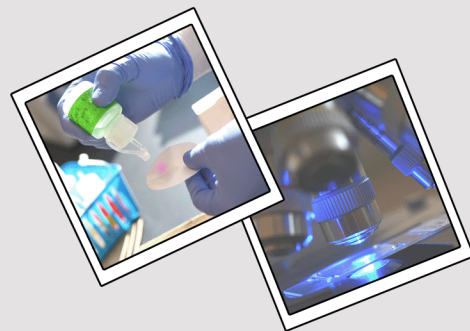


North Carolina State Crime Laboratory

Forensic Update



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Dear Criminal Justice Stakeholders,

I would like to use this edition of the NC State Crime Laboratory (NCSCCL) Forensic Update to introduce myself. Former Director John Byrd retired earlier this summer. My first day was August 26, 2019.

Before joining the NCSCCL, I served as the DNA Interpretation Supervisor at the Houston Forensic Science Center in Houston, Texas. Prior to that role, I served as a Forensic Scientist Supervisor and DNA Technical Leader at the DuPage County Forensic Science Center in Wheaton, Illinois. I began my forensic science career doing serology and DNA analysis in the Miami-Dade Police Department Crime Laboratory.

Before beginning my career in forensic science, I worked as a computer programmer and developer in the private sector and at Florida State University. I received my undergraduate degree from St. Ambrose University and my master's degree in Biological Science from Florida State University.

I am committed to leading the NCSCCL in ongoing efforts to address the backlog of untested sexual assault evidence collection kits and to assist law enforcement in obtaining new investigative leads. This article introduces an additional submission form to accompany sexual assault evidence as well as a new investigative tool using DNA called Familial Searching. This article also includes information on how the NCSCCL is handling marijuana and hemp.

Please feel free to contact my office with any questions or concerns at (919) 582-8711.

Wishing you and yours a holiday season filled with joy and laughter and a new year of happiness!

Vanessa Martinucci
Director, North Carolina State Crime Laboratory
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"Truth through science."

Sexual Assault Kit Testing and new Supplemental Submission Form

The passage of the Survivor Act requires the State Crime Laboratory to modify the request for examination forms submitted for Sexual Assault kits. Effective November 13, 2019, an additional form must be submitted in any case involving a sexual assault kit. This new form, **SAK Supplemental Submission Form-11-13-2019**, is located and downloadable from the NC DOJ website at the following web link: <https://ncdoj.gov/crime-lab/iso-procedures/>

At the top of the form in red, we request that you check “Yes” if there is probable cause to believe that a crime was committed and “No” only if your investigation has shown by clear and convincing evidence that a crime did not occur. This information is necessary for kits collected after January 1, 2018, to determine whether any resulting DNA profile can be uploaded into CODIS. For kits collected on or before January 1, 2018, if you check “No” after a comprehensive case review and complete review by the review team established under the Survivor Act, those kits should not be sent to the State Crime Laboratory. If you later determine from other evidence that the information regarding whether a crime was committed has changed, please notify the State Crime Laboratory.

Familial Searching

Effective November 25, 2019, the State Crime Laboratory has established a procedure for Familial Searching. A familial search is a deliberate search of the North Carolina State DNA Database for the purpose of attempting to identify *close biological relatives* of an evidentiary DNA profile. A familial search has the potential to provide additional investigative information to law enforcement officials in previously unsolved cases in which all other investigative leads have been exhausted. For a case to be considered for familial searching, the investigating agency and the District Attorney for the investigating jurisdiction shall affirm that all current investigative leads have been exhausted and any potential leads developed from this search will be fully investigated.

In addition, cases may only be considered for a familial search when the following specific conditions are met:

- The case must have an active investigation of an unsolved violent crime against a person, such as homicide, felonious sexual assault, or other violent felonious crime that has a significant public safety concern.
- A DNA profile in the case resides in the CODIS database at the national level and has been previously searched with no investigative leads established.
- The DNA profile in CODIS is a single-source profile or deduced/major single-source DNA profile from a biological male (X, Y).
- The DNA profile in CODIS contains at a minimum the 13 original CODIS core loci.
- DNA extracts or evidence remains that will allow for YSTR testing to be performed.

Inquiries concerning familial searching should be directed to Forensic Scientist Manager Jody H. West at 919-582-8863 or jwest@ncdoj.gov.

Marijuana and Hemp

Marijuana and hemp are different strains of the plant of the genus *Cannabis* with the only method of distinction being a Tetrahydrocannabinol (THC) concentration determination. This distinction can only be made by conducting a quantitative analysis in order to determine the level of THC present in the sample(s). With changes in federal law, and potential future changes regarding *Cannabis* in North Carolina, the North Carolina State Crime Laboratory has adjusted the current analytical scheme for the testing of suspected *Cannabis* plant material and extracts effective November 25, 2019. Any plant material or extract case(s) suspected to contain *Cannabis* that were in process prior to the above listed date will have results of analyses reported out under the previous reporting guidelines according to the Technical Procedure for

the Identification of Marijuana with the schedule listed alongside the reported substance (for example: Marijuana – Schedule VI).

The North Carolina State Crime Laboratory does not currently have the validated methods, instrumentation, and policies or procedures in place to perform quantitative analyses on plant material and/or plant material extracts nor to determine if an extract is of marijuana or hemp origin. Therefore, cases analyzed on or after November 25, 2019 will be analyzed and reported based on the new Technical Procedure for the Identification of Plant Material and Plant Material Extracts with no statutory scheduling information provided. A summary of the testing and approved reporting language is outlined below:

Plant Material Exhibiting Characteristic Botanical Features of Marijuana/Hemp

- Macroscopic and Microscopic examination
- Color test: (Modified Duquenois-Levine)
- Instrumental Analysis: Gas Chromatograph Mass Spectrometer (GC-MS) analysis
- Report Statement: *“Plant material belonging to the genus Cannabis containing Tetrahydrocannabinol(s) (THC)* and/or Cannabidiol(s)*. Concentration of cannabinoid(s) not determined.”*

*Note: As determined by the analysis

Non-Plant Material (i.e. oils, vapes)

- Color test: (Modified Duquenois-Levine)
- Instrumental Analysis: Gas Chromatograph Mass Spectrometer (GC-MS) analysis
- Reporting Statement: *“Tetrahydrocannabinol(s) (THC)* and Cannabidiol(s)*. Concentration of cannabinoid(s) not determined.”*

*Note: As determined by the analysis

If and when the current analytical scheme changes and the North Carolina State Crime Laboratory has the ability to conduct the necessary quantitative analyses to differentiate between marijuana and hemp *Cannabis*, we will inform our customers and stakeholders. Should you have any questions regarding a specific case, please reach out to the Forensic Scientist assigned to the case as listed on the provided laboratory report. Otherwise, for any general questions or guidance, please contact Forensic Scientist Manager Katy Schell at 919-582-8827 or kschell@ncdoj.gov.