The Miami Beach Police Department has begun a collaborative project with the FBI Biometric Analysis Section, the Miami-Dade Police Department Forensic Services Bureau, and the Florida Department of Law Enforcement to develop protocols for a local police department's forensic team to:

Use a Rapid DNA instrument to analyze crime scene samples

Produce accurate DNA profiles

Use the profiles to obtain investigative leads in criminal investigations

Goals of the Initiative

1. Establish mutual expectations for a police department's forensic team to properly use Rapid DNA technology;

2. Establish mutual expectations and protocols for how evidence is collected for and processed by the Rapid DNA instrument, and how results are analyzed and reasonably interpreted;

3. Establish mutual expectations for the acceptable performance of the Rapid DNA instrument itself;

4. Establish mutual expectations and protocols for a police department to use a Rapid DNA profile obtained from crime scene evidence when to do so may be helpful in a criminal investigation.
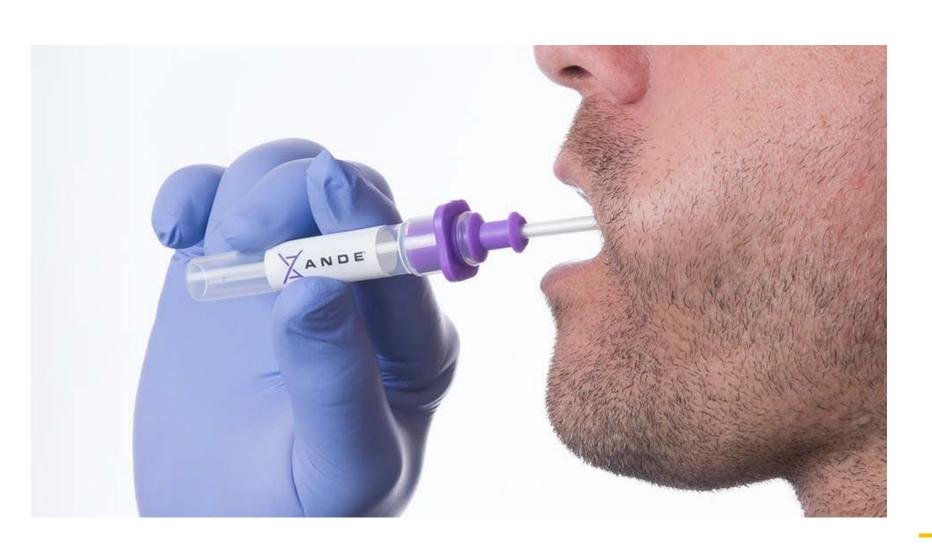
Usage

The intended use of the ANDE System by the MBPD Crime Scene Unit is to aid in the law enforcement investigative process.

Since April 2017, the ANDE System has aided in various investigations, including persons and property crimes.

Current Practices

Buccal sample swabs are being collected from all consenting parties, including arrestees, victims and witnesses.

Sample swabs of evidentiary items are being collected in the field and in the lab during processing.

Swab content has varied from bodily fluids, such as blood, to touch DNA samples.

Active Cases/Swabbing

Primary swabs of references and samples are collected for submission to the Miami-Dade Police Department Forensic Services Bureau.

Secondary swabs of both standards and samples are collected for entry into the ANDE instrument for analysis.

* Sampling procedures are being evaluated by the MBPD in collaboration with ANDE and the Miami-Dade Police Department Forensic Services Bureau for sample optimization.

Case Example: Shooting

Over the 2017 Memorial Day Weekend, the ANDE 6C
aided in a shooting investigation.

The shooter fired multiple times into an occupied taxi on a crowded street in
the entertainment district of Miami Beach.

Both victim and suspect fled the scene. The suspect was apprehended within
minutes.

The firearm used in the incident was recovered on a sidewalk near where the
suspect was taken into custody.

The ANDE 6C provided a match of the suspect's DNA from a secondary swab of
the handgun at the crime scene.

Detailed Match Results

The searched DNA profile from sample 17-XXXXX-SW-firearm-body is a **match** to the DNA profile from sample 17-XXXXX-D.-J.-2

Result: **MATCH**	
Number of Matched Loci	27/27
Number of Mismatched Loci	0
Number of Excluded Loci	0
Gender Match	Yes

Locus Name	Searched Profile: ▮▮▮▮SW-firearm-body		Hit Sample: ▮▮▮▮	
	Allele 1	Allele 2	Allele 1	Allele 2
AMEL	X	Y	X	Y
D3S1358	14	17	14	17
D1S1656	14	---	14	---
D2S441	14	---	14	---
D10S1248	12	14	12	14
D13S317	11	12	11	12
PentaE	12	13	12	13
D16S539	12	13	12	13
D18S51	15	16	15	16
D2S1338	17	---	17	---
CSF1PO	12	13	12	13
D6S1043	11	15	11	15
TH01	7	9	7	9
vWA	16	19	16	19
D21S11	28	32	28	32
D7S820	9	10	9	10
D5S818	11	12	11	12
TPOX	11	---	11	---
DYS391	9	---	9	---
D8S1179	14	15	14	15
D12S391	19	---	19	---
D19S433	12	14	12	14
SE33	14	19	14	19
D22S1045	15	17	15	17
FGA	21	26	21	26
DYS576	18	---	18	---
DYS570	16	---	16	---

Miami-Dade Police Department
F o r e n s i c   S e r v i c e s   B u r e a u
9105 NW 25th Street, Miami, Florida 33172
(305) 471-2050

Forensic Biology Section
Laboratory Analysis Report   **August 9, 2017**

MDPD Case #:	PD170▮▮▮▮	**Victim:**	Unknown
AOA Case #:	2017-▮▮▮▮	**Subject:**	D. J▮▮▮▮

Detective G. Sanchez
Miami Beach Police Department

The following items submitted to the Forensic Biology Section were analyzed, and the results and interpretations of analysis are summarized below.

Item	Description	Test	Result	Ret	DNA
1	(2) Oral standard from D. Jo▮▮▮▮	NA	NA	X	X
2	(2) Swabs from overall surface of firearm; S:N/ ECE8624	BP	Negative	X	X
		SA	Positive		

Acronym Key	
BP	Blood, presumptive
SA	Saliva, presumptive
NA	Not applicable
Ret	Specimen(s) from this item retained in the laboratory
DNA	Portion(s) of sample used for DNA analysis

DNA recovered from the items indicated above was amplified and typed using the GlobalFiler® PCR Amplification Kit at 21 polymorphic loci, 1 Y-STR locus, and 2 sex-determining markers.

A male DNA profile was obtained from item #1 (oral standard from▮▮▮▮

The male DNA profile obtained from item #2 (swab from overall surface of firearm; S:N/ ECE8624) matches the DNA profile obtained from item #1 (oral standard ▮▮▮▮▮▮ :1 of the 21 loci. The frequency with which the evidence DNA profile is expected to be found in an unrelated individual in the population at large is 1 in 11.23 septillion. Because the rarity of this DNA profile exceeds 1 in 320 billion, it is unreasonable to conclude that an unrelated individual would be the source of the DNA profile obtained from item #2 (swab from overall surface of firearm; S:N/ ECE8624).

Any portions of unused DNA evidence samples have been retained in the laboratory. The evidence package was forwarded to your agency for storage.

Additional items may have been submitted to the Forensic Biology Section; however, no additional items were analyzed. If it is determined that additional analysis is necessary, the analyst should be notified immediately.

An ASCLD/LAB Accredited Laboratory Since 1989

Case Example: Hit-and-Run

On July 16, 2017, a woman was struck by a vehicle while crossing a street in the middle of the night. The victim died at the hospital.

The vehicle fled the scene but was located later in the day by investigators. The suspected driver was taken into custody.

With the use of the ANDE 6C instrument, a successful match was made comparing the suspect's reference sample to a touch DNA sample collected from a secondary swab of the gear shift of the vehicle.

Confirmatory lab results from the Miami-Dade Police Department Forensic Services Bureau are pending.

Detailed Match Results
The Searched DNA profile from sample 17-XXXXX-39-A_C is a **match** to the DNA profile from sample 17-XXXXX-GEAR-SHIFT

Result: **MATCH**	
Number of Matched Loci	27/27
Number of Mismatched Loci	0
Number of Excluded Loci	0
Gender Match	Yes

Locus Name	Searched Profile: ▮▮▮▮-A_C		Hit Sample: ▮▮▮▮GEAR-SHIFT	
	Allele 1	Allele 2	Allele 1	Allele 2
AMEL	X	Y	X	Y
D3S1358	15	---	15	---
D1S1656	12	13	12	13
D2S441	10	11	10	11
D10S1248	14	---	14	---
D13S317	9	13	9	13
PentaE	13	18	13	18
D16S539	9	10	9	10
D18S51	14	18	14	18
D2S1338	17	24	17	24
CSF1PO	10	---	10	---
D6S1043	13	14	13	14
TH01	7	9.3	7	9.3
vWA	17	18	17	18
D21S11	30	33.2	30	33.2
D7S820	10	12	10	12
D5S818	11	12	11	12
TPOX	8	11	8	11
DYS391	11	---	11	---
D8S1179	13	14	13	14
D12S391	19.1	20	19.1	20
D19S433	13.2	14	13.2	14
SE33	23	30.2	23	30.2
D22S1045	15	17	15	17
FGA	23	24	23	24
DYS576	17	---	17	---
DYS570	19	---	19	---

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