.draeger.com

Remit to:
LOCKBOX (Standard USPS)
Draeger, Inc.
PO Box 13369
Newark, New Jersey
07101-3382

Remit to:
LOCKBOX (Overnight)
FIS Lockbox Processing
Lockbox #13369
400A Commerce Blvd
Carlstadt, NJ 07072
Phone: 201 460-2823

Remit US Wire Transfers to:
Account Name: Draeger Inc.
Account Number: 00-494-936
Transit Routing: 021001033
SWIFT: BKTRUS33
Deutsche Bank Trust Company Americas
60 Wall Street 25th Fl, New York, NY 10005

Packing Slip

Customer no	Order No	Order date
150061056	10769102	04/03/2015

Packing slip no.	Ship date
80936784	04/03/2015

Please reference on inquiries

Ship to

150061057
BRIELLE BOROUGH POLICE DEPARTMENT
ATTN: KAREN/CHIEF PALMER
MONMOUTH COUNTY
601 UNION LANE
BRIELLE, NJ 08730
USA

Payer

Your Purchase Order Number

7110: ARWM-0073
Any questions? Please contact:
MARA HERRERA

Customer
BOROUGH OF BRIELLE
ATTN: FINANCE DEPARTMENT
MONMOUTH COUNTY
P.O. BOX 445
BRIELLE, NJ 08730
USA

Your sales person
LINDA SALO
Phone: 866-385-5900
Fax: 972-929-1260

Delivery terms
FA
FREIGHT ALLOWED

Page 1 / 2

Item#	sh. Quant.	Part no. Description
		Ship via: Fed Ex Saver NOTE: All claims for shortages/defects must be reported within 10 Business days after receipt of order. All returns must have our RMA# clearly marked on the box. Please call Customer Service at 866-385-5900. 7110: ARWM-0073
0010	1 EA	4414161 CALIBRATION, 7110 Ordered / Back ordered : 0 / 0 EA
0020	0.5 EA	4414166 HOURLY LABOR CHARGE Ordered / Back ordered : 0.0 / 0.0 EA

Draeger Safety Diagnostics Inc.
Accounting Address:
101 Technology Drive
Pittsburgh, PA 15275
Tel: (412) 788-5537
Fax: (412) 788-5598

Remit Wire Transfers To:
Citizens Bank
Acct. # 6209426615
Acct. Name: Draeger Safety Diagnostics Inc.
Transit Number: 036076150
Federal ID Number: 84-1600159

REMIT TO:
Draeger Safety Diagnostics Inc.
P.O. Box 536410
Pittsburgh, PA 15253-5906

Packing Slip

Customer no	Order No	Order date
150061056	10769102	04/03/2015

Packing slip no.	Ship date
80936784	04/03/2015

Please reference on inquiries

Page 2 / 2

Item#	sh. Quant.	Part no. Description
0030	1 EA	6808455 SENSOR : FUEL CELL Ordered / Back ordered : 0 / 0 EA
0040	2 EA	6808486 PLATES,7110--9510 Ordered / Back ordered : 0 / 0 EA

Alcotest 7110 Trial Exhibit Checklist

- ❑Alcotest Operator Certification replica card (operator)
- ❑Alcohol Influence Report
- ❑Tolerance Worksheet
- ❑Calibration Record
- ❑Calibration Certificate: Part I – Control Tests
- ❑Calibration Certificate: Part II – Linearity Tests
- ❑New Standard Solution Report (post calibration check)
- ❑Alcotest Operator Certification replica card (coordinator)
- ❑Breath Test Coordinator Instructor replica card
- ❑New Standard Solution Report (pre-AIR)
- ❑Certification of Analysis, 0.10 Percent Simulator Solution
- ❑**NIST Traceable Digital Thermometer Readings**

DEPARTMENT OF

Law and Public Safety

This is to certify that

Brian C. Stahl
Brielle Borough

IS QUALIFIED AND COMPETENT TO CONDUCT CHEMICAL BREATH ANALYSES PURSUANT TO CHAPTER 142 OF THE LAWS OF 1966 IN THE OPERATION OF THE **Alcotest 7110 MKIII-C**
A METHOD TO DETERMINE INTOXICATION.
GIVEN UNDER MY HAND AT TRENTON, NEW JERSEY THIS **2nd** DAY OF **April**
TWO THOUSAND AND **Fifteen**

SUPERINTENDENT
NEW JERSEY STATE POLICE

ACTING ATTORNEY GENERAL
STATE OF NEW JERSEY

ORIGINAL COURSE DATES _____

	DATE	Refresher Course PLACE	INSTRUCTOR
1.	1/18/17	LAKEHURST	Adam Stahl
2.	2/19/19	LAKEHURST	Adam Stahl
3.			
4.			
5.			
6.			
7.			
8.			
9.			

S.P. 2938 (Rev. 06/13)

ALCOHOL INFLUENCE REPORT FORM, ALCOTEST 7110 MKIII-C
BRIELLE POLICE DEPT.

Department Case No.: 20BR05608
Summons No(s): 1309E20000711
Sequential File No.: 00860

Subject

Last Name: First Name: MI
D.O.B.: Gender: Ht ft in. Wt lbs.
Driver License Number: Issuing State:NJ

Arresting Officer

Last Name: BROWN First Name: DANTE' MI: A
Badge No.: 172 Arrest Date: 07/11/2020 Arrest Time: 01:01D Arrest Location: 1309

Instrument

Location: Alcotest 7110 MKIII-C BRIELLE POLICE DEPT. Serial No.: ARWM-0073

Calibration File No.:	00852	Calib. Date:	05/18/2020	Calib. No.:	00033
Certification File No.:	00853	Cert. Date:	05/18/2020	Cert. No.:	00028
Linearity File No.:	00854	Lin. Date:	05/18/2020	Lin. No.:	00027
Solution File No.:	00859	Soln. Date:	06/23/2020	Soln. No.:	00190
Sequential File No.:	00860	File Date:	07/11/2020		
Calibrating Unit:	WET	Model No.:	CU-34	Serial No.:	DDXA S3-0052
Control Solution %:	0.100%			Expires:	10/30/2021
Solution Control Lot:	19300			Bottle No.:	1292

Breath Test Information Date of Test: 07/11/2020

Function	Result %BAC	Time HH:MM	Volume (L)	Duration Sec (s)	Temp. Sim.(°C)	Error Message
Ambient Air Blank	0.000%	01:46D				
Control Test 1					34.0°C	
EC Result	0.098%	01:47D				
IR Result	0.097%	01:47D				
Ambient Air Blank	0.000%	01:48D				
Breath Test 1			3.1L	11.5s		
EC Result	0.140%	01:48D				
IR Result	0.141%	01:48D				
Ambient Air Blank	0.000%	01:49D				
Breath Test 2			2.6L	13.0s		
EC Result	0.141%	01:51D				
IR Result	0.139%	01:51D				
Ambient Air Blank	0.000%	01:52D				
Control Test 2					34.0°C	
EC Result	0.097%	01:52D				
IR Result	0.097%	01:52D				
Ambient Air Blank	0.000%	01:53D				

REPORTED BREATH TEST RESULT: 0.13% BAC

Breath Test Operator

Last Name: STAHL First Name: BRIAN MI: C
Signature: Badge No.: 165
Date: 07/11/2020

Copy Given to Subject

Score 1:

EC: . 140 IR: . 141

Score 2:

EC: . 141 IR: . 139

Reported Breath Test Result: . 13

Total: . 561

Mean: . 14025

Upper Limit Relative Tolerance: . 1472

Upper Limit Absolute Tolerance: . 1452

Lower Limit Relative Tolerance: . 1332

Lower Limit Absolute Tolerance: . 1352

Upper Tolerance Limit: . 1472

Lower Tolerance Limit: . 1332

Breath Samples Are Within Acceptable Tolerance

Printed:
Date: 7/11/120 Time: 02:05:09

Alcotest 7110 Calibration Record

Equipment	Alcotest 7110 MKIII-C			Serial No.:	ARWM-0073
Location:	BRIELLE POLICE DEPT.				
Calibration File No.:	00852	Calib. Date:	05/18/2020	Calib. No.:	00033
Certification File No.:	00837	Cert. Date:	12/05/2019	Cert. No.:	00027
Linearity File No.:	00838	Lin. Date:	12/05/2019	Lin. No.:	00026
Solution File No.:	00851	Soln. Date:	04/28/2020	Soln. No.:	00187
Sequential File No.:	00852	File Date:	05/18/2020		
Calibrating Unit:	WET	Model No.:	CU-34	Serial No.:	DDXA S3-0052
Control Solution %:	0.100%			Expires:	10/14/2021
Solution Control Lot:	19270			Bottle No.:	1079

Coordinator

Last Name: LUTZ First Name: DENNIS MI: J

Signature: Tpr I Lutz 7045 Badge No.: 7045

Date: 05/18/2020

*Black Key Temperature Probe Serial.....# DDLBP3-0115 (DL)

*Digital NIST Temperature Measuring System Serial.....# 191 959 029 (DL)

Pursuant to law, and the "Chemical Breath Testing Regulations" N.J.A.C. 13:51, I am a duly appointed Breath Test Coordinator/Instructor. In my official capacity, and consistent with "Calibration Check Procedure for Alcotest 7110," as established by the Chief Forensic Scientist of the Division of State Police, I perform calibration checks on approved instruments employing infrared analysis and electrochemical analysis, when utilized in a single approved instrument as a dual system of chemical breath testing. Pursuant to, and consistent with, the current "Calibration Check Procedure for Alcotest 7110," as established by the Chief Forensic Scientist, I performed a Calibration Check on the approved instrument identified on this certificate. The results of my Calibration Check are recorded on this certificate, which consists of two parts on two pages: Part I - Control Tests; and Part II - Linearity Tests. I certify that the foregoing statements made by me are true. I am aware that if any of the foregoing statements made by me are wilfully false, I am subject to punishment.

Alcotest 7110 Calibration Certificate

Part I - Control Tests

Equipment	Alcotest 7110 MKIII-C			Serial No.:	ARWM-0073
Location:	BRIELLE POLICE DEPT.				
Calibration File No.:	00852	Calib. Date:	05/18/2020	Calib. No.:	00033
Certification File No.:	00853	Cert. Date:	05/18/2020	Cert. No.:	00028
Linearity File No.:	00838	Lin. Date:	12/05/2019	Lin. No.:	00026
Solution File No.:	00851	Soln. Date:	04/28/2020	Soln. No.:	00187
Sequential File No.:	00853	File Date:	05/18/2020		
Calibrating Unit:	WET	Model No.:	CU-34	Serial No.:	DDXA S3-0052
Control Solution %:	0.100%			Expires:	10/14/2021
Solution Control Lot:	19270			Bottle No.:	1079

Function	Result %BAC	Time HH:MM	Temperature Simulator (°C)	Comment(s) or Error(s)
Ambient Air Blank	0.000%	09:27D		
Control 1 EC	0.100%	09:28D	34.0°C	*** TEST PASSED ***
Control 1 IR	0.100%	09:28D	34.0°C	*** TEST PASSED ***
Ambient Air Blank	0.000%	09:29D		
Control 2 EC	0.098%	09:29D	34.0°C	*** TEST PASSED ***
Control 2 IR	0.100%	09:29D	34.0°C	*** TEST PASSED ***
Ambient Air Blank	0.000%	09:30D		
Control 3 EC	0.099%	09:31D	34.0°C	*** TEST PASSED ***
Control 3 IR	0.100%	09:31D	34.0°C	*** TEST PASSED ***
Ambient Air Blank	0.000%	09:32D		

All tests within acceptable tolerance.

Coordinator

Last Name: LUTZ First Name: DENNIS MI: J

Signature: Tpr I Dennis 7045 Badge No.: 7045

Date: 05/18/2020

Pursuant to law, and the "Chemical Breath Testing Regulations" N.J.A.C. 13:51, I am a duly appointed Breath Test Coordinator/Instructor. In my official capacity, and consistent with "Calibration Check Procedure for Alcotest 7110," as established by the Chief Forensic Scientist of the Division of State Police, I perform calibration checks on approved instruments employing infrared analysis and electrochemical analysis, when utilized in a single approved instrument as a dual system of chemical breath testing. Pursuant to, and consistent with, the current "Calibration Check Procedure for Alcotest 7110," as established by the Chief Forensic Scientist, I performed a Calibration Check on the approved instrument identified on this certificate. The results of my Calibration Check are recorded on this certificate, which consists of two parts on two pages: Part I - Control Tests; and Part II - Linearity Tests. I certify that the foregoing statements made by me are true. I am aware that if any of the foregoing statements made by me are wilfully false, I am subject to punishment.

Alcotest 7110 Calibration Certificate

Part II - Linearity Tests

Equipment	Alcotest 7110 MKIII-C			Serial No.:	ARWM-0073
Location:	BRIELLE POLICE DEPT.				
Calibration File No.:	00852	Calib. Date:	05/18/2020	Calib. No.:	00033
Certification File No.:	00853	Cert. Date:	05/18/2020	Cert. No.:	00028
Linearity File No.:	00854	Lin. Date:	05/18/2020	Lin. No.:	00027
Solution File No.:	00851	Soln. Date:	04/28/2020	Soln. No.:	00187
Sequential File No.:	00854	File Date:	05/18/2020		
Calibrating Unit:	WET	Model No.:	CU-34	Serial No.:	DDSC S3-0005
Control Solution %:	0.040%			Expires:	07/31/2020
Solution Control Lot:	18240			Bottle No.:	0921
Calibrating Unit:	WET	Model No.:	CU-34	Serial No.:	DDMK S3-0005
Control Solution %:	0.080%			Expires:	08/06/2020
Solution Control Lot:	18250			Bottle No.:	1091
Calibrating Unit:	WET	Model No.:	CU-34	Serial No.:	DDWE S3-0211
Control Solution %:	0.160%			Expires:	08/21/2020
Solution Control Lot:	18260			Bottle No.:	0320

Function	Result %BAC	Time HH:MM	Temperature Simulator (°C)	Comment(s) or Error(s)
Ambient Air Blank	0.000%	09:45D		
Control 1 EC	0.042%	09:46D	34.0°C	*** TEST PASSED ***
Control 1 IR	0.040%	09:46D	34.0°C	*** TEST PASSED ***
Ambient Air Blank	0.000%	09:48D		
Control 2 EC	0.041%	09:48D	34.0°C	*** TEST PASSED ***
Control 2 IR	0.040%	09:48D	34.0°C	*** TEST PASSED ***
Ambient Air Blank	0.000%	09:50D		
Control 3 EC	0.082%	09:50D	34.0°C	*** TEST PASSED ***
Control 3 IR	0.082%	09:50D	34.0°C	*** TEST PASSED ***
Ambient Air Blank	0.000%	09:52D		
Control 4 EC	0.083%	09:53D	34.0°C	*** TEST PASSED ***
Control 4 IR	0.080%	09:53D	34.0°C	*** TEST PASSED ***
Ambient Air Blank	0.000%	09:54D		
Control 5 EC	0.163%	09:55D	34.0°C	*** TEST PASSED ***
Control 5 IR	0.160%	09:55D	34.0°C	*** TEST PASSED ***
Ambient Air Blank	0.000%	09:57D		
Control 6 EC	0.162%	09:57D	34.0°C	*** TEST PASSED ***
Control 6 IR	0.161%	09:57D	34.0°C	*** TEST PASSED ***
Ambient Air Blank	0.000%	09:59D		

All tests within acceptable tolerance.

Coordinator

Last Name: LUTZ First Name: DENNIS MI: J

Signature: Tpr I Dennis 7045

Badge No.: 7045

Date: 05/18/2020

Calibrating Unit
New Standard Solution Report

Equipment	Alcotest 7110 MKIII-C			Serial No.:	ARWM-0073
Location:	BRIELLE POLICE DEPT.				
Calibration File No.:	00852	Calib. Date:	05/18/2020	Calib. No.:	00033
Certification File No.:	00853	Cert. Date:	05/18/2020	Cert. No.:	00028
Linearity File No.:	00854	Lin. Date:	05/18/2020	Lin. No.:	00027
Solution File No.:	00855	Soln. Date:	05/18/2020	Soln. No.:	00188
Sequential File No.:	00855	File Date:	05/18/2020		
Calibrating Unit:	WET	Model No.:	CU-34	Serial No.:	DDXA S3-0052
Control Solution %:	0.100%			Expires:	10/30/2021
Solution Control Lot:	19300			Bottle No.:	1287

Function	Result %BAC	Time HH:MM	Temperature Simulator (°C)	Comment(s) or Error(s)
Ambient Air Blank	0.000%	11:08D		
Control 1 EC	0.101%	11:09D	34.0°C	*** TEST PASSED ***
Control 1 IR	0.100%	11:09D	34.0°C	*** TEST PASSED ***
Ambient Air Blank	0.000%	11:09D		
Control 2 EC	0.100%	11:10D	34.0°C	*** TEST PASSED ***
Control 2 IR	0.100%	11:10D	34.0°C	*** TEST PASSED ***
Ambient Air Blank	0.000%	11:11D		
Control 3 EC	0.101%	11:11D	34.0°C	*** TEST PASSED ***
Control 3 IR	0.100%	11:11D	34.0°C	*** TEST PASSED ***
Ambient Air Blank	0.000%	11:12D		

All tests within acceptable tolerance.

On this date, I installed the above indicated "NEW SOLUTION" in acordance with Alcotest 7110 operator training and procedures established by the (NJSP) Chief Forensic Scientist.

Temperature Probe Serial Number: DDWJP2-228 (DL)

Changed By:

Last Name: LUTZ First Name: DENNIS MI: J

Signature: Tpr I Dennis 7045

Badge No.: 7045

Date: 05/18/2020

DEPARTMENT OF

Law and Public Safety

This is to certify that

Dennis J. Lutz

Breath Test Coordinator/Instructor

IS QUALIFIED AND COMPETENT TO CONDUCT CHEMICAL BREATH ANALYSES PURSUANT TO CHAPTER 142 OF THE LAWS OF 1966 IN THE OPERATION OF THE Alcotest 7110 MKIII-C A METHOD TO DETERMINE INTOXICATION.

GIVEN UNDER MY HAND AT TRENTON, NEW JERSEY THIS 29th DAY OF Jaanary TWO THOUSAND AND Nineteen

COLONEL, NEW JERSEY STATE POLICE

ATTORNEY GENERAL, STATE OF NEW JERSEY

ORIGINAL COURSE DATES _____

	DATE	Refresher Course PLACE	INSTRUCTOR
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			

S.P. 2938 (Rev. 01/19)

DEPARTMENT OF

Law and Public Safety

This is to certify that

Dennis J. Lutz

New Jersey State Police

IS QUALIFIED AND COMPETENT TO CONDUCT CHEMICAL BREATH ANALYSES PURSUANT TO CHAPTER 142 OF THE LAWS OF 1966 IN THE OPERATION OF THE Alcotest 7110 MKIII-C A METHOD TO DETERMINE INTOXICATION.

GIVEN UNDER MY HAND AT TRENTON, NEW JERSEY THIS 1st DAY OF October TWO THOUSAND AND Nine

COLONEL, NEW JERSEY STATE POLICE

ATTORNEY GENERAL, STATE OF NEW JERSEY

ORIGINAL COURSE DATES _____

	DATE	Refresher Course PLACE	INSTRUCTOR
1.	2-3-11	OCPA	Wm Lyons
2.	1/24/13	OCPA	Adam Stanley
3.	11-23-15	OCPA	M. Gonsalves
4.	4/6/17	LAKEWOOD PST	Adam Stanley
5.	8/22/19	NJSP Galloway	
6.			
7.			
8.			
9.			

S.P. 2938 (Rev. 01/19)

Calibrating Unit
New Standard Solution Report

Equipment	Alcotest 7110 MKIII-C			Serial No.:	ARWM-0073
Location:	BRIELLE POLICE DEPT.				
Calibration File No.:	00852	Calib. Date:	05/18/2020	Calib. No.:	00033
Certification File No.:	00853	Cert. Date:	05/18/2020	Cert. No.:	00028
Linearity File No.:	00854	Lin. Date:	05/18/2020	Lin. No.:	00027
Solution File No.:	00859	Soln. Date:	06/23/2020	Soln. No.:	00190
Sequential File No.:	00859	File Date:	06/23/2020		
Calibrating Unit:	WET	Model No.:	CU-34	Serial No.:	DDXA S3-0052
Control Solution %:	0.100%			Expires:	10/30/2021
Solution Control Lot:	19300			Bottle No.:	1292

Function	Result %BAC	Time HH:MM	Temperature Simulator (°C)	Comment(s) or Error(s)
Ambient Air Blank	0.000%	08:40D		
Control 1 EC	0.097%	08:41D	34.0°C	*** TEST PASSED ***
Control 1 IR	0.096%	08:41D	34.0°C	*** TEST PASSED ***
Ambient Air Blank	0.000%	08:41D		
Control 2 EC	0.096%	08:42D	34.0°C	*** TEST PASSED ***
Control 2 IR	0.096%	08:42D	34.0°C	*** TEST PASSED ***
Ambient Air Blank	0.000%	08:43D		
Control 3 EC	0.096%	08:43D	34.0°C	*** TEST PASSED ***
Control 3 IR	0.097%	08:43D	34.0°C	*** TEST PASSED ***
Ambient Air Blank	0.000%	08:44D		

All tests within acceptable tolerance.

On this date, I installed the above indicated "NEW SOLUTION" in acordance with Alcotest 7110 operator training and procedures established by the (NJSP) Chief Forensic Scientist.

Changed By:

Last Name: SOFIELD First Name: RONALD MI: G

Signature: Sgt. R #161 Badge No.: 161

Date: 06/23/2020

State of New Jersey
OFFICE OF THE ATTORNEY GENERAL
DEPARTMENT OF LAW AND PUBLIC SAFETY
DIVISION OF STATE POLICE
POST OFFICE BOX 7068
WEST TRENTON, NJ 08628-0068
(609) 882-2000

PHILIP D. MURPHY
Governor

SHEILA Y. OLIVER
Lt. Governor

GURBIR S. GREWAL
Attorney General

PATRICK J. CALLAHAN
Colonel

CERTIFICATION OF ANALYSIS
0.100 PERCENT BREATH ALCOHOL SIMULATOR SOLUTION

ACCEPTANCE SPECIFICATIONS FOR BREATH ALCOHOL SIMULATOR SOLUTION: Ethyl alcohol concentration within, but not exceeding, the range of 0.1174 to 0.1246 grams per 100 milliliters of solution.

MANUFACTURER: Draeger Safety, Inc. **ANALYSIS DATE:** 11/14/2019

BREATH ALCOHOL SIMULATOR SOLUTION LOT NUMBER: 19300

Representative samples of the above-referenced Lot Number were tested by Gas Chromatography and found to have a mean ethyl alcohol concentration range of 0.1206 to 0.1219 grams per 100 milliliters of solution.

This lot of breath alcohol simulator solution may be utilized as a known traceable standard for the purpose of conducting periodic tests, pursuant to N.J.A.C. 13:51-4.3, of approved breath test instruments (N.J.A.C. 13:51-3.5) utilized by law enforcement agencies in this State. The manufacturer's expiration date for this lot of breath alcohol simulator solution is October 30, 2021.

As Assistant Chief Forensic Scientist for the Division of State Police, I hereby certify and attest that the tests and results documented in this Certificate of Analysis were performed at the Office of Forensic Sciences of the Division of State Police on properly functioning and calibrated instruments and equipment. All procedures utilized are accurate, objective, and performed on a routine basis by personnel within the Office of Forensic Sciences, in accordance with their professional duties and responsibilities.

Michael Kennedy
Assistant Chief Forensic Scientist
NJSP Office of Forensic Sciences

Sworn to and subscribed before me this 15 day of November, 2019.

Notary

KAREN E. STAHL
NOTARY PUBLIC OF NEW JERSEY
Commission # 50110522
My Commission Expires 8/13/2024

Alcotest 7110 MKIII-C Calibration
NIST-Traceable Digital Thermometer Readings

Coordinator:

Tpr I Dennis J Lutz — Name

7045 — Badge No.

Location:

Brielle Police Dept. — Agency

ARWM-0073 — Alcotest Serial No.

Equipment:

191 959 029

Digital NIST Temperature Measuring System Serial No.

Simulator Solution Concentration	CU-34 Simulator Serial No.	Time Simulators Started to Heat	Time Temp. Reading Obtained	Temp. Reading on NIST Traceable Thermometer
0.04%	DDSC 53-0005	08:16 D	09:17 D	34.0°C
0.08%	DDMK 53-0005	08:16 D	09:18 D	33.9°C
0.10%	DDXA 53-0052	08:16 D	09:19 D	34.0°C
0.16%	DDWE 53-0211	08:16 D	09:20 D	34.0°C

Pursuant to law and the "Chemical Breath Testing Regulations" established at N.J.A.C. 13:51, I am a duly appointed Breath Test Coordinator/Instructor. In my official capacity and consistent with the "Calibration Check Procedure for Alcotest 7110" as established by the Chief Forensic Scientist of the Division of State Police, I perform calibration checks on Alcotest 7110 MKIII-C instruments. Pursuant to and consistent with the current "Calibration Check Procedure for Alcotest 7110", I performed a Calibration Check Procedure on the Alcotest 7110 MKIII-C instrument identified on this certificate. Pursuant to the current "Calibration Check Procedure for Alcotest 7110", I used the Digital NIST-traceable Temperature Measuring System identified on this certificate to confirm that the temperatures of the 0.10%, 0.04%, 0.08%, and 0.16% Simulator Solutions used in the respective CU-34 Simulators identified on this certificate, were 34.0 degrees Celsius ± 0.2 degrees Celsius. I hereby certify that I truthfully recorded on this certificate the temperatures of each of the simulator solutions as shown on the Digital NIST-traceable Temperature Measuring System thermometer. I am aware that if any of the foregoing statements made by me are willfully false, I am subject to punishment.

Tpr I [signature] 7045

Coordinator's Signature

5-18-20

Date

Alcotest 7110 Match Up Numbers

- ❑Alcotest 7110 serial number
- ❑CU34 serial number
- ❑Simulator solution lot number
- ❑Sequential file numbers
- ❑Cycle numbers
- ❑Simulator solution bottle numbers
- ❑Check dates generated
- ❑Check function dates

BRIELLE POLICE DEPT.

Department Case No.: 20BR05608
Summons No(s): 1309E20000711
Sequential File No.: 00860

First Name: MI
Age: Gender: Ht ft. in. Wt: lbs.
lumber: Issuing State:NJ

ficer
WN First Name: DANTE' MI: A
Arrest Date: 07/11/2020 Arrest Time: 01:01D Arrest Location: 1309

Alcotest 7110 MKIII-C
BRIELLE POLICE DEPT.
Serial No.: ARWM-0073

No.:	00852	Calib. Date: 05/18/2020	Calib. No.: 00033
No.:	00853	Cert. Date: 05/18/2020	Cert. No.: 00028
.:	00854	Lin. Date: 05/18/2020	Lin. No.: 00027
:	00859	Soln. Date: 06/23/2020	Soln. No.: 00190

Arresting Officer

Last Name: BROWN First Name: DANTE' MI: A

Badge No.: 172 Arrest Date: 07/11/2020 Arrest Time: 01:01D Arrest Location: 1309

Instrument

Instrument: Alcotest 7110 MKIII-C Serial No.: ARWM-0073

Location: BRIELLE POLICE DEPT.

Calibration File No.:	00852	Calib. Date:	05/18/2020	Calib. No.:	00033
Certification File No.:	00853	Cert. Date:	05/18/2020	Cert. No.:	00028
Linearity File No.:	00854	Lin. Date:	05/18/2020	Lin. No.:	00027
Solution File No.:	00859	Soln. Date:	06/23/2020	Soln. No.:	00190
Sequential File No.:	00860	File Date:	07/11/2020		

Calibrating Unit:	WET	Model No.:	CU-34	Serial No.:	DDXA S3-0052
Control Solution %:	0.100%			Expires:	10/30/2021
Solution Control Lot:	19300			Bottle No.:	1292

Breath Test Information

Date of Test: 07/11/2020

Function	Result %BAC	Time HH:MM	Volume (L)	Duration Sec (s)	Temp. Sim. (°C)	Error Message
Ambient Air Blank	0.000%	01:46D				
Control Test 1					34.0°C	
EC Result	0.098%	01:47D				
IR Result	0.097%	01:47D				
Ambient Air Blank	0.000%	01:48D				
Breath Test 1			3.1L	11.5s		
EC Result	0.140%	01:48D				
IR Result	0.141%	01:48D				

Last Name: BROWN First Name: DANTE' MI: A

Badge No.: 172 Arrest Date: 07/11/2020 Arrest Time: 01:01D Arrest Location: 1309

Instrument Alcotest 7110 MKIII-C Serial No.: ARWM-0073

Location: BRIELLE POLICE DEPT.

Calibration File No.:	00852	Calib. Date:	05/18/2020	Calib. No.:	00033
Certification File No.:	00853	Cert. Date:	05/18/2020	Cert. No.:	00028
Linearity File No.:	00854	Lin. Date:	05/18/2020	Lin. No.:	00027
Solution File No.:	00859	Soln. Date:	06/23/2020	Soln. No.:	00190
Sequential File No.:	00860	File Date:	07/11/2020		

Calibrating Unit:	WET	Model No.:	CU-34	Serial No.:	DDXA S3-0052
Control Solution %:	0.100%			Expires:	10/30/2021
Solution Control Lot:	19300			Bottle No.:	1292

Breath Test Information Date of Test: 07/11/2020

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Breath Test 1			3.1L	11.5s		
EC Result	0.140%	01:48D				
IR Result	0.141%	01:48D				
Ambient Air Blank	0.000%	01:49D				

Arresting Officer

Last Name: BROWN | First Name: DANTE' | MI: A

Badge No.: 172 | Arrest Date: 07/11/2020 | Arrest Time: 01:01D | Arrest Location: 1309

Instrument

Instrument: Alcotest 7110 MKIII-C | Serial No.: ARWM-0073

Location: BRIELLE POLICE DEPT.

Calibration File No.:	00852	Calib. Date:	05/18/2020	Calib. No.:	00033
Certification File No.:	00853	Cert. Date:	05/18/2020	Cert. No.:	00028
Linearity File No.:	00854	Lin. Date:	05/18/2020	Lin. No.:	00027
Solution File No.:	00859	Soln. Date:	06/23/2020	Soln. No.:	00190
Sequential File No.:	00860	File Date:	07/11/2020		

Calibrating Unit:	WET	Model No.:	CU-34	Serial No.:	DDXA S3-0052
Control Solution %:	0.100%			Expires:	10/30/2021
Solution Control Lot:	19300			Bottle No.:	1292

Breath Test Information

Date of Test: 07/11/2020

Function	Result %BAC	Time HH:MM	Volume (L)	Duration Sec (s)	Temp. Sim. (°C)	Error Message
Ambient Air Blank	0.000%	01:46D				
Control Test 1					34.0°C	
EC Result	0.098%	01:47D				
IR Result	0.097%	01:47D				
Ambient Air Blank	0.000%	01:48D				
Breath Test 1			3.1L	11.5s		
EC Result	0.140%	01:48D				
IR Result	0.141%	01:48D				

Instrument	Alcotest 7110 MKIII-C			Serial No.:	ARWM-0073
Location:	BRIELLE POLICE DEPT.				
Calibration File No.:	00852	Calib. Date:	05/18/2020	Calib. No.:	00033
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Linearity File No.:	00854	Lin. Date:	05/18/2020	Lin. No.:	00027
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Control Solution %:	0.100%			Expires:	10/30/2021
Solution Control Lot:	19300			Bottle No.:	1292

Breath Test Information

Date of Test: 07/11/2020

Function	Result %BAC	Time HH:MM	Volume (L)	Duration Sec (s)	Temp. Sim.(°C)	Error Message
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Control Test 1					34.0°C	
EC Result	0.098%	01:47D				
IR Result	0.097%	01:47D				
Ambient Air Blank	0.000%	01:48D				

2.0L 15.0s

1% 01:51D
0% 01:51D
0% 01:52D

34.0°C

7% 01:52D
7% 01:52D
0% 01:53D

ST RESULT: 0.13% BAC

First Name: BRIAN MI: C

Badge No.: 165
Date: 07/11/2020

State of New Jersey Office of Forensic Sciences Alcotest Inquiry System

HTTPS://WWW.NJPORTAL.COM/NJSP/ALCOTEST/DEFAULT.ASPX

Alcotest Inquiry System

DOES CONTAIN DATA FOR THESE FUNCTIONS:

- ❑Solution Changes
- ❑Subject Breath Tests

DOES **NOT** CONTAIN DATA FOR THESE FUNCTIONS:

- ❑Calibration
- ❑Control
- ❑Linearity

Roadside Video

N.J.S.A. 40A:14-118.1 (MVR)

N.J.S.A. 40A:14-118.5 (BWC)

N.J.S.A. 52:17B-224(b)

N.J.S.A. 52:17B-228(d)

State v. Stein, 225 *N.J.* 582, 596 (2016)

State v. P.S., 202 *N.J.* 232, 253 (2010)

In-Station Video

- *Mouth Check*
- *Observation Period*
- *Masks*
- *Presence/Absence of Electronics*
- *Intervals Between Samples*

State v. Kuropchak,
221 *N.J.* 368 (2015)

Certificate of Analysis 0.10 Percent Breath Alcohol Simulator Solution

Most recent Calibrating Unit New Standard Solution Report


NOT
GUILTY


ANY
QUESTIONS?

JOHN MENZEL, J.D.

603 Mattison Avenue, Suite 320, Asbury Park, NJ 07712

(732) 899-1899 office, (732) 713-4100 cell, (732) 899-8884 fax

jmenzel@menzellaw.com

www.dwi1dwi.com

National College for DUI Defense:

2023 Appellate Advocacy Award

2017 Mentoring Award

Board certified in DUI defense

Immediate Past State Delegate

Sustaining Member, Faculty

New Jersey State Bar Association:

2015, 2023 Municipal Court Practice Award

Past Chair, Municipal Court Practice Section

Other:

N.J. Institute of Continuing Legal Education presenter and moderator

Garden State Continuing Legal Education senior instructor

Certified by Drager re Alcotest 7110 breath testing instrument

Certified in Standardized Field Sobriety Test administration

[redacted]

GARDEN STATE CONTINUING LEGAL EDUCATION
SEPTEMBER 20, 2023

INTRODUCTION

Karl Benz invented the automobile in 1886. *See, e.g.*, https://www.loc.gov/rr/scitech/mysteries/auto.html. In 1897 George Smith, a London taxi driver, became the first person ever arrested for drunk driving after crashing his cab into the side of a building. Smith pleaded guilty and was fined 25 shillings. See https://www.history.com/this-day-in-history/first-drunk-driving-arrest.

There have been drunk drivers almost as long as there have been driving. Everyone knows a drunk when they see one. Everyone knows being drunk can affect how someone drives. But some people hold their liquor better than others. So, determining whether one is drunk from observations is often subjective and can be difficult to prove with a burden of proof beyond a reasonable doubt.

The law requires objectivity to make it easier for prosecutors to convict drunk drivers. This is why legislators created *per se* laws. These laws define impairment from alcohol in terms of a blood alcohol content ["BAC"] or breath alcohol content ["BrAC"]. Most states use BAC, but some states and the National Park Service use BrAC. Whether defined as BAC or BrAC, a *per se* result means alcohol impairment even if you could tap dance on a tight rope.

HISTORY OF BREATH TESTING

So where does this concept of breath testing come from? It originated soon after the invention of the automobile and before Prohibition.

In 1874, a British physician, Dr. **Frederick E. Anstie** (1833-1874), proposed Anstie's limit, an amount of alcohol that could be consumed daily with no ill effects (1.5 oz. pure ethanol or 2½ drinks). Anstie observed that small amounts of alcohol were excreted in breath.

In 1927, Dr. **William Duncan McNally** (1882-1961), the chief chemist for the Cook County Department of Public Health and Cook County Medical Examiner's office, invented an early breath testing device. If alcohol was in the breath, chemicals in water would change color. One use for his invention was for housewives to test whether their husbands had been drinking.

In 1931, Dr. **Rolla N. Harger** (1890-1983) developed the Drunkometer, the first breath testing device used by police in the field. He patented the Drunkometer in 1936. Stephenson Corporation of Red Bank, New Jersey, manufactured it. Indianapolis police obtained the first breath test in the field on New Year's Eve 1938. Harger was biochemistry and pharmacology department chair of the Indiana University School of Medicine from 1933 to 1956 and worked as a professor in the Department of Biochemistry and Toxicology from 1922 to 1960.

Here's how the Drunkometer worked: The subject would blow into a balloon. The captured breath was attached to the instrument and mixed with a potassium permanganate solution that changed color if alcohol was present. The darker the solution, the more alcohol was in the sample.

In 1936, the Indiana State Police Criminology Laboratory hired **Robert F. Borkenstein** (1912-2002), who rose through the ranks from a clerk to the captain in charge of laboratory services. While working with the Indiana State Police, Borkenstein developed a close professional relationship with Harger. Because the Drunkometer was complicated and of questionable reliability, Borkenstein decided to develop a more reliable device. In 1954, while attending Indiana University, he created the Breathalyzer -- a more compact and more easily operated breath test device. The Breathalyzer was commercially produced -- first by Stephenson, then Smith & Wesson, then Drager -- and adopted in law enforcement agencies throughout the country and world. Breathalyzers were used in the field until 2006, when New Jersey finally retired them.

During the same year Borkenstein graduated from Indian University, he retired from the Indiana State Police and joined the university faculty as Chair of the new Department of Police Administration. In 1971, Borkenstein became the director of the Indiana University Center for Studies of Law in Action, which went on to offer the reoccurring "*Robert F. Borkenstein Course on Alcohol and Highway Safety: Testing, Research, and Litigation*" for forensic science, law enforcement, and criminal justice professionals.

In 1967, two men, **Bill Ducie** and **Tom Parry Jones**, developed the first electronic breath testing instrument at Lion Laboratories in Cardiff, Wales. The instrument was called the Alcolyser and incorporated crystal-filled tubes that changed color above a certain BrAC level. It was approved for police use in Britain in 1979. In 1983, the Intoximeter 3000 replaced the Alcolyser, which, along with the Lion Alcolmeter and Lion Intoxilyser, used a fuel cell instead of crystals. This improvement made the instruments more practical and eliminated the need for confirmatory blood or urine samples. In 1991, American company MPD, Inc. (the parent company of CMI, Inc.), acquired Lion Laboratories.

In 1972, **Omicron Systems Corporation** introduced the Intoxilyzer, an infrared breath testing device. The first Intoxilyzer was designated as model 4011. CMI acquired the rights to the Intoxilyzer and upgraded it to the series 5000 models, which used 3.4 microns for ethanol.

Today, after several mergers and acquisitions, three companies dominate the breath testing market: Drager, Inc., Intoximeters, Inc., and CMI, Inc. Their instruments use either infrared spectroscopy ["IR"] or electro-chemical fuel cell ["EC"] technology or both.

PHYSIOLOGICAL ASSUMPTIONS

In states that use BAC as the *per se* standard, BrAC is used to indirectly measure BAC. *See State v. Chun*, 194 *N.J.* 54, 77 (2008). In most states, there are fundamental physiological assumptions on which breath testing is based:

(a) All vapor in a breath sample comes from the lungs. *See id.* at 76.

(b) Breath in the alveoli is most strongly associated with the blood, and alcohol in the blood exchanges from the blood to the breath in the alveoli. *Ibid.*

(c) The alcohol in 2100 parts of breath is equivalent to that in one part of blood. *See id.* at 95; *State v. Downie*, 117 *N.J.* 450, 460-63 (1990).

(d) Temperature affects the exchange of alcohol from blood to breath with mouth temperature assumed to be 34 degrees Celsius (93 degrees Fahrenheit) ($1^{o}C=1.8^{o}F$). *See State v. Chun, supra* at 104.

(e) BrAC at time of a test taken within a certain or reasonable time of motor vehicle operation is the same as BrAC at the time of operation. *See State v. Tischio*, 107 *N.J.* 504, 506, 522 (1987).

Some experts have challenged these assumptions. Wayne Alan Jones, Ph.D., has studied and published on physiological conditions that affect breath samples. The late Michael P. Hlastala, Ph.D., challenged the fundamental premise that the BrAC comes from alveolar vapor.

Whether these physiological assumptions are relevant may depend on whether the law of the jurisdiction defines its *per se* limits in terms of blood or breath. In most states, the *per se* limit is defined by statutes like those in New Jersey: "A person who ... operates a motor vehicle with a **blood alcohol concentration** of 0.08% or more by weight of alcohol in the defendant's blood ... shall be subject [to punishment]." *N.J.S.A.* 39:4-50(a). These physiological assumptions have a direct bearing on the validity of a BAC result. Some jurisdictions define the *per se* limit by BrAC -- *e.g.*, "Operating or being in actual physical control of a motor vehicle is prohibited while....[t]he alcohol concentration in the operator's **blood or breath** is 0.08 grams or more of alcohol per 100 milliliters of blood or 0.08 grams or more of alcohol per 210 liters of breath...." 32 *C.F.R.* sec. 4.23(a)(2).

Some states have ruled certain physiological challenges irrelevant as a matter of law -- *e.g.*, retrograde extrapolation and blood-breath ratio challenges. In others, they may provide fertile ground to explore, at least in induvial cases. But whether *per se* is defined by BAC, BrAC, or both, other considerations come into play.

SAMPLING PATTERNS

Breath sampling follows certain patterns, depending on the instrument used. All breath sampling requires an air blank ["A"], breath sample ["B"], and a calibration check, also called a control test ["C"]. Air blanks make sure that the consecutive breath samples do not contaminate each other. Control tests relate the BrAC result to simulator alcohol content ["SAC"]. A simulator may be either wet bath or dry gas that contains a known quantity of alcohol against which to compare the subject breath sample.

ABAB. During the days of the Breathalyzer, the testing pattern was ABAB with the C function done at intervals of weeks or months via periodic inspections. Given the physical manipulation required to operate the Breathalyzer instrumentation, New Jersey required two separate consecutive specimens 6-15 minutes apart. It's also why we called the Breathalyzer a "Dial-a-Drunk."

ABABC. The late Kurt M Dubowski, Ph.D, was widely regarded as an expert in breath testing, among other things. In an influential treatise, he proposed minimum requirements for a reliable breath test, including (a) a pretest deprivation-observation period, (b) blank tests before the taking of each specimen, (c) two separate consecutive specimens 2-10 minutes apart, and (d) control test with every subject test. 18 *J.Anal.Toxicology* 270 (Oct. 1994). Intoxilyzers generally use ACABA.

In New Jersey, the testing patterns of the Alcotest 7110 is ACA BAB ACA. Two control tests are performed for every subject with a simulator solution of a known alcohol concentration in an attached simulator. These new testing patterns addressed published scientific criticism of the ABAB pattern used in the Breathalyzer. The new Alcotest 951

MEASUREMENT CONCEPTS: GOALS FOR RELIABILITY

Accuracy. Accuracy is the closeness of a measurement to a particular value. Accuracy is also associated with uncertainty -- an accuracy tolerance. *See* below.

Precision. Precision (also called repeatability) is the closeness of repeated measurements to each other. The degree to which measurements can differ is sometimes called a precision tolerance. In New Jersey, EC and IR results for each breath sample must agree within .004 of each other. Overall, all four measurements (two samples multiplied by the two methods) must be within either .005 or five percent of the average of all measurements, whichever is greater.

Breath test results must be accurate and precise. It would be unacceptable if results were: (a) accurate but not precise, (b) precise but not accurate, or (c) neither accurate nor precise.

For breath test results to be considered scientifically reliable, instruments must produce results which have certain additional characteristics:

Uncertainty. No measurement is perfect. There is always a margin for error or "accuracy tolerance." The National Institute of Standards and Technology ["NIST"], refers to uncertainty as the probability a measurement will lie within a certain confidence interval. "It is not such uncertainty itself that is problematic; rather, for a measurement to be scientifically reliable, the amount of uncertainty must be known so the error rate of a given...measurement can be determined." *State v. Cassidy*, 235 *N.J.Super.* 482 (2018).

Uncertainty can be expressed as a tolerance with reference to the average or mean or as a range with reference to the extremes. For example, in New Jersey, the Alcotest 7110 is programmed to a tolerance of plus or minus 10 percent for results of .10 or more and plus or minus .01 for results below .10 -- in other words, a range of .20 for results of .10 or more or .02 for results below .10. On review, our Supreme Court reduced this uncertainty to a tolerance plus or minus five percent for results of .10 or more and plus or minus .005 for results below .10 or a range of ten percent for results of .10 or more and .01 for results below .10.

Traceability. According to NIST, "traceability" is the "property of a measurement result whereby the result can be related to a reference through a documented unbroken chain of calibrations, each contributing to the measurement uncertainty." Calibration is the concept that this series of measurement comparisons can be traced back to national standards. Equipment is

not traceable, but measurements made by equipment are. Breath test results are the result of several measurements, including temperature and SAC ethanol concentration. Atmospheric pressure can also come into play if breath tests are conducted at high elevations, although this is not much of an issue in a relatively low-lying state like New Jersey.

Specificity. Specificity is the ability of a breath test to detect ethanol to the exclusion of other substances like methanol, isopropanol, acetone, or acetaldehyde. As we will see, breath testing instrument manufacturers have sought to achieve specificity by use of certain IR wavelengths and, in the case of Drager, using different technologies in combination.

TECHNOLOGIES

IR and EC are the most widely used methods of measuring BrAC. IR and EC work in different ways. The Alcotest 7110 and 9510 instruments use both technologies to measure each breath sample to increase specificity. The Intoximeter EC/IR also uses both technologies, but not in combination; rather, EC is used to measure the BrAC in the sample while EC is used for "slope detection" to determine whether there is contamination in a sample.

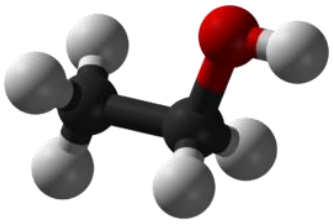
IR analysis is based on a measurement of the amount of energy absorbed by a breath sample at various electromagnetic wavelengths. Ethanol has two chemical bonds -- a C-H bond and C-O bond. Ethanol as a molecule is described with various formulae:

C_2H_6O

C_2H_5OH

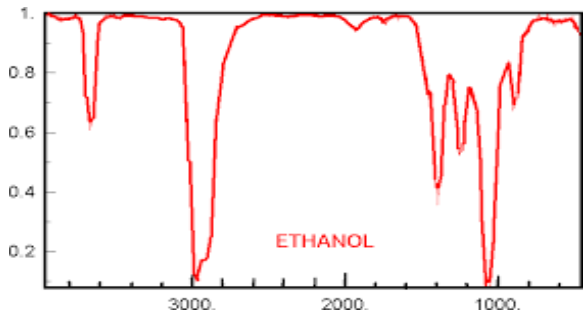
$CH_3{-}CH_2{-}OH$

```
  HH
HCCOH
  HH
```

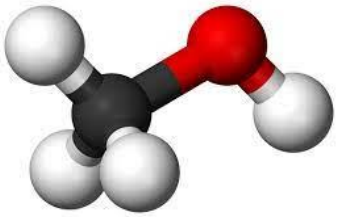


ETHANOL.

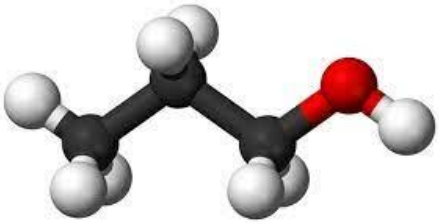
The various chemical bonds in an ethanol molecule will absorb infrared light at 3.4, 7.2, 8.2, 9.5, and 11.4 microns. C-H bonds absorb IR at 3.4 microns. Most organic compounds have C-H bonds. C-O bonds absorb at 9.5 microns. Fewer organic compounds have C-O bonds.



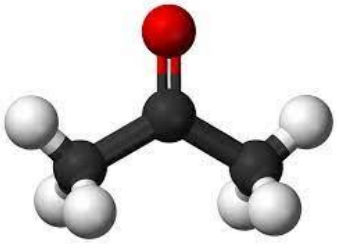
Measuring IR absorption at 9.5 microns is more specific for ethanol than measuring IR absorption at 3.4 microns. In this way, breath testing instrument manufacturers attempt to achieve greater specificity for ethanol, but many compounds that are similar to ethanol:



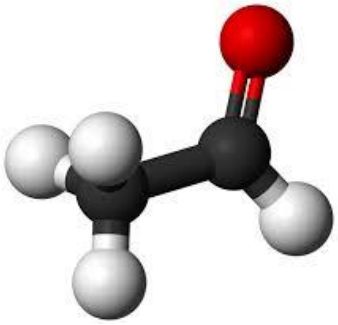
METHANOL.



ISOPROPANOL.



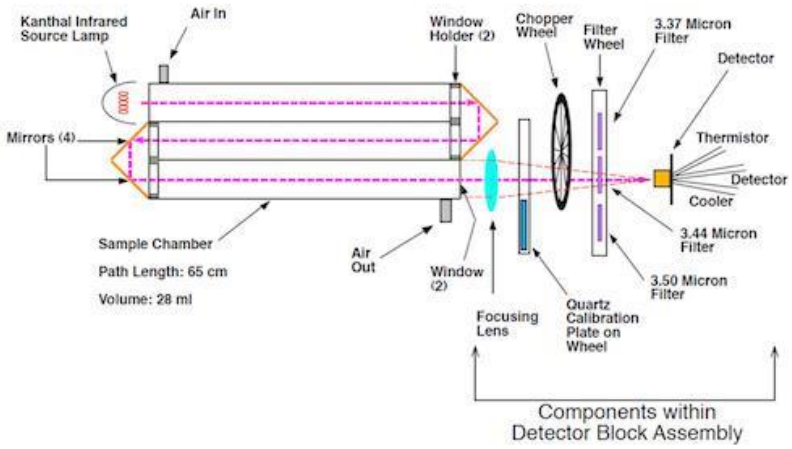
ACETONE.



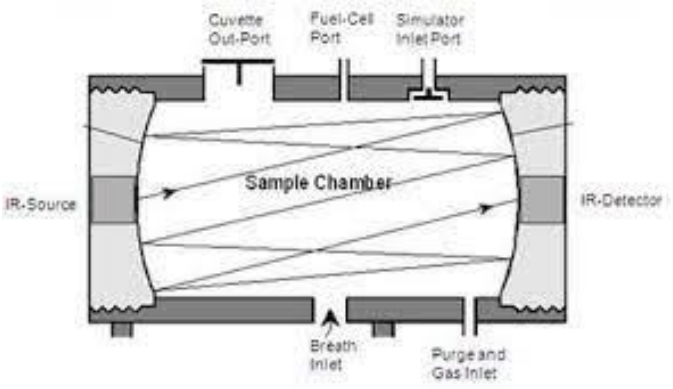
ACETALDEHYDE.

The ability of IR instrumentation to measure the absorption of IR energy improves as the length of the light path between an emitter and detector increases. The detector determines how much IR light at whatever wavelength is absorbed by the vapor in the sample chamber. By comparing the amount of IR light detected without the presence of ethanol during the air blank and to the amount absorbed in the breath sample with reference to the known amount of alcohol during the control test, the instruments calculate a BrAC result and print out IR results, usually to three decimal places along with IR results for air blanks and calibration checks.

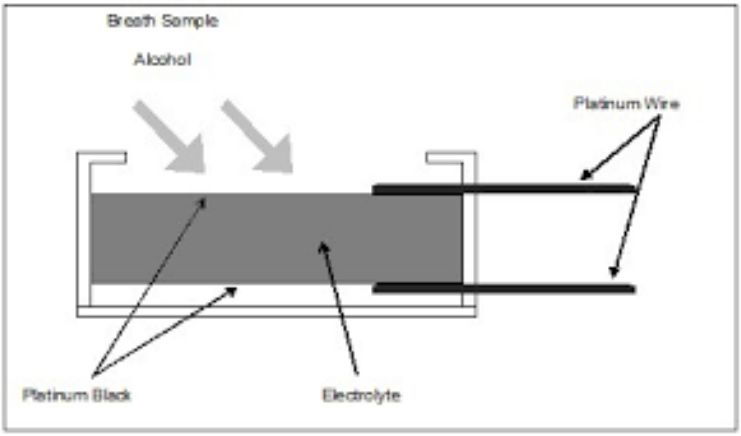
Intoxilyzer and Intoximeter instruments use periscopic tubing and mechanical chopper wheels to expand and regulate the interface between emitter and detector:



Alcotest instruments use parabolic mirrors at either end of the sample chamber ("cuvette") to reflect light back and forth to a filtered detector opposite the light source that is regulated electronically:



EC analysis is done by a fuel cell, a sandwich of metal plates between which electrons will flow in the presence of certain substances. When alcohol is introduced into the substrate between the fuel cell's negative terminal ("anode") and positive terminal ("cathode"), electrons will flow from the anode to the cathode in the presence of the sample, just as electrons will flow from the negative to positive terminals of a battery. The increase in electric current is, in theory, related to the amount of ethanol in the breath sample.



Neither EC nor IR are specific for ethanol. Only the Alcotest 7110 and 9510 instruments combine EC and IR for measurements of each sample. This increases specificity, because while EC and IR are not specific for ethanol, they are non-specific in different ways. But this does not eliminate the issue of non-specificity completely in some cases -- *e.g.*, isopropanol.

COMMON BREATH TESTING DEVICES

A breath testing system will generally include an instrument, which forms the heart of the system, an associated simulator (either wet bath or dry gas), a simulator solution (for wet bath simulators), and temperature probes. For now, we focus on breath testing instruments. But associated instrumentation is equally important to establish reliable results. The most common breath testing instruments currently in use in the United States are these:

- Alcotest 7110. Drager, Inc., Houston, TX, and Lubeck, Germany. Uses EC and IR technologies on each of two breath samples.
- Alcotest 9510. Drager, Inc., Houston, TX, and Lubeck, Germany. Uses EC and IR technologies on each of two breath samples with IR at 9.5 microns.
- Datamaster CDM. Intoximeters, Inc., St. Louis, MO (formerly National Patent Analytical Systems, Inc., Mansfield, OH). Uses IR at 3.44, 3.37, 3.50 microns.
- Datamaster DMT. Intoximeters, Inc., St. Louis, MO (formerly National Patent Analytical Systems, Inc., Mansfield, OH). Uses IR at 3.37, 3.44, 3.50 microns.
- Intoxilyzer 5000. CMI, Inc., Owensboro, KY. Uses IR at 3.4 microns.
- Intoxilyzer 8000. CMI, Inc., Owensboro, KY. Uses IR at 3.4, 9.36 microns.
- Intoxilyzer 9000. CMI, Inc., Owensboro, KY. Uses IR at four wavelengths.
- Intoximeter EC/IR. Intoximeters, Inc., St. Louis, MO. Uses EC for evidentiary breath test results and IR for slope detection only.

COMPUTER MONITORING

All of these devices rely on computer "firmware" or "software." While there are subtle distinctions between firmware and software, both terms represent instructions for the instruments to execute. They contain algorithms which determine how different measurements made by a breath testing device are made and integrated into a final result.

Think of algorithms as recipes for a reliable breath test result. The ingredients of these recipes include IR and EC measurements for breath samples, measurements of the alcohol strength of the simulator solution tested during the control tests, and how those values are compared to each other. These comparisons are intended to assure that all results agree within programmed accuracy and precision tolerances, thus providing additional quality assurance. Specifically, these ingredients include, among other things:

(a) Minimum volume requirements for acceptance of breath samples.

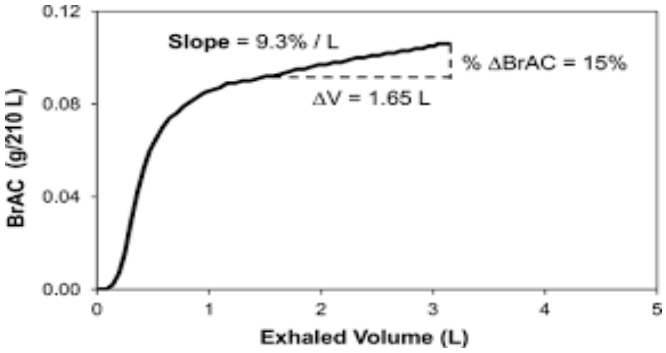
(b) Minimum duration requirements for acceptance of breath samples.

(d) The degree of accuracy which the instrument will accept -- *i.e.*, how closely SAC at time of the subject breath test agrees with SAC when calibration was last checked before the subject breath test.

(e) The degree of precision within which an instrument will deem multiple results reliable -- *i.e.*, how closely two valid results should agree with each other and, in the case of Alcotest instruments, how closely EC and IR results from a single sample should agree with each other.

(f) Flow rate -- *i.e.*, how continuously the sample is introduced into the sample chamber, without interruption.

(g) Plateau (to assure that samples contain alveolar air), a graphical concept representing BrAC as a function of time. For example, when an alcohol-laden sample is introduced into an Alcotest 7110, it initially detects zero BrAC. Almost immediately, however, BrAC rises steeply, then levels off. This near-horizontal line or plateau represents alveolar breath. BrAC will remain relatively constant at plateau regardless of any additional volume or duration of breath. Thus, minimum volume and duration requirements should be irrelevant once plateau is reached. Here is a graphical representation of plateau:



(h) Reference replacement intervals -- *i.e.*, how many tests may be run or what level of depletion is acceptable before the wet bath or dry gas simulator is replaced.

Manufacturers also require that certain environmental conditions exist for results to be reliable. For example, the Alcotest 7110 will function properly at temperatures from 32 to 104 degrees Fahrenheit, at humidity between 20 and 99 percent, on a flat level stable surface, and in a vibration free environment, according to the manufacturer. Some states also require operation away from electromagnetic interference ["EMI"] or radio frequency interference ["RFI"].

A manufacturer can adapt all of these factors by manipulating firmware instructions to suit each customer's requirements. These instructions will display the prompts that let the operator know whether all requirements were met. If an instrument fails to achieve any of these requirements, the firmware is programmed to cause the instrument to display error messages. For example, the Alcotest 7110 will show messages like:

"MINIMUM VOLUME NOT ACHIEVED" if the sample size detected is less than 1.5 milliliters. The 7110 will then display three options to the operator: refusal, terminate, continue. The operator selects "refusal" if the breath test subject declines to blow into the machine. He selects "terminate" if there is some other reason that prevents the completion of breath testing. He selects "continue" if he wishes to try another test.

"BLOWING TIME TOO SHORT" if a defendant delivers the 1.5-milliliter minimum volume but does not blow for at least 4.5 seconds.

"PLATEAU NOT ACHIEVED" if a sample's alcohol strength does not level off. The manufacturer claims that this indicates that the subject did not blow in a continuous exhalation by either breaking the breath or sucking back. This could also indicate the presence of interferents.

"BLOWING NOT ALLOWED" if the subject blows into the instrument before being prompted to do so.

"TEST NOT WITHIN +/- TOLERANCE." The Alcotest 7110 will automatically initiate an additional breath test.

"INTERFERENCE" and "MOUTH ALCOHOL" indicate the presence of foreign substances reacting with the instrument. If these messages appear, the operator should ask the defendant to blow again after waiting an additional period of pre-test observation.

"CONTROL TEST FAILED," "AMBIENT AIR CHECK ERROR," and "MEMORY FULL" messages indicate some simulator, environmental, or memory error and lead to an aborted test.

"PURGING ERROR" messages indicate that the hose connecting the simulator to the Alcotest instrument either became cracked or disconnected from the Alcotest instrument.

In New Jersey, a "perfect" set of two breath samples on an Alcotest 7110, together with air blanks and control tests, will fill a single-page *Alcohol Influence Report* ["AIR"]. If the AIR is more than two pages, errors or anomalies have occurred, and a defense attorney may consider expert review.

Test Identification. Breath testing devices perform different functions, including a so-called "calibration" function (actually a calibration check), control function, linearity function, reference test function, and breath test function. An instrument should assign a sequential file number for each time a function is run. An instrument should assign a cycle number for each time a particular function is run. By identifying and understanding these numbers, patterns can emerge, such as the frequency of calibration checks in relation to other functions, depletion of wet bath and dry gas references, and conformance with algorithms.

BREATH TEST FOUNDATION

To introduce breath test results in evidence at trial, the State must lay a proper foundation, which may differ by State. For instance, New Jersey requires the following:

> (1) the equipment was in proper order -- that it was periodically inspected in accordance with accepted procedures;
>
> (2) the operator was qualified to administer the instrument -- that these qualifications as an operator were properly certified; and
>
> (3) the test was given correctly -- that it was administered in accordance with the official instructions for the use of the instrument.
>
> [*State v. Chun*, 194 *N.J.* 54, 134 (2008) (Alcotest 7110); *Romano v. Kimmelman*, 96 *N.J.* 66, 80-81 (1984) (Breathalyzer); *State v. Johnson*, 42 *N.J.* 146, 171-72 (1964) (Drunkometer).]

In New Jersey, such proof must be by clear and convincing evidence. *Romano v. Kimmelman, supra* at 90-91. This standard applies because the State has exclusive possession, custody, and control of the damning instrument. Clear-and-convincing evidence is

> that which produces in the mind of the trier of fact a firm belief or conviction as to the truth of the allegations sought to be established -- evidence so clear, direct and weighty and convincing as to enable the factfinder to come to a clear conviction, without hesitancy, of the precise facts in issue.
>
> [*In re Seaman*, 133 *N.J.* 67, 74 (1993).]

Statutes, administrative regulations, or case law define what *prima facie* proofs are needed for admissibility. Since there are conditions of admissibility, the defense attorney may attempt to challenge the admissibility of the breath test result pretrial in a *N.J.R.E.* 104 hearing either before or during trial and at trial.

***Properly Administered Tests*.** For a test to be considered valid, the operator must administer it correctly:

Operators must observe a breath testing subject for a certain time period before collecting a sample to avoid overestimated readings due to residual effects of mouth alcohol to ensure that no alcohol has entered the person's mouth while awaiting the start of the testing sequence. Dubowski recommended 15 minutes. New Jersey and Tennessee both require 20 minutes. This observation period must be continuous, uninterrupted, and face-to-face (often interpreted as within an officer's field of vision). If the arrestees swallow anything or regurgitate, or if subjects are observed chewing gum or tobacco or placing anything in their mouths, the operator must begin the required observation period anew. As the New Jersey Supreme Court explained, the operator's role now consists of

Commented [s1]: John, want me to include TN's pre-reqs? A bit more detailed, but essentially the same: We hold that the testing officer must be able to testify (1) that the tests were performed in accordance with the standards and operating procedure promulgated by the forensic services division of the Tennessee Bureau of Investigation, (2) that he was properly certified in accordance with those standards, (3) that the evidentiary breath testing instrument used was certified by the forensic services division, was tested regularly for accuracy and was working properly when the breath test was performed, (4) that the motorist was observed for the requisite 20 minutes prior to the test, and during this period, he did not have foreign matter in his mouth, did not consume any alcoholic beverage, smoke, or regurgitate, (5) evidence that he followed the prescribed operational procedure, (6) identify the printout record offered in evidence as the result of the test given to the person tested.

State v. Sensing, 843 S.W.2d 412, 416 (Tenn. 1992)

> observing the subject to ensure that twenty minutes has passed and to be certain that the subject has neither swallowed nor regurgitated any substances during that time that would influence the test results; inputting and verifying the accuracy of the identifying information needed to start the sequence; changing the control solution if the machine alerts him to do so; attaching a new mouthpiece; reading the instructions about how to blow into the machine; observing the LED screen and following its prompts; and observing the subject to ensure that he or she actually provides a sample.
>
> [*State v. Chun*, *supra*, 194 *N.J.* at 140.]

***Qualified Operator*.** Technically speaking, in New Jersey, breath test operators are not qualified by virtue of knowledge, skill, experience, training, or education as required by *N.J.R.E.* 702 but rather are certified by the Attorney General to conduct breath testing. *N.J.A.C.* 13:51-1.1 *et seq.* governs certification of breath test operators. Administrative regulations set the requirements for initial, refresher, and conversion certification for the operator, the duration of the certification, and the form of proof (certificate, replica card, master record). The technical formal requirements concerning the form of signatures required and prerequisites for issuance of replacement credentials are also appropriate areas of defense inquiry.

Properly Operating Equipment. To prove that a breath testing device is in proper operating condition, prosecutors will likely provide an AIR which incorporates calibration checks. In addition, the State must specifically perform additional calibration checks when the instrument is placed in service, returned from repair, and at least every six months thereafter. *N.J.A.C.* 13:51-4.3(b)(3). For Breathalyzers, calibration checks were performed "periodically," *N.J.A.C.* 13:51-4.3(a)(1), with no specific interval required. With the simulator such an integral part of Alcotest 7110 operation in New Jersey, the State provides documents concerning the operability of the simulator temperature probe in discovery. Tennessee requires certification, including a calibration check, on each evidentiary breath testing instrument every 90 days.

An evidentiary breath testing device does not stand alone. Other measurement-taking equipment is associated with a breath testing device include: (a) a temperature probe associated with the subject's breath test; (b) a temperature probe, the measurements of which can be traced to NIST, used to check the breath testing device's calibration; (c) ethanol controls represented by either a dry gas cylinder or a wet bath simulators and its associated simulator solution. The State should supply calibration records for these associated instruments. Of course, the breath testing instruments use keyboards or touchscreens for input and display screens and printers for output.

Borderline Cases. In borderline cases, defense attorneys may have additional defenses like accuracy tolerance (margin for error) and breath temperature (for every degree Celsius that breath temperature exceeds 34 degrees Celsius, breath testing instruments will overstate breath test result by about seven percent).

CONFRONTATION

"[I]f the evidence is testimonial, reliability as defined by the exceptions to the hearsay rules does not equate with, and cannot substitute for, confrontation through cross-examination." *State v. Chun, supra*, 194 *N.J.* at 139. The New Jersey Supreme Court observed:

> [T]he operator should be available to testify in a contested matter. Notwithstanding this reduced role to be played by the operator as relates to the ultimate BAC results reported, requiring that he or she be made available for cross-examination is an important constitutional safeguard. We, therefore, consistent with our longstanding practice..., can ensure that each defendant has the opportunity to confront the witness who has potentially relevant testimony.
>
> [*Id.* at 140-41 (cleaned up).]

Documents deemed reliable have long been admitted to prove that breath testing devices are in proper working order. *See, e.g., State v. Garthe*, 145 *N.J.* 1, 9 (1996); *State v. McGeary*, 129 *N.J.Super.* 219 (App.Div. 1974). While defendants have a right to confront their accusers, when it comes to foundational proofs for breath test admission, many statements offered will be admissible if the court determines that the information conveyed is non-testimonial. *State v. Chun, supra*, 194 *N.J.* at 141. Such records may qualify as business records and government documents, *see N.J.R.E.* 803(c)(6) and (8), or simply "reliable," *N.J.R.E.* 403.

DISCOVERY

Discovery represents a particularly critical phase of any DWI defense. It is a time to question and learn about everything having to do with the breath testing instrument.

Entitlement to Discovery. Drunk driving defendants are entitled to pre-trial discovery. *N.J.Ct.R.* 7:7-7; *State v. Young*, 242 *N.J.Super.* 467, 470 (App.Div. 1990); *State v. Ford*, 240 *N.J.Super.* 44, 48 (App.Div. 1990); *State v. Utsch*, 184 *N.J.Super.* 575, 579 (App.Div. 1982). "We are dealing with the defendant's right to a fair trial mandated by the Due Process Clause of the Fifth Amendment to the Constitution. Our construction of that Clause will apply equally to the comparable Clause in the Fourteenth Amendment applicable to trials in state courts." *United States v. Agurs*, 427 *U.S.* 97, 107, 98 *S.Ct.* 2392, 49 *L.Ed.*2d 342 (1976). "Regardless of intent or lack thereof, police action that results in a defendant's receiving an unfair trial constitutes a deprivation of due process." *Arizona v. Youngblood*, 488 *U.S.* 51, 62, 109 *S.Ct.* 333, 102 *L.Ed.*2d 281 (1988) (Blackmun, J., dissenting). "The essence of due process certainly requires that the parties have adequate notice and opportunity to know the State's evidence and to present evidence in argument and response." *State v. Garthe, supra* at 8. While the prosecutor's duty to provide discovery may be more limited than that of parties in civil cases, a wide variety of materials in the State's possession could constitute exculpatory information to which a defendant is entitled. *State v. Ford, supra* at 52.

Material Exculpatory Evidence. Due process requires the State to disclose evidence that is material to either guilt or punishment; indeed, the prosecution has a constitutional duty to turn over exculpatory evidence that would raise reasonable doubt about a defendant's guilt. *See Brady v. Maryland*, 373 *U.S.* 83, 83 *S.Ct.* 1194, 10 *L.Ed.*2d 215 (1963); *United States v. Agurs*,

supra. "Exculpatory" does not necessarily mean that the evidence disproves a defendant's guilt or an element of an offense. Rather, the exculpatory value of evidence is a function of its relevance and materiality. "[R]egardless of the specificity of the defendant's request, evidence is material for *Brady* purposes 'if there is a reasonable probability that, had the evidence been disclosed to the defense, the result of the proceeding would have been different.'" *State v. Knight*, 145 *N.J.* 233, 246 (1996), quoting *United States v. Bagley*, 473 *U.S.* 667, 682, 105 *S.Ct.* 3375, 87 *L.Ed.*2d 481 (1985) (plurality opinion of Blackmun, J.). *See also id.*, 473 *U.S.* at 685 (White, J., concurring).

Specific Requests. The U.S. Supreme Court, adopting a government formulation that "an incomplete response to a specific request not only deprives the defense of certain evidence, but also has the effect of representing to the defense that the evidence does not exist," agreed "that the prosecutor's failure to respond fully to a *Brady* request may impair the adversary process in this manner. And the more specifically the defense requests certain evidence, thus putting the prosecutor on notice of its value, the more reasonable it is for the defense to assume from the nondisclosure that the evidence does not exist, and to make pretrial and trial decisions on the basis of this assumption." *Id.*, 473 *U.S.* at 682-83.

Withheld Evidence. "[I]mplicit in the requirement of materiality is a concern that the suppressed evidence might have affected the outcome of the trial." *United States v. Agurs*, *supra*, 427 *U.S.* at 104. "Such evidence...if disclosed and used effectively,...may make the difference between conviction and acquittal." *State v. Knight*, *supra*, 145 *N.J.* at 246, quoting *United States v. Bagley*, *supra*, 473 *U.S.* at 676. At the same time, the U.S. Supreme Court "rejected a standard that would require the defendant to demonstrate that the evidence if disclosed probably would have resulted in acquittal." *Id.*, 473 *U.S.* at 680.

"When the evidence withheld is no longer available, to establish a due process violation a defendant may show that the evidence had 'an exculpatory value that was apparent before [it] was destroyed' and that 'the defendant would be unable to obtain comparable evidence by other reasonably available means.'" *State v. Mustaro*, 411 *N.J.Super.* 91, 102 (App.Div. 2009), quoting *California v. Trombetta*, 467 *U.S.* 479, 489, 104 *S.Ct.* 2528, 81 *L.Ed.*2d 413 (1984). "Alternatively, if the defendant cannot establish that the now lost evidence had 'apparent' exculpatory value and can show only that the evidence was 'potentially' useful or exculpatory, then the defendant can show a due process violation by establishing that the evidence was destroyed in bad faith." *State v. Mustaro*, *supra* at 103, quoting *Arizona v. Youngblood*, *supra*, 488 *U.S.* at 57-58.

"[R]egardless of the specificity of the defendant's request, evidence is material for *Brady* purposes 'if there is a reasonable probability that, had the evidence been disclosed to the defense, the result of the proceeding would have been different.'" *State v. Knight*, *supra* at 246, quoting *United States v. Bagley*, *supra*, 473 *U.S.* at 682 (plurality opinion of Blackmun, J.). *See also id.*, 473 *U.S.* at 685 (White, J., concurring). "[I]mplicit in the requirement of materiality is a concern that the suppressed evidence might have affected the outcome of the trial." *United States v. Agurs*, *supra*, 427 *U.S.* at 104. "Such evidence...if disclosed and used effectively...may make the difference between conviction and acquittal." *State v. Knight*, *supra* at 246, quoting *United States v. Bagley*, *supra*, 473 *U.S.* at 676.

Scope of Discovery. *State v. Ford, supra*, provides persuasive authority with which to support initial inquiries:

> We would expect that under a general demand for discovery in a DWI case...that the State would provide full identification of the instrument used, the date it was first placed in service by the State, the type of instrument used, including the manufacturer, model number and results of the coordinator's testing of the instrument for approximately one year to include the next testing after defendant's tests. Obviously, the time of administration of the tests and the results and all reports and relevant documents signed by defendant or pertaining to his condition of sobriety including blood and urine tests must be supplied. We offer these observations only as a general guide to the prosecution and municipal judges. We caution the State that in particular cases a wide variety of materials in its possession could constitute exculpatory information to which a defendant is entitled.
>
> [*Id.* at 52 (citations omitted)]

A case like *Ford* sets a floor, a minimum, which the State must produce, not a ceiling as many prosecutors are prone to argue. In fact, the defense should receive wider discovery in cases involving any breath testing instrument, at least with the attorney's early exposure to a particular instrument. For example, the State should provide operator and service manuals and inspection protocols. "If defendant had reason to put in issue the nature and specifics of the test protocols employed, he would have been entitled to discovery." *State v. Garthe, supra* at 11.

Specific Requests. Minimally, a defense attorney should receive the following documents from the State in discovery:

(a) Documentation of the certification status of the Breath Test Operator.

(b) Documentation of the certification status of the officer responsible for checking the calibration of the instrument.

(c) Documentation of periodic inspections or calibration checks of the instrument.

(d) The form showing the times and results of the air blank, control tests, breath samples, and reported breath test result for the defendant.

(e) All operator, service, and training manuals associated with the instrument at least once.

(f) Training requirements and training materials for certifying officers as competent in administering the breath test and checking the instrument's calibration.

(g) All repair and maintenance records for the instrument.

Repair Records. Repair records are required to be produced in discovery. *State v. Maricic*, 417 *N.J.Super*. 280, 288 (App.Div. 2010). In *State v. Chun, supra*, there was "scant evidence relating to repair history of any of these devices" because the instruments involved were "so newly put into service that no repairs have been needed." *Id.* at 145, n.48. But the Court "commend[ed] to the State the establishment of a protocol for maintaining repair logs to the extent that these become more frequent and, therefore, potentially relevant." *Id.* "[I]nquiry regarding these facts is extremely material." *State v. Maricic, supra* at 285. Denying such discovery is a "misuse[]" of a trial judge's discretion. *Id.* at 286.

All Instrument Results. Another issue which defense attorneys may address deals with discoverability of all test results -- air blank, breath sample, control tests, linearity tests, control changes -- rendered by a particular instrument for all subjects for review by an expert. Such information should be provided in an electronic format (preferably in Excel format) and an explanation of column headings and row titles. While the State and the manufacturer claim the instrument is reliable, this should be established over time. For example, in *State v. Foley*, 370 *N.J.Super*. 341 (Law Div. 2003), the defense discovered anomalies from analysis of a few hundred cases. This led the State of New Jersey to withdraw and reprogram the Alcotest 7110. Providing all tests recorded by a particular instrument may expose other anomalies which could give rise to reasonable doubt in a particular case. The concealment or unavailability of such records can provide the basis for argument for an adverse inference and reasonable doubt.

VIDEO

Video can provide visual evidence of breaches on breath testing protocol (like a failure to abide by pre-test observation requirements), operational anomalies (like instruments analyzing samples too quickly), or outright exculpation (where observational evidence of sobriety is so inconsistent with the breath test result so as to raise reasonable doubt).

If a picture is worth a thousand words, how many words is a video recording worth? A municipal prosecutor is "required to provide the requested videotapes that may have recorded defendant's appearance, behavior, and motor skills. Such information, if available, [is] clearly relevant to a DWI defense." *State v. Stein*, 225 *N.J.* 582, 596 (2016), citing *N.J.Ct.R.* 7:7-7(b). "Indeed, a video recording of events in many cases may be equal or superior to testimonial evidence." *Id.* As the New jersey Supreme Court stated, referring to the recording of an alleged child abuse victim's statement, video:

> "convey[s] not only the exact words spoken by the child, but their finer shades of meaning through facial expressions, body movements and inflections of voice." In addition, a video recording creates an objective, reviewable record, enhances the reliability of confessions, protects police officers from false allegations, improves the overall quality of police work, and may well "preserve judicial resources" by discouraging defendants from raising frivolous pre-trial challenges to the admission of the child's statement.
>
> [*State v. P.S.*, 202 *N.J.* 232, 253 (2010) (citations omitted).]

See State v. Ugrovics, 410 *N.J.Super.* 482 (App.Div. 2009), *certif.den.* 202 *N.J.* 346 (2010), as to the pretest observation period. *See State v. Ghegan*, 213 *N.J.Super*. 383 (1986), as to the use of video to contradict a breath test result.

PLAYING FOR THE FUMBLE

Fundamentals are important. Push the State to cross every T and dotting every I. Match up serial, sequential, and cycle numbers between breath tests and calibration checks. In time, you may find that you have a better understanding of breath testing than the prosecutor. If there is no material difference between the upside and downside of penalties to which your client is exposed, try the case.

Also, remember our role as defense attorneys. We have "no...obligation to ascertain or present the truth." *United States v. Wade*, 388 *U.S.* 218, 256, 87 *S.Ct.* 1926, 18 *L.Ed.*2d 1149 (1967):

> Defense counsel need present nothing, even if he knows what the truth is. He need not furnish any witnesses to the police, or reveal any confidences of his client, or furnish any other information to help the prosecution's case. If he can confuse a witness, even a truthful one, or make him appear at a disadvantage, unsure or indecisive, that will be his normal course. Our interest in not convicting the innocent permits counsel to put the State to its proof, to put the State's case in the worst possible light, regardless of what he thinks or knows to be the truth. Undoubtedly there are some limits which defense counsel must observe but more often than not, defense counsel will cross-examine a prosecution witness, and impeach him if he can, even if he thinks the witness is telling the truth, just as he will attempt to destroy a witness who he thinks is lying. In this respect, as part of our modified adversary system and as part of the duty imposed on the most honorable defense counsel, we countenance or require conduct which in many instances has little, if any, relation to the search for truth.
>
> [*Id.*, 388 *U.S.* at 257-58.]

When we follow these precepts, it is amazing how often even experienced prosecutors will blunder. *See, e.g., State v. Kuropchak*, 221 *N.J.* 368 (2015), where the prosecution placed incorrect foundational documents into evidence. Play for the fumble.

History of Breath-Testing Devices in New Jersey

1) State vs. Johnson, 42 N.J., 146(1964) (Drunkometer)

> The Drunkometer is sufficiently established and accepted as a scientifically reliable and accurate device for determining the alcoholic content of the blood to admit testimony of the reading obtained upon a properly conducted test, without any need for antecedent expert testimony by a scientist that such reading is a trustworthy index of blood alcohol, or why.' State vs. Miller, 64 N.J.Super 262, 268(1960).

We, therefore, have no hesitancy in adopting Judge Gaulkin's statement as correctly stating the law of this State. This conclusion cannot be affected by the fact that there are some, like defendant's witness in this case, who dispute the precise accuracy of the device and that there is a possibility of error. Practically every new scientific discovery has its detractors and unbelievers, but neither unanimity of opinion nor universal infallibility is required for judicial acceptance of generally recognized matters. While such testimony is probably technically still admissible, its probative value and weight is almost nil in the present state of knowledge of the scientific and medical community.

It is, of course, most essential, in view of the heavy impact the result can have, that proper administration of the test be clearly established before the reading is admitted in evidence. This includes full proof that the equipment was in proper order, the operator qualified and the test given correctly (as well as the fact that the defendant consented orally or in writing).

2) Romano vs. Kimmelmann, 96 N.J. 66(1984)
(Breathalyzer models 900 and 900A)

3) State vs. Chun, 194 N.J. 54(2008) (Alcotest 7110 MKIII C)

4) State vs. Chun II, 215 N.J. 459(2013) (Alcotest 7110 MKIII C)

5) State vs. Cunningham, ___ N.J. ___ (2023) (Alcotest 9510)