

# MATCP DRUG TESTING MANUAL

2nd Edition







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2<sup>nd</sup> Edition

*Drug Testing Standards Committee*

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Prepared by the Michigan Association of Treatment Court Professionals, Drug Testing Standards Committee. More information about MATCP can be found at [www.matcp.org](http://www.matcp.org)

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## **LETTER FROM THE PRESIDENT**

“Frequent alcohol and drug testing is fundamental to any good Drug Court program.” This was the opening sentence of the letter from then MATCP President Brian MacKenzie, when the first edition of this manual was published in 2010. All of the research since then, the recommended best practices, and the Ten Key Components still reinforce this basic tenet. If your program does not test often and accurately, a participant’s recovery cannot be properly monitored; nor can it be determined if the treatment plan, together with other requirements imposed to modify behavior, is working.

Since 2010, different types of testing and new research have created the need for revisions to the original MATCP publication. During the past year, we have been fortunate to have a task force composed of Treatment Court practitioners and experts from the private sector, combining their efforts to update the standards and practices necessary to assist you in implementing a proper drug testing protocol for your program. The Co-Chairs of this new task force are Judge Brian McKenzie (Ret.) and Mr. David Wallace. They were aided by Judge Peggy Hora (Ret.) and Dr. Leo Kadehjian.

On behalf of the members of MATCP, and all others who may use this publication, I thank the task force members for their time and efforts.

Please utilize the information contained in this manual to continue the wonderful work all of you do in treatment courts, and in other programs addressing substance use disorders.

Thank you all,

Judge Geno D. Salomone  
President, Michigan Association of Treatment Court Professionals

## EXECUTIVE SUMMARY

Every day Treatment Courts all over the United States refer to the “10 Key Components of a Drug Court,” developed by the National Association of Drug Court Professionals (NADCP) to guide their programs. In 2015 NADCP issued “Adult Drug Court Best Practice Standards, Volume II,” which established that the most successful Drug Courts are those that adhere to all 10 key components.

Key Component Number Five states: “Abstinence is monitored by frequent alcohol and other drug testing.”<sup>1</sup> Alcohol and other drug testing provide an accurate, timely and comprehensive assessment of unauthorized substance use throughout participants’ involvement in a Drug Treatment Court. It holds a participant accountable and it is an indicator whether the individual’s treatment plan is “working.”

Effective alcohol and other drug testing provide the only objective measure of treatment effectiveness that Treatment Court team members have in assessing participant progress; everything else is opinion. The results of these tests provide the basis for rewards, sanctions and treatment adjustments that are the underlying pillars for participant success.

Therefore Treatment Courts must be able to rely on the accuracy of their testing procedures. If alcohol and other drug testing is not being conducted in accordance with recognized policies and forensically sound practices, then the integrity and success of the Treatment Court program could be at stake. Furthermore, inaccurately interpreting test results could allow participants who continue to use forbidden substances to go undetected, while others may be unfairly sanctioned. In order to operate the most successful Treatment Court programs it is incumbent upon all of us to educate ourselves on the products, research and policies regarding drug testing.

This manual is intended to act as a guide for Michigan’s Treatment Courts. It incorporates Michigan’s new “Adult Drug Standards, Best Practices, and Promising Practices” published in March of 2017 footnoting the relevant standards to each section and subsection.<sup>2</sup> It is neither all- encompassing nor exhaustive; however, it does provide a sound basis for testing practices. Nothing within these pages is original; rather it is a compilation of information from nationally recognized experts within the field.

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<sup>1</sup> Defining Drug Courts: The Key Components, The National Association of Drug Court Professionals: Drug Court Standards Committee, January 1997.

<sup>2</sup> Adult Drug Court Standards, Best Practices, and Promising Practices, State Court Administrative Office, Trial Court Services, Problem-Solving Courts, Michigan Association of Treatment Court Professionals, July 2017.  
<http://courts.mi.gov/Administration/SCAO/Resources/Documents/standards/ADC-BPManual.pdf>



We would like to thank all of those experts for doing this most important and often unappreciated work. A special thank you to Judge Peggy Hora (Ret.) who took the time to edit this manual and offer suggestions towards its betterment and Dr. Leo Kadehjian who provided many helpful suggestions.

We also wish to express our deepest appreciation and respect to Ms. Barbara M. Hankey, the principle author of Michigan Drug Testing Manual, First Edition. Her outstanding original work made this process both better and significantly easier.

Judge Brian MacKenzie (Ret.)  
David Wallace  
Co-Chairpersons  
MATCP Drug Testing Standards Committee

## **SUMMARY – THE FOUR ESSENTIAL STEPS TO AN EFFECTIVE DRUG TESTING PROGRAM<sup>3</sup>**

1. Participant Understanding
2. Testing
  - A. Frequent
  - B. Random
  - C. Duration
  - D. Comprehensive Panels
  - E. Methodologies
3. Collection
  - A. Participant Identification
  - B. Collection Site
  - C. Specimen Collection
  - D. Witnessed Collections
  - E. Valid specimens
4. Test Results
  - A. Reliable results
  - B. Rapid results

### Top 10 Tips for Drug Testing

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<sup>3</sup> Douglas B. Marlowe, J.D., Ph.D., Carson L. Fox, Jr., J.D., *et al.*, Adult Drug Court Best Practice Standards Volume II, National Association Of Drug Court Professionals, Alexandria, Virginia, 2015. NOTE: The order and placement of the NADCP Best Practices has been modified for organizational purposes.

## 1. Participant Understanding

Research in organizational theory has established that a person's understanding of the process is an important factor in attitudes towards a program's requirements.<sup>4</sup> Thus an individual's understanding of the testing regimen is essential for a participant's satisfaction and compliance. Compliance with, and results from, drug tests are better when the policies and procedures are made clear to and agreed upon by the participants. This in turn results in fewer violations, days of substance use and new criminal offenses.<sup>5</sup>

## 2. Testing

According to the American Society of Addiction Medicine (ASAM), "The New Paradigm, embodied by these and similar programs [Drug Courts], has been shown to significantly reduce drug use, criminal recidivism, and incarceration. The foundation of this approach is frequent, random drug testing."<sup>6</sup> Frequent, random, long term, drug testing makes it more difficult for participants to find times to use alcohol and other drugs between tests.

### A. Frequent

Treatment Courts that test two or more times per week throughout the program produce significantly greater benefits including higher graduation rates and lower recidivism rates.<sup>7</sup> Participants report that drug testing is one of the strongest factors in keeping them from using.<sup>8</sup>

Most illegal and addictive drugs, depending upon the assay, can be discovered within a period of between 24 to 72 hours. Testing less than twice a week creates a

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<sup>4</sup> Found at: <https://www.eeoc.gov/eeoc/mediation/report/chapter2.html>

<sup>5</sup> Shelli B. Rossman et al., 3 The Multi-Site Adult Drug Court Evaluation: The Drug Court Experience 96 (2011)

<sup>6</sup> Drug Testing: A White Paper of the American Society of Addiction Medicine (ASAM) 2013

<sup>7</sup> Shannon M. Carey, Ph.D., Michael W. Finigan, Ph.D., Kimberly Pukstas, Ph.D, Exploring the Key Components of Drug Courts: A Comparative Study of 18 Adult Drug Courts on Practices, Outcomes and Costs 42-42 (2011)

<sup>8</sup> Ibid

gap that allows participants to use without being detected.<sup>9</sup> Studies have established that those courts that test more frequently reduce recidivism by 38 percent.<sup>10</sup>

### **B. Random**

Schedule random/unpredictable alcohol and other drug tests to ensure an effective drug testing program<sup>11</sup> The probability of being tested on weekends and holidays must be the same as during the weekdays.<sup>12</sup> Participants must provide a specimen no later than eight hours after being notified.<sup>13</sup> For drug tests with short windows of detection, like oral fluid tests, the participant must provide a sample within four hours of notification.<sup>14</sup>

### **C. Duration**

Drug testing should start upon entry into the program and continue with no interruptions until the day of graduation. Participants state that long term testing helps them keep drug free.<sup>15</sup> Reduction of testing should not be used as a reward although increased testing is a common sanction.

### **D. Comprehensive Panels**

Test for the full range of substances that are most likely to be used by your Treatment Court participants or in your community. However, new substances of abuse are constantly being sought out by offenders in order to use without detection. Therefore, occasionally testing for a wider range of potential drugs of abuse will aid you in keeping ahead of the participant and possibly determine what new substance use might be emerging with your participants.<sup>16</sup>

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<sup>9</sup> Crosby, R., Carlson, G., Specker., *Simulation of Drug Use and Urine Screen Patterns*, Journal of Addictive Diseases, Vol. 22(3) (2003); DuPont, R., Griffin, D., Siskin, B., Shiraki, S., Katze, E., *Random Drug Tests at Work: The Probability of Identifying Frequent and Infrequent Users of Illicit Drugs*. Journal of Addictive Diseases, Vol. 14(3) (1995).

<sup>10</sup> Drug Courts: A Smart Approach to Criminal Justice, Office of National Drug Control Policy, May 31, 2011.

<sup>11</sup> Adult Drug Court Standards, Vol. II, *supra*.

<sup>12</sup> Ibid

<sup>13</sup> Ibid

<sup>14</sup> Ibid

<sup>15</sup> Found at: <https://www.ncjrs.gov/html/bja/honestchance/chp6c.html>

<sup>16</sup> Adult Drug Court Standards, Vol. II, *supra*.

## **E. Methodologies**

While urine is the “go to” methodology for drug testing, breath, oral fluids, sweat and hair depending upon the circumstances and court needs can be useful testing method.<sup>17</sup> Testing methodologies should be based, at least in part, on what drugs are being used in the communities that the court serves. To be admissible in a hearing, testing must use scientifically valid and reliable methods. Appellate court decisions accept the scientific validity of several methods for analyzing urine, including gas chromatography/mass spectrometry, liquid chromatography/tandem mass spectrometry and the enzyme multiple immunoassay technique.<sup>18</sup> Courts have also ruled that some sweat, oral fluid, hair, and ankle-monitor tests are scientifically acceptable.<sup>19</sup>

### **3. Collection**

Participants will endeavor to defraud chemical tests. These efforts include, dilution, adulteration, and substitution. Treatment Court staff members should be trained on how to implement countermeasures to prevent and identify tampered test specimens.<sup>20</sup>

#### **A. Participant Identification**

Ensuring that the participant is the person providing the specimen is critical to proper collection. Courts and testing agencies cannot allow a different individual to take the place of the person who needs to be tested. Therefore verifying the donor’s identity is fundamental to good collection procedures.

#### **B. Collection Site**

Drug test samples in the Treatment Court setting must be considered a form of forensic evidence.<sup>21</sup> Therefore Treatment Courts must create policies and procedures

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<sup>17</sup> Drug Testing: A White Paper of the American Society of Addiction Medicine (ASAM) 2013

<sup>18</sup> Meyer, W. (2011). Constitutional And Legal Issues In Drug Courts. In D.B. Marlowe & W.G. Meyer (Eds.), *The Drug Court Judicial Benchbook* (pp. 159–180). Alexandria, VA: National Drug Court Institute (2011). Available at: [http://www.ndci.org/sites/default/files/nadcp/14146\\_NDCI\\_Benchbook\\_v6.pdf](http://www.ndci.org/sites/default/files/nadcp/14146_NDCI_Benchbook_v6.pdf)

<sup>19</sup> Ibid

<sup>20</sup> Ibid

<sup>21</sup> Ibid

that control specimen handling including such considerations as chain of custody documents, sample containers and storage compartments.

### **C. Specimen Collection**

Sample collection is a critical component of an effective drug-testing program. The collection of valid samples is the necessary first step to an objective drug-testing program.<sup>22</sup>

### **D. Witnessed Collections**

Witnessing a collection is essential. All sample collections must be observed; those not witnessed are of little or no assessment value.<sup>23</sup> To that end Treatment Courts must require that all specimen collection is witnessed in a gender appropriate manner.

### **E. Valid specimens**

Collecting a valid sample is necessary in order to determine participant drug-use behavior. All specimens should be routinely inspected for evidence of dilution and adulteration including testing for creatinine, pH, Oxidants and specific gravity.<sup>24</sup>

## **4. Results**

Drug testing results must be reliable and they must be provided in a timely fashion. Courts must have results that are both valid and legally defensible.<sup>25</sup> However, a procedurally fair Treatment Court needs those results quickly so that impact of the results is therapeutically beneficial.

### **A. Reliable Results**

To be admissible in a court proceeding, the tests must use scientifically valid and reliable methods.<sup>26</sup> Confirmation of a presumptive test should be made with an

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<sup>22</sup> Ibid

<sup>23</sup> Ibid

<sup>24</sup> Adult Drug Court Standards, Vol. II, *supra*.

<sup>25</sup> Ibid

<sup>26</sup> Ibid

instrumented test that virtually eliminates the odds of a false positive result.<sup>27</sup> Courts should establish a procedure to ensure a valid chain of custody for each specimen.<sup>28</sup> Results falling below recommended cutoff levels should not be interpreted as evidence of new substance use.<sup>29</sup>

## **B. Rapid Results**

Timing is one of the most influential factors for testing success. The sooner the court imposes sanctions for a positive test or provides an incentive for a negative test, the better the participant can maintain sobriety. Negative test results should be reported no later than one day after a sample is provided and positive results should be received by the court within two days if confirmation testing is requested.<sup>30</sup>

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<sup>27</sup> Matthew T. Fagnani, C-SAPA “Trends in Drug Testing”  
[http://www.americanbar.org/content/dam/aba/administrative/labor\\_law/meetings/2000/adr2000\\_mexico.authcheckdam.pdf](http://www.americanbar.org/content/dam/aba/administrative/labor_law/meetings/2000/adr2000_mexico.authcheckdam.pdf)

<sup>28</sup> [http://www.csosa.gov/about/policies/docs/chain\\_of\\_custody.pdf](http://www.csosa.gov/about/policies/docs/chain_of_custody.pdf)

<sup>29</sup> Adult Drug Court Standards, Vol. II, *supra*. NOTE: A "negative" on any drug test cannot be interpreted as "no drug" or "no drug use".

<sup>30</sup> *Ibid*

## TOP TEN TIPS FOR EFFECTIVE DRUG TESTING PROGRAM

1. Do everything to minimize cheating
2. Test frequently and randomly. Best Practices call for a minimum of twice a week until the participants are in the final phase and ready for graduation.
3. Test for a full range of substances that your participants may use. If not cost prohibitive, test for synthetics occasionally.
4. In the probation conditions or Treatment Court contract, require disclosure of any drug use before testing. Apply a sanction for lying plus a sanction for use if there is no disclosure and a positive test.
5. Develop written policies and procedures so everyone is on the same page.
6. Standardize the collection procedures.
7. Employ a provider that uses a scientifically valid and reliable testing procedure.
8. Safeguard the collection site.
9. Review reliability and certification of your confirmation laboratory.
10. Have a written contract/probation conditions re: testing.



# I. THE FUNDAMENTALS OF AN EFFECTIVE DRUG TESTING PROGRAM

## A. Participant Understanding

Participants are more likely to obey drug-testing requirements if they have a full understanding of what they are.<sup>31</sup> So it critical to your Treatment Court’s success to explain all that is expected with regard to testing upon their entrance into the program<sup>32</sup> since a lack of understanding can lead to confusion and frustration for both participants and staff.<sup>33</sup>

When participants first report for testing the requirements and procedures of the process should be explained to them. They should also be required to review and sign a Participant Contract.

Additionally if they have not already received them, they should be given a set of the written rules and regulations. The court or testing agency should have the participant acknowledge the receipt of the rules with a signature or some other means.

### Practice Tip

“Participants in focus groups at these Drug Court sites were consistent in reporting that one of the strongest factors in keeping them from using was the drug testing.”

*Shannon M. Carey et al., NPC Research, Exploring the Key Components of Drug Courts: A Comparative Study of 18 Adult Drug Courts on Practices, Outcomes, and Costs 42 (2008).*

At a minimum, court and testing agency rules should contain the following items:

- Participant’s responsibility for presenting valid identification each time they report for testing.

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<sup>31</sup> Burke, K., & Leben, S. (2007). Procedural fairness: A key ingredient in public satisfaction. *Court Review*, 44(1-2), 4–25.

<sup>32</sup> Carey, S.M., Mackin, J.R., & Finigan, M.W. (2012). What works? The ten key components of Drug Court: Research-based best practices. *Drug Court Review*, 8(1), 6–42.

<sup>33</sup> Rachel Porter, PROCEDURAL FAIRNESS IN CALIFORNIA:Initiatives, Challenges, and Recommendations, Center for Court Innovation, 2011

- The cost of each test, including costs for confirmation or other fees are not covered under the per test cost.
- Acceptable methods of payment if applicable.
- Policies regarding leaving the testing area and / or building prior to the completion of a test.
- Time limits on a participant’s ability to provide a specimen.
- Participant requirements regarding smoking, eating, or drinking prior to reporting for an alcohol/PBT test.
- Days and hours of operation of the testing facility.
- Random selection procedure and contact information
- A list of prohibited behaviors for such things as adulteration efforts, dilute samples, missed tests, and failure to provide an adequate sample,
- Any other rules specific to the agency’s operation should also be listed.

Participant participation forms should be as specific as possible and inform them that they will be held accountable for their actions.<sup>34</sup> The contract should contain statements begin with “I understand,” “I have been informed,” or “It is my responsibility” when applicable.<sup>35</sup>

## **B. Testing<sup>36</sup>**

A population of high needs specialty court participants require frequent testing, extensive test panels, and specific testing techniques.<sup>37</sup> Random, frequent, long

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<sup>34</sup> <https://www.ok.gov/odmhsas/documents/Specialty%20Court%20Conference%20-%20Paul%20Cary-%20Drug%20Testing%20Power%20Point%20-%20OK%209-27-12.pdf>

<sup>35</sup> Ibid. Also to examine sample Participant Contracts, go to Appendix H, or also see Adult Drug Court Standards, Best Practices and Promising Practices. *Chapter 7: Drug and Alcohol Testing* (pp 52-60). Found at: <http://courts.mi.gov/Administration/SCAO/Resources/Documents/bestpractice/ADC-BPManual.pdf>

<sup>36</sup> See Adult Drug Court Standards, Best Practices, and Promising Practices. *Chapter 7: Drug and Alcohol Testing* (pp. 52-60): 1. General. Found at: <http://courts.mi.gov/Administration/SCAO/Resources/Documents/bestpractice/ADC-BPManual.pdf>

term, and comprehensive testing is the objective foundation for any specialty court success. It can significantly reduce crime and drug use in Treatment Court participants.<sup>38</sup>

Modern effective drug testing generally starts with urine, but also uses other forms such as, breath, oral fluid, sweat, blood, and hair/nails. The circumstance of the court's supervision will determine which forms of testing are the best choices.<sup>39</sup>

Participants in focus group studies consistently reported that drug testing was one of the strongest factors in keeping them from using.<sup>40</sup>

### 1. Frequent Testing<sup>41</sup>

The half-life for elimination of most illicit drugs, ethanol and their metabolites ranges from two to four days.<sup>42</sup> This biological fact suggests that testing less than two times a

### **Practice Tip**

*Drug Testing:* Testing was significantly related to reductions in crime and drug use at both 6 and 18 months. Compared to low numbers of drug tests (9 or fewer tests), high (more than 37) and medium (9 to 37) episodes of testing were related to significantly fewer crimes and days of drug use.

*Shelli B. Rossman et al., 4 The Multi-Site Adult Drug Court Evaluation: The Impact of Drug Courts 225 (2011).*

<sup>37</sup> American Society of Addiction Medicine. (2013). Drug testing: A white paper of the American Society of Addiction Medicine (ASAM). Chevy Chase, MD: Author. Available at <http://www.asam.org/docs/default-source/public-policy-statements/drug-testing-a-white-paper-by-asam.pdf?sfvrsn=2>

<sup>38</sup> Shelli B. Rossman et al., 4 The Multi-Site Adult Drug Court Evaluation: The Impact of Drug Courts 225 (2011).

<sup>39</sup> Drug Testing: A White Paper of the American Society of Addiction Medicine (ASAM) 2013

<sup>40</sup> Shannon M. Carey et al., NPC Research, Exploring the Key Components of Drug Courts: A Comparative Study of 18 Adult Drug Courts on Practices, Outcomes, and Costs 42 (2008).

<sup>41</sup> See Adult Drug Court Standards, Best Practices, and Promising Practices. *Chapter 7: Drug and Alcohol Testing* (pp. 52-60): 3. Frequency and Breadth of Testing. Found at: <http://courts.mi.gov/Administration/SCAO/Resources/Documents/bestpractice/ADC-BPManual.pdf> See Also Figure 1 for Approximate Detection Time in Urine.

<sup>42</sup> Chronic marijuana use can extend this time frame to up to fifteen to thirty days in certain circumstances. [https://www.ndci.org/sites/default/files/ndci/THC\\_Detection\\_Window\\_0.pdf](https://www.ndci.org/sites/default/files/ndci/THC_Detection_Window_0.pdf)

week creates a period during which participants can abuse substances and evade detection.<sup>43</sup> So it should come as no surprise that the programs that test at least twice per week had a 38% greater reduction in crime and were 61% more cost-effective than programs than those testing less frequently.<sup>44</sup>

While testing at least twice a week is a baseline for specialty courts with higher risk participants, consideration should be given to testing more frequent than twice a week depending upon the circumstances.<sup>45</sup>

Urine is the primary substance for drug tests as it is the least expensive to analyze, offers a wide range of drugs for inclusion on test panels and offers a longer testing window.<sup>46</sup> The detection window for positive test results with urine is 1-3 days for the most commonly used drugs.<sup>47</sup> This makes it an ideal testing procedure for frequent testing.

Breath testing on a random or daily basis is an important tool when a participant is suffering from alcohol abuse or addiction. Research into South Dakota's 24/7 Sobriety, which focused on repeat drunk drivers suggests twice daily breath testing, deterred alcohol consumption in the majority of the participants and significantly reduced failures to appear and re-arrest rates among alcohol addicted offenders.<sup>48</sup>

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<sup>43</sup> Stitzer, M.L., & Kellogg, S. (2008). Large-scale dissemination efforts in drug abuse treatment clinics. In S.T. Higgins, K. Silverman, & S.H. Heil (Eds.), *Contingency management in substance abuse treatment* (pp. 241–260). New York: Guilford Press. See also: Crosby, R., Carlson, G., Specker., *Simulation of Drug Use and Urine Screen Patterns*, *Journal of Addictive Diseases*, Vol. 22(3) (2003); DuPont, R., Griffin, D., Siskin, B., Shiraki, S., Katze, E., *Random Drug Tests at Work: The Probability of Identifying Frequent and Infrequent Users of Illicit Drugs*. *Journal of Addictive Diseases*, Vol. 14(3) (1995).

<sup>44</sup> Carey, S.M., Mackin, J.R., & Finigan, M.W. (2012). What works? The ten key components of drug court: Research-based best practices. *Drug Court Review*, 8(1), 6–42.

<sup>45</sup> Drug Testing: A White Paper of the American Society of Addiction Medicine (ASAM) 2013

<sup>46</sup> Ibid

<sup>47</sup> Ibid

<sup>48</sup> Kilmer, B., Nicosia, N., Heaton, P., & Midgette, G. (2012). Efficacy of frequent monitoring with swift, certain, and modest sanctions for violations: Insights from South Dakota's 24/7 Sobriety Project. *American Journal of Public Health*

Drug tests, that have detection windows of less than twenty-four hours, such as oral fluids, should also be conducted on a daily basis or for spot-testing during high-risk times such as for holidays.<sup>49</sup>

In high-risk alcohol addicted participants, sweat patches for illicit drug or ankle monitors, which screen an individual continuously for alcohol use, can be a helpful tool to monitor use over an extended period of time.<sup>50</sup>

A hair/nail test has a limited panel of analytes and it is also more expensive than urine, breath, oral fluid, or sweat testing.<sup>51</sup> It is better used as a baseline test, than a routine form of testing since its window of detection can be as long as 90 days.<sup>52</sup>

### **Practice Tip**

**Across multiple methods, among the most consistent findings were that offenders who received higher levels of judicial supervision and drug testing, and who attended more than a month of substance abuse treatment, reported fewer crimes and fewer days of drug use.**

*Shelli B. Rossman et al., 4 The Multi-Site Adult Drug Court Evaluation: The Impact of Drug Courts 225 (2011).*

Blood has a shorter detection time for drugs than oral fluids and given the need for medical personnel and expense, is not recommended for frequent testing.<sup>53</sup>

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<sup>49</sup> Douglas B. Marlowe, J.D., Ph.D, Carson L. Fox, Jr., J.D., et al., *Adult Drug Court Best Practice Standards Volume II*, National Association Of Drug Court Professionals, Alexandria, Virginia, 2015.

<sup>50</sup> Ibid

<sup>51</sup> Ibid

<sup>52</sup> Ibid

<sup>53</sup> Drug Testing: A White Paper of the American Society of Addiction Medicine (ASAM) 2013

## 2. Random Testing<sup>54</sup>

Effective drug testing requires random testing.<sup>55</sup> Random drug testing is significantly more likely to detect illicit drug or alcohol use than scheduled testing.<sup>56</sup> When drug tests are pre-scheduled it is easier for participants to adjust their use or game the testing regiment by adulterating, substituting or diluting their urine.<sup>57</sup>

In order to be random, the likelihood of a drug test must be the same for every day of the year.<sup>58</sup> This means that testing on weekends and holidays are as likely as any other day of the week.<sup>59</sup> Courts that do not test on holidays and weekends are not engaged in truly random testing and providing a window of opportunity for a participant to use.

Random testing requires more than setting random dates. Participants must receive a time-limited notice to test, generally no more than a few hours before appearing at the collection site for specimen collection.<sup>60</sup> Most random systems involve assigning the donor with a color, letter, number or individual code. Each has a frequency attached to it, which only the court program should know (e.g. blue may have a frequency of twice per week). Each day the donor is required to check with

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<sup>54</sup> See Adult Drug Court Standards, Best Practices, and Promising Practices. *Chapter 7: Drug and Alcohol Testing* (pp. 52-60): 2 Randomization. Found at: <http://courts.mi.gov/Administration/SCAO/Resources/Documents/bestpractice/ADC-BPManual.pdf>

<sup>55</sup> Ibid

<sup>56</sup> Harrison, L. (1997). The validity of self-reported drug use in survey research: An overview and critique of research methods. In L. Harrison & A. Hughes (Eds.), *The validity of self-reported drug use: Improving the accuracy of survey estimates* [Research Monograph No. 167] (pp. 17–36). Rockville, MD; National Institute on Drug Abuse.

<sup>57</sup> Drug Testing: A White Paper of the American Society of Addiction Medicine (ASAM) 2013. Note that even without scheduled collection, as little as 15–30 minutes notice can allow for a highly dilute urine.

<sup>58</sup> Douglas B. Marlowe, J.D., Ph.D, Carson L. Fox, Jr., J.D., et al., *Adult Drug Court Best Practice Standards Volume II*, National Association Of Drug Court Professionals, Alexandria, Virginia, 2015.

<sup>59</sup> Ibid

<sup>60</sup> Cary, P. (2011). *The Fundamentals Of Drug Testing*. In D.B. Marlowe & W.G. Meyer (Eds.), *The Drug Court Judicial Benchbook* (pp. 113–138). Alexandria, VA: National Drug Court Institute. Available at [http://www.ndci.org/sites/default/files/nadcp/14146\\_NDCI\\_Benchbook\\_v6.pdf](http://www.ndci.org/sites/default/files/nadcp/14146_NDCI_Benchbook_v6.pdf)

the program to determine if they are required to test that day. This may be done via a phone, website, or email. In addition, some programs are taking advantage of social media and apps to send the test notification message.

To be random the participant must never know when they are going to be tested, including a second test on the same day or the day immediately following.

### 3. Extended Testing<sup>61</sup>

Drug use must be monitored continuously throughout the length of the program, as individual participants can suffer from relapses.<sup>62</sup> A relapse that goes undetected is problematic both for the participant and for program success, but if detected can present opportunities for therapeutic intervention.<sup>63</sup>

Upon entry into the program, an initial screen test should be given.<sup>64</sup> It will help identify those participants who are still actively using upon entry into the program.<sup>65</sup> The initial screen will eliminate negative specimens to focus efforts and resources on those participant specimens most likely to contain drugs of abuse.

Based upon the entrance assessment and drug tests, a program of testing should be implemented. This testing should continue through the entire time the participant is in the program.<sup>66</sup> As the participant progresses the testing will provide an objective understanding of progress. It will reveal any relapse and as a result the participant's treatment regimens can be adjusted based upon that information. Testing should continue until the participant graduates from the program, as it will improve the outcomes of addiction treatment.<sup>67</sup>

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<sup>61</sup> See Adult Drug Court Standards, Best Practices, and Promising Practices. *Chapter 7: Drug and Alcohol Testing* (pp. 52-60): b. Best Practices. Found at: <http://courts.mi.gov/Administration/SCAO/Resources/Documents/bestpractice/ADC-BPManual.pdf>

<sup>62</sup> <https://www.drugabuse.gov/publications/principles-drug-addiction-treatment-research-based-guide-third-edition/principles-effective-treatment> 2014

<sup>63</sup> Drug Testing: A White Paper of the American Society of Addiction Medicine (ASAM) 2013

<sup>64</sup> For a discussion on the initial testing for marijuana, see Appendix B.

<sup>65</sup> Ibid

<sup>66</sup> Cary, P. (2011). The Fundamentals of Drug Testing. In D.B. Marlowe & W.G. Meyer (Eds.), *The Drug Court Judicial Benchbook* (pp. 113–138). Alexandria, VA: National Drug Court Institute. Available at [http://www.ndci.org/sites/default/files/nadcp/14146\\_NDCI\\_Benchbook\\_v6.pdf](http://www.ndci.org/sites/default/files/nadcp/14146_NDCI_Benchbook_v6.pdf)

<sup>67</sup> Drug Testing: A White Paper of the American Society of Addiction Medicine (ASAM) 2013.

#### 4. Comprehensive Tests<sup>68</sup>

When a participant tends to use a particular drug such as alcohol, there can be a temptation to test only for that drug. Of course, such testing is necessary, but as multiple drugs or drug classes can be tested for simultaneously it is not a cost effective approach.<sup>69</sup> Testing for multiple drugs provides operational efficiencies and cost savings while at the same time reduces the likelihood of a participant switching to a different drug to avoid the test.<sup>70</sup>

Urine, oral fluid, sweat and hair/nail sample panels identify only those drugs, or drug metabolites that are being tested for.<sup>71</sup> The choice of what drugs to test for should be based upon an assessment of that participant and their risk history.<sup>72</sup>

“Five panel<sup>73</sup>” tests for urine, oral fluid or sweat are inexpensive, while hair tests for the same limited panel costs more.<sup>74</sup> As the number of drugs being tested for increases, so does the cost.<sup>75</sup> However, specialty courts need to test for the full range of substances that may be used by participants. Limiting testing to certain panels allows participants to elude detection simply by switching to other drugs that are not detected by that test.<sup>76</sup>

For example marijuana users will switch to synthetic cannabinoids, to evade detection and then return to marijuana use after the testing regimen has been discontinued.<sup>77</sup> These new synthetics are often developed simply to beat drug

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<sup>68</sup> See Adult Drug Court Standards, Best Practices, and Promising Practices. *Chapter 7: Drug and Alcohol Testing* (pp. 52-60): 3. Frequency and Breadth of Testing. Found at: <http://courts.mi.gov/Administration/SCAO/Resources/Documents/bestpractice/ADC-BPManual.pdf>

<sup>69</sup> Ibid

<sup>70</sup> Ibid

<sup>71</sup> Ibid

<sup>72</sup> Ibid

<sup>73</sup> A five-panel test is a drug test screen that examines the specimen for five different classes of drugs.

<sup>74</sup> Ibid

<sup>75</sup> Ibid

<sup>76</sup> Ibid

<sup>77</sup> Douglas B. Marlowe, J.D., Ph.D, Carson L. Fox, Jr., J.D., et al., *Adult Drug Court Best Practice Standards Volume II*, National Association Of Drug Court Professionals, Alexandria, Virginia, 2015.



tests.<sup>78</sup> At times it is useful to randomly test for other substances beyond the ones commonly expected. Courts must test a wide range of illicit drugs in order to provide the best opportunity for their participants' success.

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<sup>78</sup> Ibid

## II. DRUG TESTING METHODOLOGIES

### A. Discussion Topics

1. Urine Testing
  - a. Immunoassay Screening
    - 1.) Automated Laboratory Analyzers
    - 2.) Point of Collection Testing (POCT)
2. Breath Testing
  - a. Breathalyzers and/or Preliminary Breath Tests
  - b. Interlocks and Home Breath Testing
3. Oral Fluids/Saliva
4. Skin Testing Technology
  - a. Sweat Patches
  - b. Ankle Bracelets
5. Hair / Nails Testing
6. Blood Testing

### B. Types Of Testing Specimens

Evidence of substance use can be found in urine, blood, saliva, hair, nails, sweat and breath.<sup>79</sup>

However, because of the unique make up each drug and specimen type, concentrations may vary greatly among these specimens.<sup>80</sup> (See chart, Figure 1).

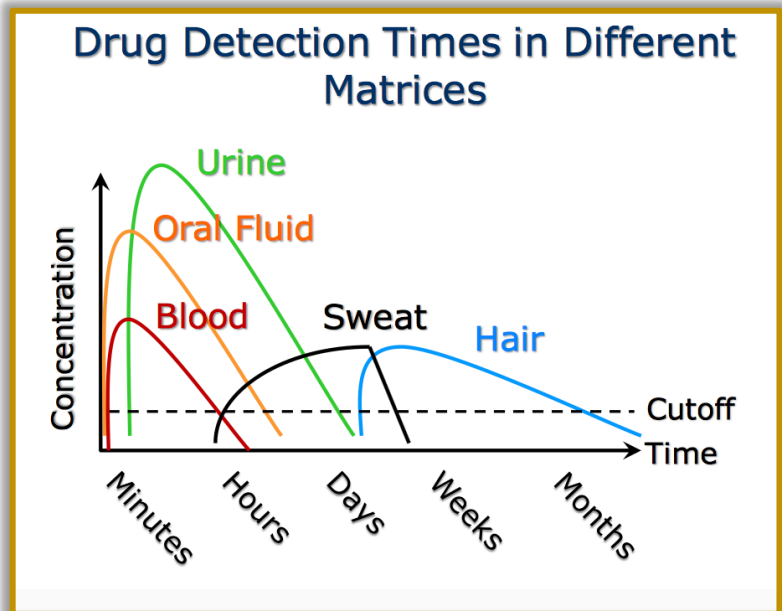


FIGURE 1

<sup>79</sup> Drug Testing: A White Paper of the American Society of Addiction Medicine (ASAM) 2013

<sup>80</sup> See Appendices C and/or D for the ranges on cutoff levels on various drugs.

## 1. Urine Testing

Despite the variety of specimen types, urine remains the best option for Treatment Court abstinence monitoring. With its longstanding history, urine is accepted as the gold standard for drug testing.<sup>81</sup>

In the court system, urine testing is the most commonly used testing approach for licit and illicit drugs and alcohol.<sup>82</sup> It is inexpensive to analyze, and offers the widest range of drug test panels. The tests themselves are generally accurate with false negatives more likely than false positives.<sup>83</sup>

The primary problem with urine testing is that the specimen can be altered. Treatment Court participants may attempt to alter specimens and when they are unmonitored in collection situations or if they know beforehand when they will be tested.<sup>84</sup> Specimen adulteration can include waterloading, substituting negative specimens for their own sample, or otherwise altering their samples. The risk of successful alteration is less when all sample collections are observed during collection and a random testing schedule is used.<sup>85</sup>

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<sup>81</sup> The Drug Court Judicial Benchbook, *supra*.

<sup>82</sup> Drug Testing: A White Paper of the ASAM, *supra*.

<sup>83</sup> Ibid

<sup>84</sup> Adult Drug Court Standards, Vol. II, *supra*.

<sup>85</sup> Ibid

### Urine Testing Use:

- Abstinence monitoring
- Frequent, random drug testing

### Advantages:

- Broadest range of drug tests
- Lower cost relative to other specimens
- Established cutoffs
- Contains high concentration of drugs
- Detects both recent and past usage
- Numerous inexpensive testing options
- Reasonable pricing/possible
- Can test for alcohol (EtG) beyond normal range

### Disadvantages:

- Invasive collection procedures
- Drug concentration influenced by fluids
- Must observe to guard against adulteration
- Sample collection process is time consuming

After a single episode of substance use, the detection window in urine is up to three days depending upon the characteristics of the substance being tested. (See Figure 1.<sup>86)</sup><sup>87</sup>

There are two basic types of urine drug tests. The first, called the immunoassay, is accurate, cost-effective and provides quick results. The second type of test is called gas chromatography/mass spectrometry (GC/MS). GC/MS uses the same procedure for obtaining a urine sample as the immunoassay but getting any results takes longer and it is more expensive; for that reason, it is often used as a confirming test.<sup>88</sup>

## 2. Immunoassay Screening

Immunoassays (IA) urine drug screening is the most common screening currently used to test for substances that are abused. Immunoassays use antibodies to detect drugs or their metabolites in urine. Laboratory animals are injected with a specific drug to produce the antibodies for each assay (for example, cocaine, PCP, etc.). Reagents containing these labeled antibodies can then be introduced into urine samples, and if the specific drug from which the antibody was made is present, a chemical reaction will occur which is read as a positive result. Even in small amounts, it will react with the antibodies on the test device. If the drug or drug metabolite is not present or is not present above the specified amount, it will result in a negative test. The various handheld tests or point of contact devices, and automated analyzers for urine are all immunoassays.

All urine-testing technologies utilize specified antibody quantities that provide known immunoassay cutoff levels. A negative urine assay result does not necessarily prove that the subject did not consume the substance. Rather it may be there simply was not enough of the substance in the donor's system to exceed the cutoff level.

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<sup>86</sup> Image taken from: Drug Testing: A White Paper of the American Society of Addiction Medicine (ASAM) 2013; Cone, E. J. (2011). Oral Fluid Drug Testing Workshop: Pain Management. Society of Forensic Toxicology/The International Association of Forensic Toxicologists (SOFT/TIAFT). September 25-30, 2011. San Francisco, CA.

<sup>87</sup> See Figure 1 – Drug Detection Times in Different Matrices

<sup>88</sup> Ibid

Detection of substances in urine is affected by urine dilution; therefore creatinine and/or specific gravity values, which can indicate dilution, should be taken into consideration on all urine tests.

There are two different types of immunoassay screenings, automated laboratory analyzers and Point of Collection Testing (POCT) devices.

### *a. Automated Laboratory Analyzers*

Automated laboratory analyzers target metabolites and their parent drugs because they are discharged over a longer period of time and therefore provide a better opportunity to detect drug use.<sup>89</sup> Some compounds are also considered representative of a drug class. For example, cocaine assays do not target cocaine because it has a short period of excretion.<sup>90</sup> Instead, they target an inactive metabolite unique to cocaine because it has a much longer window of excretion.

During automated analyzer testing, a chemical reaction occurs that changes the light-absorbing properties of the test mixture. Special instruments called spectrophotometers measure the changes in the amount of light the sample absorbs, which is related to the amount of drug or drug metabolite the sample contains. The more drug or metabolite present in the person's urine, the greater the response produced. If there is little or no drug present in the sample, the response is lower.

The sample's response is compared to the response of a calibrator, which contains a known quantity of the drug in question. This known quantity of drug in the calibrator is the cutoff. If the sample's response is higher than or equal to the calibrator's the sample is considered positive for the particular substance. If the sample's response is less than that of the calibrator, the sample is considered negative.

Treatment Court testing programs using automated analyzers must operate the laboratory according to the manufacturer's specifications and timetable. All personnel responsible for running samples should be required to complete any manufacturer training and follow all recommended maintenance and operational instructions.

The potential disadvantage of all immunoassays including automated laboratory analyzers occurs when an antibody cross- reacts with a compound outside the class

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<sup>89</sup> A Clinical Guide to Urine Drug Testing University of Medicine & Dentistry of New Jersey– Center for Continuing and Outreach Education (2009)

<sup>90</sup> Ibid

of drugs the analyzer is designed to detect. This can result in a false positive. Cross-reactivity problems differ between manufacturers and even between lots of reagents.<sup>91</sup>

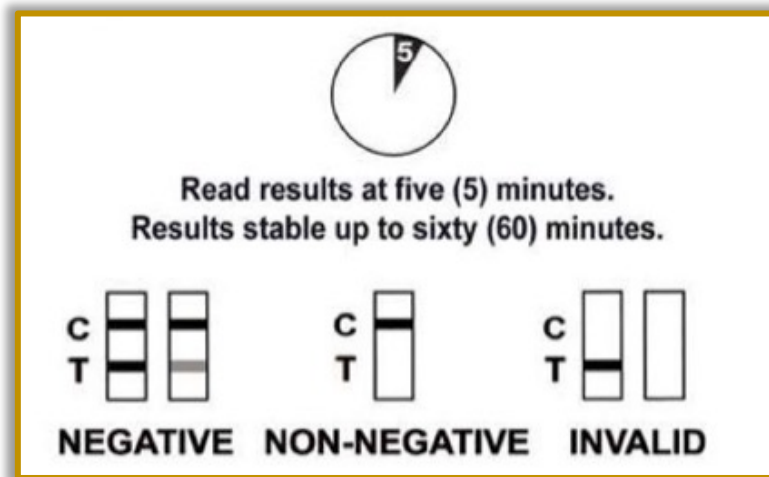
### ***b. Point of Collection Testing (POCT)***

POC testing, relying on IA technology, is currently limited to a relatively narrow range of drug classes and a few specific drugs (usually 15 or less).

POCT systems vary in design and the number of drugs tested. Generally, these systems are multi panel strips or urine test cups.<sup>92</sup> Each one is designed to test for multiple substances or metabolites at the same time. Each panel is a separate drug test and needs to be read independently of one another.

Regardless of what design is chosen, it is very important that Treatment Court testing programs follow the manufacturer's instructions for using the device. These devices usually involve submerging a dipstick into the urine sample, using a pipette to draw out a small amount of urine to be placed on a test cassette or having the test built into the specimen container.

Once the urine comes into contact with the testing device the collector must allow the manufacturer's recommended amount time to pass before "reading" the device for a result. This



information can be found on the instrument's instructions.

**FIGURE 2**

<sup>91</sup> Ibid. It can also vary depending on the drug. For example, there are virtually no false positives for modern analyzer based immunoassays for cocaine metabolite or cannabinoids (THC metabolite). More cross-reactivity issues occur for amphetamines.

<sup>92</sup> Adult Drug Court Standards, Vol. II, *supra*.

Generally, these devices have colored bands next to each drug being tested indicating whether a drug is present or absent in the particular sample (See Figure 2). Most of these devices will also have a "control" band ("C") designed to ensure the testing device is performing according to the manufacturer's specifications. A test should be considered invalid if no colored band (line) appears in the control region (C) of the device. The drug or "test" bands ("T") indicate whether the testing device has detected a specific drug. The design of the point of contact devices varies with some devices testing for a single drug while others contain multiple channels testing for many drugs. Each drug will have its own separate color band. When a colored band/line appears in the drug or test region (regardless of the intensity of the color), the test is considered negative. The absence of a colored band/line next to a drug or test region indicates a "presumptive" positive result.

### **Practice Tip**

Test kits that are ripped, torn, or past their expiration date should not be used. All kits should remain unopened until ready for use.

It should be noted that POCTs have expiration dates and handling instructions. Test kits that are ripped, torn, or past their expiration date should not be used. All kits should remain unopened until ready for use.

The potential disadvantages of POCTs include the subjective nature of the assays, questions about the integrity of the test reagents following transportation and storage, the possible lack of adequate quality assurance and quality control, data management issues and staff training issues.<sup>93</sup>

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<sup>93</sup> Drug Testing: A White Paper of the ASAM, *supra*.

## C. Breath Testing

Breath is the current standard specimen for alcohol testing.<sup>94</sup> Alcohol evaporates from the blood into the lungs and is excreted in breath, allowing it to be measured in a breath sample.<sup>95</sup> It is currently limited to alcohol as there are no current scientifically valid tests for other drugs using breath.<sup>96</sup> However, new breath technologies are under development, so that breath testing for other drugs may become available in the future.<sup>97</sup>

### 1. Breathalyzers<sup>98</sup> and/or Preliminary Breath Tests<sup>99</sup>

The Breathalyzer or the Preliminary Breath Test (PBT) are devices which produces an estimate of Breath Alcohol Content (BrAC) based upon the chemical analysis of an expired breath sample. These devices generally have an LCD where the BrAC is displayed. For

#### Breath Testing Use:

- Recent use
- On vehicles
- Daily alcohol testing

#### Advantages:

- Difficult to adulterate
- Immediate results
- Inexpensive
- Readily available
- Easy for staff to use
- Preventing operating vehicle while intoxicated

#### Disadvantages:

- Limited to only alcohol
- Short detection window
- Certified device that is calibrated
- Staff must be trained
- Alcohol concentration influenced by breath force

<sup>94</sup> Drug Testing: A White Paper of the American Society of Addiction Medicine (ASAM) 2013

<sup>95</sup> Ibid

<sup>96</sup> Ibid

<sup>97</sup> Ibid

<sup>98</sup> “‘Breathalyzer’ is the brand name (a genericized trademark) for the instrument that tests the alcohol level developed by inventor Robert Frank Borkenstein. It was registered as a trademark on May 13, 1954, but many people now use the term to refer to any generic device for estimating blood alcohol content.” Obtained from *Wikipedia*.

<sup>99</sup> See Adult Drug Court Standards, Best Practices, and Promising Practices. *Chapter 7: Drug and Alcohol Testing* (pp. 52-60): 5. Witnessed: Collections. Found at: <http://courts.mi.gov/Administration/SCAO/Resources/Documents/bestpractice/ADC-BPManual.pdf>



PBTs, which are handheld devices, readings must be manually recorded, as there is usually no print capability. PBTs are easy to use, portable and relatively low cost and they must be calibrated monthly by a certified technician to ensure accurate readings. Breathalyzers, larger and typically stationary, will have a printout of the results. They must have an accuracy check run each calendar week.

Testing facilities should develop policies for those donors who blow “numbers” while at their location. These policies are over and above how a Treatment Court will respond with an appropriate sanction. Below are some options that a testing facility may choose to adopt or use as a guide in developing its own policy:

- Donor’s initial test is under .07 and the retest shows the alcohol content to be decreasing, .06 or below. The donor does not meet the .08 requirement for being intoxicated in Michigan and therefore should be free to go. However, if the donor is visibly impaired he or she should be treated as if their result were .08 or above.
- Donor’s initial test is .07 and the retest shows the alcohol content to be increasing, .08 or above. The donor should be required to call for a ride if he or she drove or walked to the site. If the donor drove him or herself to the facility, the person should be asked to relinquish his / her keys. The facility should observe the donor until his / her ride arrives. If the person refuses to turn over the keys, the donor may be informed that the police will be called if the donor attempts to drive from the parking lot.
- If the donor is under the age of 21, Michigan has a zero tolerance law (.02 is zero tolerance) for minors. Minors who test at .02 or higher, should be handled in the same manner as adults who test .08 or higher.

Testing facilities need to individually assess their authority as to their ability to physically detain a participant. A testing facility may wish to consult with legal counsel to determine any level of liability and if the proscribed policies mitigate that liability.

## **2. Interlock and Home Breath Testing**

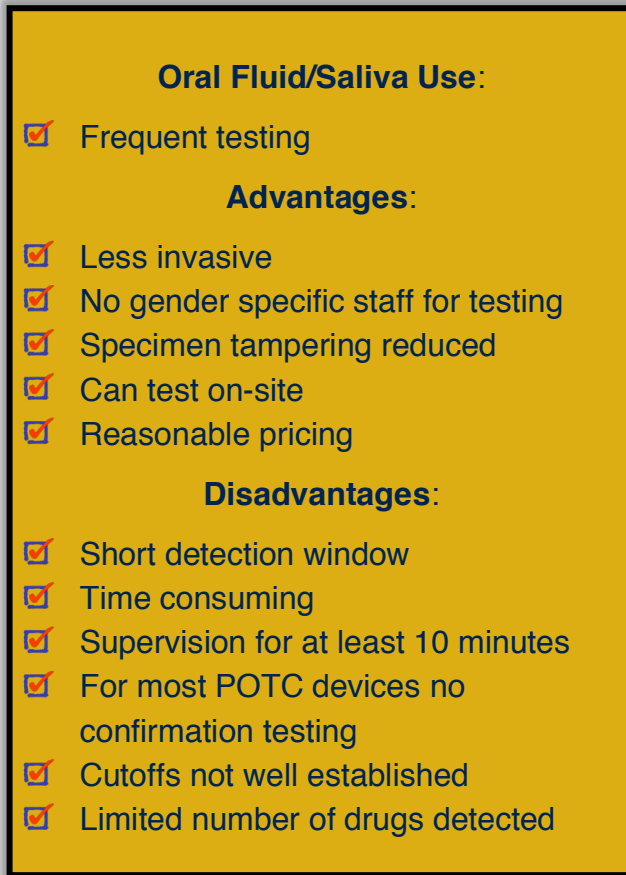
In addition to ordering participants to place an interlock device in their automobiles to prevent them from driving after they have consumed alcohol, some courts are using interlocks and home breath testing devices as a form of daily or random breath testing.

An interlock is a breath-testing device attached to a vehicle's electrical system that requires the participant to submit to a breath test before the vehicle will start. If alcohol is detected at or above a cutoff level, the vehicle will not start. If no alcohol is detected, the vehicle will start.

Monitoring occurs when the participant is required to go to an installer to have the ignition interlock device calibrated. While at the installation center, the instrument is checked to make sure it is working properly and a report is taken from the instrument's computer. If there is a positive sample it will be recorded, with each a subsequent sample to show whether or not the reading was in fact alcohol or if it was an interferent.

In home breath devices are portable versions of an interlock. They are commonly ordered as an alternative to onsite appearance breath testing. This is frequently done for participants who don't drive or don't own vehicles.

Nowadays, most interlocks and home breath testing devices have cameras attached. The device takes the test subject's picture and makes it available to the monitoring authority for photo-matching. If a court is using interlocks or home breath testing devices for alcohol monitoring, it is a best practice to require ones with cameras.<sup>100</sup>



**Oral Fluid/Saliva Use:**

- Frequent testing

**Advantages:**

- Less invasive
- No gender specific staff for testing
- Specimen tampering reduced
- Can test on-site
- Reasonable pricing

**Disadvantages:**

- Short detection window
- Time consuming
- Supervision for at least 10 minutes
- For most POTC devices no confirmation testing
- Cutoffs not well established
- Limited number of drugs detected

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<sup>100</sup> McKnight, A. S., Fell, J. C., & Auld-Owens, A. (2012, August). Transdermal Alcohol Monitoring: Case Studies. (Report No. DOT HS 811 603). Washington, DC: National Highway Traffic Safety Administration. 2012

## D. Oral Fluid/Saliva<sup>101</sup>

Oral fluid testing analyzes a saliva sample for drugs and their metabolites.<sup>102</sup> An absorbent collection device is placed in the mouth and the saliva collected, which is then screened for drugs of abuse. Samples are checked to verify the saliva is human and undiluted.

Over time oral fluid testing has grown in acceptance and use.<sup>103</sup> This shift has been driven by the fact that it now can detect more illicit drugs because of the improvements in drug testing technologies.<sup>104</sup> Oral Fluid testing provides an ease of specimen collection and lack of gender issues. It is readily available and non-intrusive. However, oral fluid testing offers fewer test panels beyond what is offered for urine testing. Although because of oral fluid testing's growth, broader panels are expected to become commercially available.<sup>105</sup> Some concerns have been expressed on oral testing because of the low specimen volume and in detecting low levels.<sup>106</sup> The detection window for THC is minimal, typically just within a few hours of use.<sup>107</sup> The window of detection for other illicit drugs in oral fluid is generally 12 to 48 hours, which is somewhat shorter than for urine.<sup>108</sup>

Currently to use oral fluid technology, testing programs must send their samples for confirmation testing to a reference laboratory to detect drugs and drug metabolites in saliva samples.

This method may be useful in some settings for on the spot testing or home visits, however its limitations suggest it should not be the primary method in a Treatment Court setting in which timely responses to substance use is necessary.

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<sup>101</sup> See Adult Drug Court Standards, Best Practices, and Promising Practices. *Chapter 7: Drug and Alcohol Testing* (pp. 52-60): 3. Frequency and Breadth of Testing. Found at: <http://courts.mi.gov/Administration/SCAO/Resources/Documents/bestpractice/ADC-BPManual.pdf>

<sup>102</sup> Drug Testing: A White Paper of the ASAM

<sup>103</sup> Ibid

<sup>104</sup> Ibid

<sup>105</sup> Ibid

<sup>106</sup> Drummer, Olaf H. "Drug Testing in Oral Fluid." *Clinical Biochemist Reviews* 27.3 2006 147–159.

<sup>107</sup> Dickson S, Park A, Nolan S et al (2007) The recovery of illicit drugs from oral fluid sampling devices. *Forensic Sci Int* 165:78–84

<sup>108</sup> Ibid

## E. Skin Testing Technology<sup>109</sup>

### 1. Sweat Patches

Sweat patch testing has some benefits over urine testing or other types since it is relatively non-invasive and it is worn 24 hours a day for an extended period of time, typically one week. The band-aid like patches are designed to be tamper resistant, with adhesives that can only be removed using special solvents. Once the patch is removed it is sent to a laboratory for testing. Although no immediate results are available, the patch is able to capture what drugs the client may have used over an extended period of time.

There have been documented cases where clients have been able to heat and then dissolve the adhesion allowing them to place barriers between the patch and skin. The patches are then reattached to the skin to create the illusion of wearing the patch. When it is known the patch will be removed for analysis, the client may again dissolve the glue to remove the barrier and re-adhere the patch.

One study in 2010 claimed the use of sweat patches did not improve outcomes in a Drug Court when used in conjunction with urine testing.<sup>110</sup> However, it is

**Skin Testing Use:**

- ☑ Continuous drug testing

**Advantages:**

- ☑ Less invasive
- ☑ No gender specific staff for testing
- ☑ Difficult to adulterate

**Disadvantages:**

- ☑ Short detection window
- ☑ Tampering
- ☑ Cutoffs not well established
- ☑ Ankle bracelets lack confirmation testing
- ☑ Ankle bracelets test only for alcohol
- ☑ Expensive

<sup>109</sup> See Adult Drug Court Standards, Best Practices, and Promising Practices. *Chapter 7: Drug and Alcohol Testing* (pp. 52-60): b. Best Practices. Found at: <http://courts.mi.gov/Administration/SCAO/Resources/Documents/bestpractice/ADC-BPManual.pdf>

<sup>110</sup> Kleinpeter, C.B., Brocato, J., & Koob, J.J. (2010). Does drug testing deter drug court participants from using drugs or alcohol? *Journal of Offender Rehabilitation*, 49(6), 434-444.

important to note that the study did not examine sweat patches as the sole use for a testing mode.<sup>111</sup>

## 2. Ankle Bracelets

When a person drinks alcohol a small amount can be detected in their “insensible sweat” or perspiration. Ankle bracelets use transdermal technology to test the concentration of alcohol present in perspiration that is given off by the skin.<sup>112</sup>

Transdermal bracelets do not detect blood alcohol concentration (BAC) levels, instead it tests for alcohol based on the transdermal alcohol content (TAC). These results are equivalent to BAC results. However, as the body absorbs alcohol, TAC peaks generally occur two hours after a BAC peak.<sup>113</sup>

These ankle bracelets measure TAC and stores the data for upload to computers for reporting and analysis.<sup>114</sup> The data is then provided to court staff. Any attempt to remove or tamper with the bracelet, is communicated to the vendor when the TAC data is uploaded.<sup>115</sup> Attempting to prevent a data upload will also be reported.

Some of these devices have GPS now built into it. Consequently, some courts have also used the devices as house arrest monitors to track participant movements, particularly if the court has imposed curfews.<sup>116</sup> They should be used to test for alcohol over a prolonged period of time.<sup>117</sup>

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<sup>111</sup> Douglas B. Marlowe, J.D., Ph.D, Carson L. Fox, Jr., J.D., et al., *Adult Drug Court Best Practice Standards Volume II*, National Association Of Drug Court Professionals, Alexandria, Virginia, 2015

<sup>112</sup> Swift, R. M., Direct measurement of alcohol and its metabolites. *Addiction*, 98(Suppl 2), 73, 2003

<sup>113</sup> McKnight, A. S., Fell, J. C., & Auld-Owens, A. (2012, August). *Transdermal alcohol monitoring: Case studies*. (Report No. DOT HS 811 603). Washington, DC: National Highway Traffic Safety Administration.

<sup>114</sup> Ibid

<sup>115</sup> Ibid

<sup>116</sup> Ibid

<sup>117</sup> *Adult Drug Court Standards, Best Practices, and Promising Practices*, 47

Recently, a flexible wearable sensor had been developed that can accurately measure a person's blood alcohol level and transmit the data wirelessly to the data.<sup>118</sup>

Overall, while these devices have historically been expensive, they have confirmed low levels of drinking.<sup>119</sup>

## F. Hair/Nails Testing

Hair/nail testing has some benefits similar to sweat patches, since it can detect use over a long period of time.<sup>120</sup> If the drug was recently used, it does take some time, up to five to seven days, for it to show up in the hair shaft.<sup>121</sup> Because head hair grows at a rate of about ½ inch per month, 1½ inches of hair may provide information on drug use for 90-day period.<sup>122, 123</sup>

Hair/nail testing is useful when looking to detect any drug use over a period of time. However, the results of this test can be misleading for clients who have used in the past but are not currently

**Hair/Nails Testing Use:**

- Extended periods of time
- Employment testing
- Establishing a baseline

**Advantages:**

- Long detection window
- Difficult to adulterate
- Less intrusive

**Disadvantages:**

- Requires an prolonged drug use
- Exposure to chemicals can effect test outcomes
- Type of hair itself and treatments can affect results
- Expensive

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<sup>118</sup> University of California - San Diego. "Flexible wearable electronic skin patch offers new way to monitor alcohol levels." ScienceDaily. ScienceDaily, 2 August 2016. Found at: [www.sciencedaily.com/releases/2016/08/160802151324.htm](http://www.sciencedaily.com/releases/2016/08/160802151324.htm)

<sup>119</sup> Ibid

<sup>120</sup> Drug Testing: A White Paper of the American Society of Addiction Medicine (ASAM) 2013

<sup>121</sup> Ibid

<sup>122</sup> Ibid

<sup>123</sup> One- or two-time drug use may not be detectable in hair under current standard laboratory testing procedures.

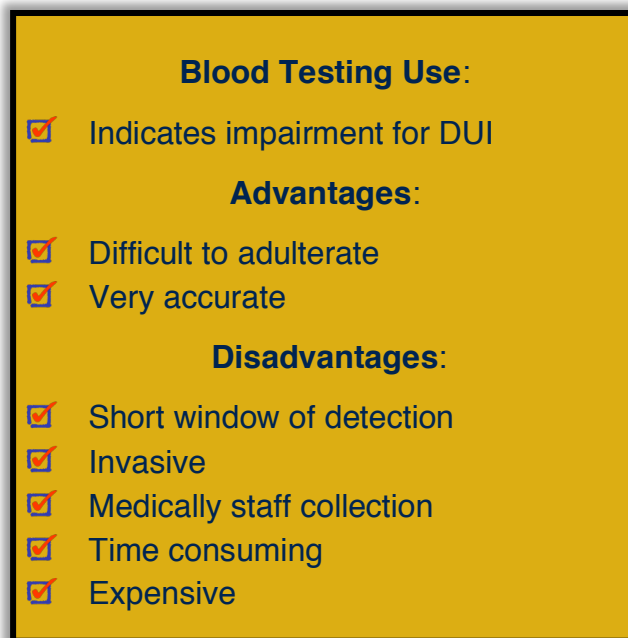
using.<sup>124</sup> It may be more appropriate to use this test as a baseline test rather than for regular participant testing.

Similar to a sweat patch, hair/nails specimens are collected and then sent to an external laboratory for testing.

Participants can limit the impact of this form of testing either accidentally or deliberately such as when a man shaves his head. That naturally limits the testing availability. Similarly when a woman colors or bleaches her hair it may cause some degradation of the drugs being tested for.<sup>125</sup> In addition, there is some concern that some hair colors (darker hair) may retain some drugs differently or longer than lighter hair.<sup>126</sup>

When testing nails, individuals with shorter nails can make collection difficult. However, nails are less likely to be affected by any external exposure to dyes or chemicals because they are thicker than hair.<sup>127</sup>

Among the disadvantages of hair/nail testing is that some drug classes like benzodiazepines are poorly detected in hair.<sup>128</sup> In addition this form of testing can be expensive.<sup>129</sup>



**Blood Testing Use:**

- ☑ Indicates impairment for DUI

**Advantages:**

- ☑ Difficult to adulterate
- ☑ Very accurate

**Disadvantages:**

- ☑ Short window of detection
- ☑ Invasive
- ☑ Medically staff collection
- ☑ Time consuming
- ☑ Expensive

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<sup>124</sup> Ibid

<sup>125</sup> Ibid

<sup>126</sup> <https://www.samhsa.gov/sites/default/files/bourland-hair-pigmentation-review-dtab-sept-2014.pdf>

<sup>127</sup> Drug Testing: A White Paper of the American Society of Addiction Medicine (ASAM) 2013

<sup>128</sup> Ibid

<sup>129</sup> Ibid

## G. Blood Testing

Most of the early drug testing used blood as there was no other methodology.<sup>130</sup> A blood test is difficult to adulterate and it is very accurate.

The liver influences the absorption and conversion of drug metabolites in blood.<sup>131</sup> This means only a fraction of the drug reaches the bloodstream. Thus, detection time in blood for drugs is significantly shorter than the other methodologies. In fact, for opioids, cocaine, and amphetamines the detection time in blood is generally 24 hours or less.<sup>132</sup>

Another concern for blood testing is that it requires medically trained staff to obtain a specimen, thus making it difficult for a court to use. It is also time consuming and expensive stemming in part from the requirements that it be treated as a biohazard material.

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<sup>130</sup> Drug Testing: A White Paper of the American Society of Addiction Medicine (ASAM) 2013

<sup>131</sup> Ibid

<sup>132</sup> Ibid



### **III. COLLECTION**

#### **A. Participant Identification**

Each time a participant reports for a drug or alcohol test, their identity must be confirmed. Regardless of how familiar a collector becomes with a participant, their ID should be checked each time they report. This may be done through a valid photo ID of the person. Any of the following may constitute a valid photo ID:

- Driver's license
- Student ID
- Employer's ID
- State issued ID card
- Valid Passport
- Jail booking photo with name

Collectors must confirm that the person in the photo is indeed the person taking the test. If there is any question as to the identification of the person, a second supporting form of ID may be requested. These might include but are not limited to:

- Social Security Card
- Voter's registration card
- Medical Insurance Card
- Car Registration / Insurance
- School ID
- Credit Card(s)

If a participant is unable to produce or does not possess a picture ID then three pieces of non-picture ID (from the list) above may be accepted. The participant's signature should also be checked to ensure a match. To match a signature, the participant may be asked to sign a piece of paper for comparison. Under no circumstances should a participant be identified on the word of another participant.

#### **B. Collection Site**

The collection site should be an area that is easily controlled and has only one entrance/exit. This area is designated for specimen collection only and is not open to the general public. Access to, and the number of individuals involved in, the

processing of specimens should be kept to a minimum. The preferable design is a single stall with no accessible running water. A bluing agent should be added to the water in all toilets. This mitigates the chance of a participant substituting or adulterating a sample. If no bluing agent is available, the collector shall instruct the participant not to flush the toilet until a valid sample has been collected. A sink may be located outside of the collection restroom for hand washing. If this is not possible a moist towelette may be provided to the participant for this purpose.

A work surface directly outside of the collection restroom is necessary for the collector to be able to perform the collection, and testing if using a POCT. A desktop or table should suffice for this purpose. Courts and agencies need to decide as a policy issue whether such testing is performed in the collection restroom, in the presence of the donor, or tested subsequently at some other location outside of the collection restroom.<sup>133</sup>

The work area should also contain a secure storage option in which extra testing supplies may be stowed. Having the supplies stored in close proximity alleviates the need for the collector to leave the area and possibly leave a participant unattended. The collector prior to starting the collection process should gather all supplies needed to collect a sample.

### **C. Specimen Collection**

Before and after the collection process the collector should check the urinal/stall area for any suspicious objects. This observation is to include the toilet or urinal itself, and any other areas in which an adulterant may be stored.

After checking the participant's ID and prior to entering the collection restroom with the participant, the collector should instruct and then observe the participant empty his or her pockets into a designated storage container. In order to ensure the participant isn't attempting to hide anything, they should be asked to remove any excess shirts, coats, jackets and hats.

The participant should be instructed to lift their pant legs one at a time, lift their shirt and run their thumbs around the waistband of their pants. In addition to the above collection procedure, any participant with long or extended fingernails should

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<sup>133</sup> It is recommended that a donor not be asked to acknowledge (i.e. view) an on-site visually-read test result as they have not been trained and accordingly are in no position to verify any observation made by the trained test staff.

have their fingernails checked prior to washing their hands for chemical compounds placed underneath them (a common means to bring in adulterants).

Finally, participants should to be instructed to wash their hands thoroughly with soap and water and dry completely. These actions are designed to prevent an attempt to conceal adulterated specimens and/or contaminants that may be added to their specimen. If an abnormal substance, container, or contraption is observed the participant should be instructed to remove it from his or her person and present it to the collector.

Specimen retention is a crucial component of drug testing.<sup>134</sup> The storage of samples, particularly urine or blood, can be difficult. If the delay between collection and testing is substantial, the court or agency will need to have an appropriate storage area to prevent drug degradation.<sup>135</sup> Therefore collection programs should have adequate refrigerator or freezer and storage facilities to accommodate positive urine samples for a period of no less than 90 days. Urine samples that are being retained for more than one week should be frozen. The temperatures of any storage refrigerators or freezers should be periodically measured and recorded.

Every participant should have the right to challenge an initial positive result through confirmation testing. Participants should be informed quickly that they have tested positive for an illicit substance. If a donor is facing a show cause or violation hearing they may choose to have the sample sent for confirmation. Barring exigent circumstances they should not however, be allowed to undergo independent testing in lieu of being tested by trained personnel assigned to or authorized by the Treatment Court.<sup>136</sup>

Urine and oral fluid swabs generally do not pose a biohazard risk and can be disposed of in regular waste receptacles. Blood or contaminated urine/swabs should be placed in a red, biohazard bag.<sup>137</sup> These bags are sold on the Internet and in medical supply stores. Seal the biohazard bag when it is 3/4 of the way to the top with urine cups. Do not crush the materials to make more room. Store them in a biohazard container, or a plastic garbage can with a lid that covers the entire

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<sup>134</sup> Drug Testing: A White Paper of the American Society of Addiction Medicine (ASAM) 2013

<sup>135</sup> Ibid

<sup>136</sup> Adult Drug Court Standards, Best Practices, and Promising Practices, 52

<sup>137</sup> Urine or swabs with blood in the sample.

opening of the garbage can and seals shut.<sup>138</sup> Then schedule a biohazard pickup.<sup>139</sup> Pickups may be scheduled as needed, or weekly, bi-weekly or monthly.

Participants who are submitting to a PBT test should be void of any objects in their mouth for a period of 15 minutes prior to the test. The donor should not drink, eat, smoke or chew gum prior to the test or while waiting for the test to be performed.

Each donor is supplied with a new, individually wrapped mouthpiece at the beginning of the test. Under no circumstances should mouthpieces be “reused,” even by the same donor.

Participants performing a PBT are advised to take a deep breath and blow into the mouthpiece. Participants need to maintain a constant stream of air for 3-5 seconds; the collector should be able to hear the air whistling in the straw. Results of the PBT test are displayed in a three-digit sequence; however, per the “Michigan State Police Preliminary Breath Testing Training Manual (2011)” results should be truncated to two decimal places. Under no circumstances should the third digit be used to “round up” the result. Participants whose test result is .01 or above are to be given a follow up PBT. This test is to be conducted after a subsequent 15 minute waiting period and will assist in determining if the donor’s breath alcohol content is rising or if it is on the decrease.

The result of the PBT is to be recorded on the donor’s PBT log (see Appendix E for a sample log), the collector must also fill in the date and time of the test and sign their name. Completing all of the fields helps the referring agent to contact the appropriate person should there be any question. This also assists the referring agencies to detect and or investigate suspected fraudulent PBT entries.

Programs need to work with their referring agencies on the way in which PBT results are reported. Ideally positive alcohol tests should be reported within one business day. Courts and referring agencies may also wish to receive weekly or monthly reports detailing the client’s testing activities. A certified breath-testing operator should periodically recalibrate PBTs.<sup>140</sup>

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<sup>138</sup> See also Medical Waste, Public Act and Rules Governing Disposal of Medical Waste, Found at: [https://www.michigan.gov/documents/deq/whm-stsw-mwrp-MW-Reg-Act-Rules\\_257176\\_7.pdf](https://www.michigan.gov/documents/deq/whm-stsw-mwrp-MW-Reg-Act-Rules_257176_7.pdf) for more information

<sup>139</sup> Medical Waste, Public Act and Rules Governing Disposal of Medical Waste, Found at: [https://www.michigan.gov/documents/deq/whm-stsw-mwrp-MW-Reg-Act-Rules\\_257176\\_7.pdf](https://www.michigan.gov/documents/deq/whm-stsw-mwrp-MW-Reg-Act-Rules_257176_7.pdf)

<sup>140</sup> See the Michigan State Police Preliminary Breath Testing Training Manual for the required recalibration frequency according to the state’s regulations.

## D. Witnessed Collections<sup>141</sup>

Except in extreme circumstances, same-sex collectors should monitor participants when providing a sample.<sup>142</sup> Programs must ensure that an adequate number of staff are available at all times so that same sex monitoring criteria are employed. This limits the court's or agency's susceptibility to staff indiscretions or legal action by the participant.<sup>143</sup> Monitoring requires direct observation of the sample submission by the participant to ensure that the sample is from the identified participant and has not been tampered with or adulterated. Collectors should not attempt to collect samples from more than one participant at a time. Such a practice could lead to confusion or inadvertent switching of samples. The collection device should be shown to the participant to satisfy them that it has not been tampered with, and is intact.

For chain of custody reasons, the collection device is to be kept in full view of the collector at all times. All specimen containers must be clearly labeled with the participant's name and a unique identifier. Collectors must complete chain of custody forms (samples can be seen at Appendices I and J) as soon as the sample has been collected. All samples should be refrigerated until ready for transport or testing.

A participant who is allowed to, or needs to provide a new sample for any reason, should not be allowed to leave the testing area. Leaving the testing facility or returning at a later time presents the possibility that adulterants may be reintroduced into the testing process.

When using an oral fluid test, collectors should not allow the participant to place the applicator in the mouth. That could allow the participant to attempt to introduce something onto the pad or into the collection device.

All collectors need to be trained about collection procedures. They also need to be properly trained on the testing equipment. It is imperative that manufacturer's

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<sup>141</sup> See Adult Drug Court Standards, Best Practices, and Promising Practices. *Chapter 7: Drug and Alcohol Testing* (pp. 52-60): 5. Witnessed Collection. Found at: <http://courts.mi.gov/Administration/SCAO/Resources/Documents/bestpractice/ADC-BPManual.pdf>

<sup>142</sup> This is in accordance with Michigan Department of Corrections policy directive #03.03.115 which states "The person taking the sample shall be of the same sex as the offender providing the sample, unless an emergency condition requires otherwise."

<sup>143</sup> Agencies which are unable to comply with this directive should consider testing methodologies which do not involve the collection of urine.

instructions are followed in order to ensure accuracy of test results. Staff collecting urine samples or performing urine tests should be trained directly by the manufacturer and have a certificate acknowledging their competence.

In addition to the training provided by the manufacturers, programs must provide comprehensive and ongoing training to staff in the areas of program policy and procedures. Staff should receive copies of the program policies and procedures and acknowledge their receipt of it through signature. Staff must have knowledge in the areas of testing technology and testing protocol in the event they are called to testify.

Collections agencies that are contracted for services through the State of Michigan or receive state funding should perform background investigations on staff prior to employment. The program will be responsible for running a records check, at a minimum, through ICHAT and OTIS. Employees must not have outstanding warrants, active personal protection orders for domestic violence, or have any pending criminal prosecution. They may not be on probation, parole or otherwise under the jurisdiction of any federal, state, county or local criminal justice agency without prior written approval from the State. Ex-offenders may not be considered for employment until they have been discharged from all sentences including parole and probation for a minimum period of five years.<sup>144</sup>

Proper direct observation collection procedures that are followed will limit or prevent participants from attempting to subvert the test.

### **E. Valid Specimens<sup>145</sup>**

Collectors must be vigilant to ensure that a specimen is not tampered with or adulterated.<sup>146</sup> There are a number of methods and procedures that can ensure that a participant does not adulterate or dilute their test specimen.

Samples that appear unusual in color, have an odor of bleach, or appear to be bubbly or fizzy are all indications that adulteration may have occurred.

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<sup>144</sup> Standard language in State of Michigan Department of Corrections contracts

<sup>145</sup> See Adult Drug Court Standards, Best Practices, and Promising Practices. *Chapter 7: Drug and Alcohol Testing* (pp. 52-60): 4. Scientifically Valid Drug Testing Methods. Found at: <http://courts.mi.gov/Administration/SCAO/Resources/Documents/bestpractice/ADC-BPManual.pdf>

<sup>146</sup> Drug Testing: A White Paper of the American Society of Addiction Medicine (ASAM) 2013

Collectors should make the participant stop urinating midstream and then inspect the toilet after a participant's void to safeguard against such events.

### **Practice Tip**

If a participant is unable to provide an adequate sample volume after three attempts or chooses not to provide a second or third sample, the test should be considered as incomplete and the referring court notified.

Test results of participants who flush the toilet while voiding or directly after completion of their void should be considered suspicious. Participants will flush adulteration tools, strips, bags, etc., down the toilet.

If a collector is using an Urine Collection Device (UCD) the participant should be given a specimen device with temperature strip and asked to provide at least a 30 mL sample. When the participant is done voiding they should place the

sample on a work surface in view of the collector. From this point forward the sample should not leave the sight of the collector until either the test has been completed and sample discarded, or the sample has been sealed with a tamper-evident seal.

The collector should check to ensure that there is an adequate sample volume – at least 30 mL. If the sample volume is not adequate, this should be noted on the Chain of Custody form. The participant must be informed that they must test again. When the participant is ready to try again, they will be given a new specimen collection container. The new sample cannot be added to the previous sample in order to obtain 30 mL or more.

If a participant is not able to provide an adequate sample volume after three attempts or chooses not to provide a second or third sample, the test should be considered as incomplete and the referring court notified.

If the participant is able to provide an adequate sample volume then it is important to check the temperature. All specimens must register between 90 -100 degrees Fahrenheit<sup>147</sup> on the temperature strip to be considered a valid sample.<sup>148</sup> Federal

<sup>147</sup> Note: The federal program requires the temperature because of not having direct observation (except under special circumstances). But because of direct observation, measurement of urine temperature should not be necessary, if collectors are doing their jobs properly.

work place standards mandate that the temperature be read within 4 minutes of the donation.<sup>149</sup> A temperature that fails to register in the prescribed range should suggest to the collector that the sample was substituted or adulterated. This should be noted on the Chain of Custody form and the participant should be requested to produce another sample. Due to the serious implications of a sample failing to register an acceptable temperature, the participant should be questioned about the anomalies, and the answers recorded.

### Tampering with Urine Specimens

A problem with urine specimens is that they are subject to tampering, by water loading, use of another person's clean specimen, or by adulteration.<sup>150</sup> Thus, all samples should be checked for adulterants prior to the drug test being conducted or prior to the sample being poured and sealed.

The primary method of adulterating a specimen is by drinking excessive amounts of water.<sup>151</sup> Normal urine color varies from pale yellow to dark amber depending upon how diluted or concentrated it is.<sup>152</sup> When urine appears colorless it is a sign either that the participant is ill or water-loading.<sup>153</sup> Twenty-four to thirty-six ounces of water can dilute urine up to ten times within 1/2 hour and the effect may last for hours.<sup>154</sup> The practice may produce a negative test result<sup>155</sup> even though illicit drugs or their metabolites are present within the participants' system.<sup>156</sup>

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<sup>148</sup> Ibid

<sup>149</sup> <https://www.gpo.gov/fdsys/pkg/FR-2017-01-23/pdf/2017-00979.pdf>

<sup>150</sup> Drug Testing: A White Paper of the American Society of Addiction Medicine (ASAM) 2013

<sup>151</sup> Ibid

<sup>152</sup> <http://www.mayoclinic.org/diseases-conditions/urine-color/basics/causes/con-20032831>

<sup>153</sup> Drug Testing: A White Paper of the American Society of Addiction Medicine (ASAM) 2013

<sup>154</sup> <http://druglibrary.org/schaffer/misc/drinkwater.htm>

<sup>155</sup> Some drug concentrations are so high that even supranormal fluid consumption will not allow the concentration to drop below the cutoff.

<sup>156</sup> Drug Testing: A White Paper of the American Society of Addiction Medicine (ASAM) 2013



A study of adults in the United States found urine creatinine concentrations do vary by sex, by age, by ethnicity, and vary somewhat within a given individual during the day and on a day-to-day basis.<sup>157</sup> It also found that less than 1% of the creatinine level results are greater than 400 mg/dL, and less than 1% of the results are below 20 mg/dL.<sup>158</sup> This means that low creatinine levels are rare. Except in specialty court populations where the incidence of low creatinine in drug users is up to ten times greater than in the general population.<sup>159</sup> This is why testing for specimen validity of a suspect sample is critical.

Urine specimens should be tested on a regular and random basis, along with whenever a collector suspects tampering based upon urine abnormality for creatinine or specific gravity.<sup>160</sup>

There are several readily accessible over the counter substances that attempt to “mask” illegal drug use. The substances usually result in one of the above-mentioned anomalies. Adulterants come in two varieties: pre-collection and post collection. There is no evidence that pre-collection products work beyond the water

### **Policy Considerations on a Dilute Test**

The referring agency and/or Treatment Court must develop a policy for dealing with urine specimens that have been reported as dilute. The referring agency could adopt any of the following actions or develop their own:

1. Consider the test a “Positive” and sanction according to policy.
2. Consider the test a “Dilute” with unique sanctions.
3. Consider the test a “Tamper” with more severe sanctions than a positive.
4. Allow for one “Dilute” sample per phase / quarter, etc.

<sup>157</sup> Barr DB, Wilder LC, Caudill SP, Gonzalez AJ, Needham LL, Pirkle JL. Urinary creatinine concentrations in the U.S. population: implications for urinary biologic monitoring measurements. US National Library of Medicine National Institutes of Health 2005

<sup>158</sup> Ibid

<sup>159</sup> Paul L. Cary A Comprehensive Review of Drug Detection for Court Professionals 2012. Obtained from <https://jpo.wrlc.org/bitstream/handle/11204/4303/A%20Comprehensive%20Review%20of%20Drug%20Detection%20for%20Court%20Professionals.pdf?sequence=1>

<sup>160</sup> Douglas B. Marlowe, J.D., Ph.D, Carson L. Fox, Jr., J.D., et al., Adult Drug Court Best Practice Standards Volume II, National Association Of Drug Court Professionals, Alexandria, Virginia, 2015.

loading that is required to take them.<sup>161</sup> Post collection products can work.<sup>162</sup> The participant generally adds these products to the urine during the testing process, which is why it is so important for a collector to visually observe the specimen being collected. The main ingredients for these products are: Table salt (NaCl), bleach, liquid soap, crystalline drain cleaners, sodium hydroxide, chromium VI, and peroxide.

There are a variety of assays on the market that analyze urine samples for adulterants. At a minimum the adulteration test should check for: creatinine, Nitrite, pH, bleach, and specific gravity. These tests are easy to administer and are designed to determine if a urine sample has been adulterated or tampered with in some fashion by the participant.

If the program is using a Point of Collection Test (POCT) device, the collector, in full view of the participant, should pour a small amount of the sample into a second container.<sup>163</sup> The sample in the second container should be tested for adulterants<sup>164</sup>. Once the results of the adulteration test have been registered the screening test may proceed. If the POCT has a dip mechanism it should be dipped into the second container, or a pipette is used to draw a small amount of urine to place onto the cassette. These tests are usually strips that are dipped into the sample that causes a chemical reaction that turns the strip a particular color. The strip is then compared to a chart for “normal” ranges. Adulteration tests may also be built into the sample device. If the initial test has a positive result, the sample in the original container is sealed and then prepared for submission of a confirmation test. If the initial test has a negative result the remaining urine sample may be discarded. A sample should only be discarded after the adulteration test and the initial assay test result are negative.

If the program is using an automated laboratory analyzer, the sample should be split into a second container as described above. The split sample is tested for adulterants and the outcome recorded. The original container is immediately sealed with a tamper resistant seal and stored for either transport or testing. Automated laboratory

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<sup>161</sup> Paul L. Cary A Comprehensive Review of Drug Detection for Court Professionals 2012.  
Obtained from:

<https://jpo.wrlc.org/bitstream/handle/11204/4303/A%20Comprehensive%20Review%20of%20Drug%20Dectection%20for%20Court%20Professionals.pdf?sequence=1>

<sup>162</sup> Ibid

<sup>163</sup> See Appendix A – Glossary: Split Sample.

<sup>164</sup> Note: Some POCTs have adulterant test strips built in.

analyzers also provide assays for adulterants that are loaded as part of a drug test assay array. These analyzers may measure for the pH, specific gravity and creatinine concentration of the sample.<sup>165</sup>

As oral fluid testing is more closely related to blood concentration, rather than urine, the chance of adulteration of saliva specimens appears to be very low due to the direct observation necessary for the test.<sup>166</sup> However, the adulteration of oral fluid samples has not been systematically investigated.<sup>167</sup> Oral fluid specimens are correlated with saliva concentrations and there are now products on the market that claim to suppress these concentrations reducing the effectiveness of the test. Recently, this claim was given some foundation by a study that said diminished saliva production impacted upon the effectiveness of oral fluid testing.<sup>168</sup> There are now products on the market that claim to suppress these concentrations reducing the effectiveness of the test.<sup>169</sup> While this claim seems doubtful, as there is no scientific support for it, neither is there any evidence against it.

Sweat patches or devices, like oral fluids seem to be more resistant to tampering.<sup>170</sup> The patches pucker when interfered with, so an attempt to subvert it is clearly visible.<sup>171</sup> However, accidental damage to a patch can occur from daily activities like showering, creating the possibility of misidentification of deliberate adulteration.<sup>172</sup> Donors should be instructed to immediately report any patch that starts to become loose, peeling, or otherwise damaged.

On the other hand it is possible to tamper with transdermal alcohol monitoring devices.<sup>173</sup> The majority of the attempts use some form of obstruction between the

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<sup>165</sup> <https://tools.thermofisher.com/content/sfs/manuals/10009579-DRI-Creatinine-Detect-EN.pdf>

<sup>166</sup> Wendy M. Bosker, Marilyn A. Huestis, Oral Fluid Testing for Drugs of Abuse, 2009  
<http://clinchem.aaccjnls.org/content/clinchem/55/11/1910.full.pdf>

<sup>167</sup> Ibid

<sup>168</sup> Drug Testing: A White Paper of the American Society of Addiction Medicine (ASAM) 2013

<sup>169</sup> Amitava Dasgupta, PhD The Effects of Adulterants and Selected Ingested Compounds on Drugs-of-Abuse Testing in Urine, Clinical Chemistry, 2007

<sup>170</sup> Drug Testing: A White Paper of the American Society of Addiction Medicine (ASAM) 2013

<sup>171</sup> Ibid

<sup>172</sup> Ibid

<sup>173</sup> McKnight, A. S., Fell, J. C., & Auld-Owens, A. (2012, August). Transdermal alcohol monitoring: Case studies. (Report No. DOT HS 811 603). Washington, DC: National Highway Traffic Safety Administration. 2012

device and the participant's skin in order to block the sensors.<sup>174</sup> There have also been attempts to remove the device tampering with the strap and then replacing it.<sup>175</sup>

On site breath testing, like oral fluid tests has little likelihood of being tampered with. So long as the force of the breath blow is sufficient there seems little that a participant can do to affect the test.

In-car and home breath devices pose a different problem. Attempts to tamper with ignition interlock devices (IID) in automobiles has been so widespread that one study found twenty-one percent of ignition interlock drivers were found to have tampered with the device.<sup>176</sup> The study listed numerous examples of tampering ranging from; "using a mechanical air blower to provide a bogus breath sample, having another person blow into the IID, or physically tampering with wiring or the IID itself."<sup>177</sup> The perception that tampering with IIDs was widespread caused a number of states to pass laws to criminalize it.<sup>178</sup>

The *Michigan DWI/Sobriety Court Ignition Interlock Evaluation* however established that this tampering rate could be significantly reduced.<sup>179</sup> In that study, just over one percent of the participants attempted to tamper with their interlock.<sup>180</sup> The placement of cameras on the devices and the requirement of monthly maintenance appointments when technicians can inspect the devices were largely responsible for that reduction.<sup>181</sup>

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<sup>174</sup> Ibid

<sup>175</sup> Paul R. Marques, A. Scott McKnight, EVALUATING TRANSDERMAL ALCOHOL MEASURING DEVICES, National Highway Traffic Safety Administration 2007

<sup>176</sup> Darrin T. Grondel, Evaluation of the Washington State Ignition Interlock Pilot Program 2009, Washington Traffic Safety Commission, 2014

<sup>177</sup> Ibid

<sup>178</sup> Ignition Interlock Device Guidelines for DWI Courts, the National Center for DWI Courts. <http://www.nadcp.org/sites/default/files/ncdc/Guidelines%20for%20the%20Use%20of%20Ignition%20Interlock%20Devices%20in%20DWI%20Courts%20-%20Final.pdf> 2010

<sup>179</sup> Christopher A. Kierkus, Ph.D., Brian R. Johnson, Ph.D. Michigan DWI/Sobriety Court Ignition Interlock Evaluation, Michigan Association of Treatment Court Professionals, 2015. Obtained from: <http://courts.mi.gov/Administration/admin/op/problem-solving-courts/Drug/Documents/Ignition%20Interlock%20Device%20Report%20-%20revised.pdf>

<sup>180</sup> Ibid

<sup>181</sup> Ibid

## IV. RESULTS<sup>182</sup>

Drug tests must be based upon scientifically valid and reliable results.<sup>183</sup> The reasons for this are simple: accuracy and admissibility.

Courts should only use accurate tests, both to protect the rights of a participant from false accusations, and to ensure that they are not using forbidden substances. To be admissible in a court proceeding, a test must also be scientifically accurate.<sup>184</sup>

Forensic drug testing focuses on results that can withstand legal challenges.<sup>185</sup> The test results must comply with the rules of evidence in any Treatment Court proceeding<sup>186</sup>. However, the results must be reliable and they also must be obtained quickly.

### Results for Drug Testing

- ☑ Tests must use scientifically valid and reliable methods.
- ☑ Confirmation with an instrumented test (GC/MS or LC/MS/MS) virtually eliminates the odds of a false positive result.
- ☑ Timing is one of the most influential factors for success.
- ☑ The sooner sanctions and incentives are delivered, the better the results.
- ☑ Negative test results no longer than 1 business day to produce, and if confirmation testing is requested for a positive test, results take no more than 2 days.

<sup>182</sup> See Adult Drug Court Standards, Best Practices, and Promising Practices. *Chapter 7: Drug and Alcohol Testing* (pp. 52-60): 4. Scientifically Valid Drug Testing Methods. Found at: <http://courts.mi.gov/Administration/SCAO/Resources/Documents/bestpractice/ADC-BPManual.pdf>

<sup>183</sup> Meyer, W. (2011). Constitutional and legal issues in drug courts. In D.B. Marlowe & W.G. Meyer (Eds.), *The drug court judicial benchbook* (pp. 159-180). Alexandria, VA: National Drug Court Institute. Available at [http://www.ndci.org/sites/default/files/nadcp/14146\\_NDCI\\_Benchbook\\_v6.pdf](http://www.ndci.org/sites/default/files/nadcp/14146_NDCI_Benchbook_v6.pdf)

<sup>184</sup> Ibid

<sup>185</sup> Drug Testing: A White Paper of the American Society of Addiction Medicine (ASAM) 2013

<sup>186</sup> Ibid. See also *Daubert v. Merrell Dow Pharmaceuticals*, 509 U.S. 579 (1993). The Daubert standard provides a rule of evidence regarding the admissibility of expert witnesses' testimony during United States federal legal proceedings and it has been adopted by a majority of the states.

Treatment Courts that have drug test results within 48 hours are significantly more effective than courts that wait longer.<sup>187</sup> A Treatment Court adhering to best practices should have all test results including confirming tests within 48 hours from production of the sample.<sup>188</sup>

Under no circumstances should missed tests be tolerated in a specialty court setting except under exceptional circumstances. Missed tests should be treated as a “positive” test and sanctioned accordingly. Make-up tests should only be granted by the Treatment Court, and should only be done in rare, well-documented situations. Participants, who miss tests but report the following day, may be doing so in order to give themselves more time to eliminate substances from their systems therefore increasing their chances of testing negative. The testing program should never allow anyone to test on a day other than their assigned day except with prior approval from the referring agency.

#### **A. Reliable Results<sup>189</sup>**

If the screening test is negative and the sample has not been adulterated

### **Practice Tip**

Under no circumstances should missed tests be tolerated in a specialty court setting except under exceptional circumstances. Missed tests should be treated as a “positive” test and sanctioned accordingly.

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<sup>187</sup> Carey, S.M., Mackin, J.R., & Finigan, M.W. (2012). What works? The ten key components of drug court: Research-based best practices. *Drug Court Review*, 8(1), 6–42.

<sup>188</sup> See Adult Drug Court Standards, Best Practices, and Promising Practices. *Chapter 7: Drug and Alcohol Testing* (pp. 52-60): 6. Chain of Custody and Results. Found at: <http://courts.mi.gov/Administration/SCAO/Resources/Documents/bestpractice/ADC-BPManual.pdf>

<sup>189</sup> See Adult Drug Court Standards, Best Practices, and Promising Practices. *Chapter 7: Drug and Alcohol Testing* (pp. 52-60): 4. Scientifically Valid Drug Testing Methods. Found at: <http://courts.mi.gov/Administration/SCAO/Resources/Documents/bestpractice/ADC-BPManual.pdf>

the remaining sample should be poured in the urinal/toilet and the collection container discarded in the proper receptacle consistent with any local or state biohazard disposal requirements. The negative test result should be recorded.

On some POCTs “a faint-line” result can occur. This happens when the test band is barely visible, is broken or is faint. In these instances the collector / program should follow the packet insert directions exactly as written. Most manufacturers will advise that if the test band is visible at all, regardless if it is faint, broken or otherwise, that it is a negative test.

If the test is positive, the participant should be questioned about time of last use and their response should be recorded.

A policy regarding the handling of positive test results for confirmation testing should be developed in cooperation with the referring agency and/or Treatment Court. One or more of the following options could be employed regarding positive immunoassay tests for confirmation testing:

- 1) All positives are sent for confirmation testing; or
- 2) If the participant has a valid prescription for which a known cross reaction may occur, a confirmation may not be necessary each time the donor is tested. However, random confirmations on these positive tests will ensure that no other substances are being used or that the prescription is being used as directed; or
- 3) The participant admits to recent prohibited substance use and therefore a confirmatory test is not necessary. The court accepts the participant’s statement as confirmation. The participant should initial or sign an acknowledgement of their recent drug usage. If the participant does not admit to use, then the test is sent for confirmation. There may be an additional sanction if the confirming test is also positive – one for the positive test and one for failure to disclose use of a prohibited substance.

Individual confirmation specimens should be tracked using the unique number assigned to it. Specimens are considered to be in the custody of the collector, as long as the collector remains in the same secured, limited access area. If the collector leaves this area, custody of the specimens must be transferred to another collector, or placed in secure temporary storage. If the secured area contains multiple rooms, once the collector leaves one room in the section, the custody of the specimens must be transferred to another collector or secure temporary storage.

Once the urine sample has been collected a Chain of Custody form must be completed. This form ensures the identity and integrity of the sample through transport, testing and reporting of results. The form should contain the participant's unique identifier that then pairs it with the sample.<sup>190</sup> It is on this form that both the participant and the collector sign indicating that the sample has not left their sight since its collection. The form should also have an area where the collector may note any comments or other observations. The chain of custody form accompanies the sample to a confirmation laboratory.

### **Practice Tip**

Once the urine sample has been collected a Chain of Custody form must be completed. This form ensures the identity and integrity of the sample through transport, testing and reporting of results.

Unlike federal workplace testing or other federally mandated testing, criminal justice and treatment testing does not necessarily require confirmation, unless a participant denies the accuracy of the test. Confirmation tests commonly called GC/MS or LC/MS/MS tests are more scientifically precise than immunoassay tests.<sup>191</sup> If a participant denies substance use in the face of a positive screening

test, Michigan Drug Treatment Court Best Practices requires, and toxicology experts recommend, performing a confirming test.<sup>192</sup>

A simple re-screen using an immunoassay test of the initial sample is not sufficient to meet confirmation testing standards.<sup>193</sup> All confirmations should be performed at the laboratory's Limit of Quantitation (LOQ) or Limit of Detection (LOD).<sup>194</sup> Gas

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<sup>190</sup> Kadehjian, L., Dr. (June 2010). Urine Drug Testing in Drug Court Programs. Michigan Association of Drug Court Professionals Newsletter,

<sup>191</sup> See Appendix A – Glossary

<sup>192</sup> See Adult Drug Court Standards, Best Practices, and Promising Practices. *Chapter 7: Drug and Alcohol Testing* (pp. 52-60): 4. Scientifically Valid Drug Testing Methods. Found at: <http://courts.mi.gov/Administration/SCAO/Resources/Documents/bestpractice/ADC-BPManual.pdf>

<sup>193</sup> See Appendix A – Glossary

<sup>194</sup> See Adult Drug Court Standards, Best Practices, and Promising Practices. *Chapter 7: Drug and Alcohol Testing* (pp. 52-60): 4. Scientifically Valid Drug Testing Methods. Found at:



Chromatography-Mass Spectrometry (GC/MS) and similar MS methods such as LC/MS/MS, combine the features of chromatography and mass spectrometry to definitively identify and quantitate different substances within a test sample.<sup>195</sup>

GC/MS has been widely noted as the “gold standard” for forensic substance identification because it performs a “specific test” for the substance in question.<sup>196</sup> A specific test positively identifies the actual presence of a particular substance in a sample.<sup>197</sup>

A helpful and widely used analogy for the GC-MS method can be found in the document *Drug Toxicology for Prosecutors: Targeting Hardcore Impaired Drivers*.<sup>198</sup>

(I)nside the GC oven is a long, thin, coiled column; think of this column as a racetrack with different types of vehicles (drugs) traveling around it. Some cars are small and fast (methamphetamine), others big and slow(alprazolam); the road conditions (internal coating of the column) also dictate which cars travel faster—cars with special tires might perform better in the snow, etc. As the cars travel around the track at different speeds they become separated and ultimately each crosses the finish line (the MS detector) and generates a unique ‘retention time.’ At the finish line, each car is involved in a serious collision and is essentially blown apart by the MS; this generates pieces (molecular fragments) of the car, such as a bumper, hood, headlight, etc. These pieces are then compared with other cars of the same make, model and year (drug standards)—which allows for a near perfect overlay of car parts (unique drug fragmentation patterns) and finish times (retention times) for a positive drug identification. The GC-MS identification is based fundamentally upon how drugs are ‘put together’ or arranged chemically, including molecular attractions, which ultimately dictates how a molecule or drug will fragment or ‘blow up.’

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<http://courts.mi.gov/Administration/SCAO/Resources/Documents/bestpractice/ADC-BPManual.pdf>

<sup>195</sup> Drug Testing: A White Paper of the American Society of Addiction Medicine (ASAM) 2013

<sup>196</sup> Ibid

<sup>197</sup> Ibid

<sup>198</sup> Sarah Kerrigan, Ph.D., *Drug Toxicology for Prosecutors: Targeting Hardcore Impaired Drivers*, American Prosecutors Research Institute, 2004

GC/MS testing is typically done in a reference laboratory setting and it is critical when sending samples for further testing that the exact same sample is sent that was initially screened as documented with proper chain of custody procedures.<sup>199</sup>

Liquid chromatography-mass spectrometry (LC/MS and LC/MS/MS) is a technique that combines the physical separation capabilities of liquid chromatography with the mass analysis capabilities of mass spectrometry. LC/MS is a powerful technique used for many applications that has very high sensitivity and selectivity.<sup>200</sup> Generally its application is oriented towards the specific detection of illegal substances even in the presence of interfering substances like adulterants.<sup>201</sup>

Every program conducting drug tests for criminal justice clients should have a reference lab.<sup>202</sup> A reference lab is used to confirm positive initial screening or immunoassay tests.<sup>203</sup> All reference labs should be able to provide expert witness testimony as well as access to the certifying scientist in the event of questions regarding the test result.<sup>204</sup>

A reference lab should be certified through Substance Abuse and Mental Health Services Administration (SAMHSA), a list of labs can be found at the link listed below.<sup>205</sup> Laboratories certified by SAMHSA must meet strict guidelines in order to conduct drug and validity testing on urine samples for the federal government.<sup>206</sup> These labs must undergo three rounds of performance testing plus an on-site inspection to be certified. In order to remain certified they must undergo 2 on-site inspections and 4 rounds of proficiency testing yearly.

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<sup>199</sup> Drug Testing: A White Paper of the American Society of Addiction Medicine (ASAM) 2013

<sup>200</sup> Ibid

<sup>201</sup> Ibid

<sup>202</sup> See Adult Drug Court Standards, Best Practices, and Promising Practices. *Chapter 7: Drug and Alcohol Testing* (pp. 52-60): 4. Scientifically Valid Drug Testing Methods. Found at: <http://courts.mi.gov/Administration/SCAO/Resources/Documents/bestpractice/ADC-BPManual.pdf>

<sup>203</sup> Drug Testing: A White Paper of the American Society of Addiction Medicine (ASAM) 2013

<sup>204</sup> Note that lab scientists are often only fact witnesses about their performance of the testing. Yes, some may also be expert witnesses in clinically interpreting the test results, but many labs prefer to have any such clinical interpretations provided by someone other than the lab personnel. Whether the lab will provide such expert witnesses for interpretation needs to be established in any contract with the laboratory for the provision of such services.

<sup>205</sup> <https://www.samhsa.gov/workplace/resources/drug-testing/certified-lab-list>

<sup>206</sup> <https://www.samhsa.gov/sites/default/files/workplace/certified-labs-list-april-2017.pdf>

Other accreditation programs include the College of American Pathologists (CAP's) Laboratory Accreditation Program.<sup>207</sup> CAP is an internationally recognized program based on the CAP Laboratory Accreditation Standards.<sup>208</sup> It is designed to go well beyond regulatory compliance, as the program provides a solid foundation for quality practices and helps laboratories achieve the highest standards of excellence to positively impact patient care. Laboratories that are CAP certified are inspected and are required to participate in various proficiency testing programs.<sup>209</sup>

CAP Forensic Drug Testing (FDT) certification is a specialty accreditation available through CAP for laboratories that perform confirmatory drug testing on urine, oral fluid, and hair for non-medical purposes.<sup>210</sup> The program also accepts laboratories that perform urine screen-only testing by non-waived methods.<sup>211</sup>

The confirmation testing should be performed by a CAP FDT accredited or SAMSHA certified laboratory that is willing to report confirmation results in a qualitative (not quantitative) manner (positive or negative). Following SAMSHA cutoff guidelines removes any guesswork on the part of staff. Using a non-accredited laboratory can lead to correct screening identifications of

### **Practice Tip**

Treatment Courts should not use urine drug concentrations (numeric values) for the purpose of interpretation.

A court's response (Incentive or Sanction) on a drug test result should be based entirely on the qualitative result (positive or negative).

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<sup>207</sup> CAP Laboratory Accreditation Program process can be found at:  
[http://www.cap.org/web/home/lab/accreditation/laboratory-accreditation-program?\\_afLoop=387414100622863#!%40%40%3F\\_afLoop%3D387414100622863%26\\_adf.ctrl-state%3Dokzq0rnti\\_4](http://www.cap.org/web/home/lab/accreditation/laboratory-accreditation-program?_afLoop=387414100622863#!%40%40%3F_afLoop%3D387414100622863%26_adf.ctrl-state%3Dokzq0rnti_4)

<sup>208</sup> Ibid

<sup>209</sup> Ibid

<sup>210</sup> Ibid

<sup>211</sup> Some tests are granted a “waived status” under the Clinical Laboratory Improvement Amendments (CLIA), while other tests are not, thus they are non-waived. For a list of tests granted waived status, go to: <https://www.cms.gov/Regulations-and-Guidance/Legislation/CLIA/Downloads/waivetbl.pdf>

drug use being reversed at the confirmation stage because of the confirmation cutoff.

These labs are often used for a variety of applications, including determining if even trace amounts of a substance are present for criminal prosecution, a situation that renders cutoff levels inapplicable. They may report the quantitative result of the test (actual nanograms of the substance), without a positive or negative notation. These confirmation reports may list the analyte of the drug along with the drug itself. For instance a confirmation report for cocaine may list Benzoyllecgonine 150, Cocaine 0. Benzoyllecgonine is the analyte tested for in a cocaine confirmation urine test. This would not be a negative confirmation, but rather a positive confirmation for cocaine.

This style of reporting can be confusing and could lead to a misinterpretation of the results without proper guidance/training. Using a confirmatory lab that is willing to report confirmation results in a qualitative manner (positive or negative) according to SAMSHA cutoff guidelines removes any guesswork on the part of staff.<sup>212, 213</sup>

SAMSHA cutoff levels have been developed by professionals to ensure that the detection accuracy can be scientifically supported and ensures that legal protections regarding evidentiary admissibility are met.

Treatment Courts should be aware of the cutoff levels being employed by the various programs to which they refer. In order to ensure integrity and fairness throughout the system all Treatment Court programs should be using the same cutoff levels for screening and confirmation. Screening cut off levels for Point of Contact Devices can be found on the manufacturer's insert.

There are some programs that may wish to employ lower initial screening cut off levels. Using a lower screening cutoff level can lengthen the amount of time during which a drug may be detected within a person's system. Lower cutoff levels may also more readily detect individuals who continue to use very small amounts of illegal substances. However, using lower screening cutoffs increases the risk of claims of innocent exposure. Immunoassay screening cutoffs serve as the

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<sup>212</sup> For a complete discussion on eliminating the use of drug test levels in Treatment Courts, see: Urine Drug Concentrations: The Scientific Rationale for Eliminating the Use of Drug Test Levels in Drug Court Proceedings, Fact Sheet, National Drug Court Institute. Found at: [https://www.ndci.org/wp-content/uploads/Urine\\_Drug\\_Concentrations.pdf](https://www.ndci.org/wp-content/uploads/Urine_Drug_Concentrations.pdf)

<sup>213</sup> [https://www.transportation.gov/odapc/part40/40\\_87](https://www.transportation.gov/odapc/part40/40_87) See Appendices C (Federal Regulated Transportation) and/or D (Federal Workplace) – Drug Testing Cutoff Levels

"gatekeeper" ideally with sufficient sensitivity to accurately identify recent use without identifying innocent exposures.

Most SAMSHA laboratories also comply with the Clinical Laboratory Improvement Amendments (CLIA). CLIA regulates laboratory testing and require clinical laboratories to be certificated by their state as well as the Center for Medicare and Medicaid Services (CMS) uses CLIA to regulate laboratory testing and to require clinical laboratories to be certificated by their state before they can accept human samples for diagnostic testing.<sup>214</sup> These lab requirements are implemented at the state level and there is a State Operations Manual to provide guidance.<sup>215</sup>

The CMS has the responsibility for implementing the CLIA Program.<sup>216</sup> The regulations cover laboratory certification requirements and fees, personnel qualifications and responsibilities, quality systems, proficiency testing, and other provisions.<sup>217</sup>

With the increase in the use of Medication-Assisted Treatment, (MAT) invariably each court will encounter participants who are taking prescribed medication that may cause a positive test result. Drug testing facilitates need to work with the courts and referring agencies to determine how medication issues will be handled. Either the drug testing program or the referring agency will need to track the medications a client has been prescribed. Documentation of medications is necessary for instances of cross reactivity. All prescriptions must be verified to ensure the prescription is in the participant's name, what is being prescribed, and the dosage. This may be accomplished by having the client provide a copy of the pharmacy information printout that will include the pharmacology of the medication.

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<sup>214</sup>

<https://www.fda.gov/MedicalDevices/DeviceRegulationandGuidance/IVDRegulatoryAssistance/ucm124105.htm> There is some controversy about whether testing within a Drug Court context is considered "clinical" or "forensic" for purposes of CLIA regulations (with forensic being exempt from CLIA). So even a Drug Court's initial screening program may be considered by CMS to be "clinical" if the test results directly affect treatment, and thus be required to comply with CLIA registration and other lab requirements. As of this time, the State of Michigan has not taken this position.

<sup>215</sup> Ibid

<sup>216</sup> <https://www.cms.gov/Regulations-and-Guidance/Guidance/Manuals/downloads/som107c06.pdf>

<sup>217</sup> Ibid

Positive tests as a result of medication should not be reported as a negative test. Instead, the actual result of the test should be reported with an explanation that the medication might have caused the positive result. All staff involved with individuals who drug test should have a basic knowledge of what prescription drugs

### **Practice Tip**

Passive smoke inhalation does not explain positive marijuana results at typical cutoffs (50 ng/mL).

Repeated positive results for marijuana after the elimination benchmark has passed should be viewed as evidence of ongoing substance misuse.

may cause a positive test result. If there is any question about the possibility of cross reactivity, programs should consult the manufacturer's insert, website or contact the manufacturer directly. A quantitative test may be used to determine if the drug is being used as directed or is being misused or supplemented.

Participants should not be allowed to use "medical marijuana" as part of a MAT program.<sup>218</sup> There is almost no scientific proof that supports the

use of smoked marijuana as a medicine.<sup>219</sup> A meta-analysis of 79 studies examining the risks and benefits of cannabinoid therapies found only 4 that appeared to be unbiased.<sup>220</sup> None of them support that idea that marijuana should be allowed under the concept of MAT.<sup>221</sup> NADCP has specifically declared that it:

Recommends Drug Courts require convincing and demonstrable evidence of medical necessity presented by a competent physician with expertise in addiction psychiatry or addiction medicine before permitting the use of smoked or raw marijuana by participants for ostensibly medicinal purposes;<sup>222</sup>

<sup>218</sup> See Appendix B for a short discussion on the elimination of marijuana in urine specimens with new Treatment Court participants and establishing an elimination benchmark.

<sup>219</sup> Charles J Lockwood, MD, MHCM, Medical marijuana: An oxymoron and a risk to fetuses, Contemporary OB/GYN, 2017 <http://contemporaryobgyn.modernmedicine.com/contemporary-obgyn/news/medical-marijuana-oxymoron-and-risk-fetuses>

<sup>220</sup> Ibid

<sup>221</sup> Ibid

<sup>222</sup> Position Statement on Marijuana, National Association of Drug Court Professionals, approved by the Board of Directors on December 15, 2012. Obtained from:

As part of their medically assisted program, courts may wish to consider the use of a Medical Review Officer (MRO). The purpose of a MRO is to determine if a positive drug test result could be caused by anything other than illicit drug use (e.g., a prescription). The MRO would contact the participant to discuss medications and provide an answer to the Treatment Court about the possibility of cross reactivity. However, a MRO may not be able to determine if a person is abusing a prescribed medication or taking it as directed. While some specialty courts have chosen to use MROs, a basic knowledge of cross reactivity on the part of staff can achieve the same result without the additional expense.

## **B. Rapid Results<sup>223</sup>**

As Douglas Marlowe has written: “timing is everything.”<sup>224</sup> How quickly test results are returned is as important as its validity.<sup>225</sup> Test timing is one of the most influential factors for Treatment Court success.<sup>226</sup> There is wide spread agreement that the sooner sanctions are imposed after an infraction, the better the results.<sup>227</sup> It is equally well accepted that rewards are four times more effective than sanctions.<sup>228</sup> Thus it is also true that the sooner rewards are given the greater the

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<http://www.nadcp.org/sites/default/files/nadcp/NADCP%20Board%20Position%20Statement%20-%20Marijuana.pdf>

<sup>223</sup> See Adult Drug Court Standards, Best Practices, and Promising Practices. *Chapter 7: Drug and Alcohol Testing* (pp. 52-60): 6. Chain of Custody and Results. Found at:

<http://courts.mi.gov/Administration/SCAO/Resources/Documents/bestpractice/ADC-BPManual.pdf>

<sup>224</sup> Douglas B. Marlowe, JD, PhD, Behavior Modification 101 for Drug Courts: Making the Most of Incentives and Sanctions, National Drug Court Institute, 2012

<sup>225</sup> Carey, S.M., Mackin, J.R., & Finigan, M.W. (2012). What works? The ten key components of drug court: Research-based best practices. *Drug Court Review*, 8(1), 6-42.

<sup>226</sup> Douglas B. Marlowe, J.D., Ph.D, Carson L. Fox, Jr., J.D., et al., Adult Drug Court Best Practice Standards Volume II, National Association Of Drug Court Professionals, Alexandria, Virginia, 2015.

<sup>227</sup> Ibid

<sup>228</sup> Douglas B. Marlowe, JD, PhD, Behavior Modification 101 for Drug Courts: Making the Most of Incentives and Sanctions, National Drug Court Institute, 2012

impact on the participant.<sup>229</sup> When rapid rewards and sanctions are used in combination the impact is even greater.<sup>230</sup>

As chemical tests are the only objective basis for sanctions and incentives for use or non-use the results must be available before a status hearing. Therefore, negative test results should take no longer than one business day to produce, and positive results no more than two days, if confirmation testing is needed.<sup>231</sup>

NPC Research Co-President Shannon Carey's study of seventy Drug Courts found significant reductions in criminal recidivism when the results of a drug test were received within forty-eight hours of sample collection.<sup>232</sup> Courts were 73% more effective in reducing recidivism if tests results were reported to the Treatment Courts within forty-eight hours over courts that received results over a longer period.<sup>233</sup> In addition courts that gave immediate sanctions were an additional 32 percent more effective.<sup>234</sup> Thus the combination of rapid test results followed by immediate sanctions had a significant impact on participant recidivism.

### **Practice Tip**

How quickly test results are returned is as important as its validity. Test timing is one of the most influential factors for Treatment Court success.

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<sup>229</sup> Marlowe, D.B. (Ed.) (2012). Best practices in drug courts [Special issue]. *Drug Court Review*, 8(1). Retrieved from [http://www.ndci.org/sites/default/files/nadcp/DCR\\_best-practices-in-drug-courts.pdf](http://www.ndci.org/sites/default/files/nadcp/DCR_best-practices-in-drug-courts.pdf)

<sup>230</sup> Douglas B. Marlowe, JD, PhD, Behavior Modification 101 for Drug Courts: Making the Most of Incentives and Sanctions, National Drug Court Institute, 2012

<sup>231</sup> Douglas B. Marlowe, J.D., Ph.D, Carson L. Fox, Jr., J.D., et al., Adult Drug Court Best Practice Standards Volume II, National Association Of Drug Court Professionals, Alexandria, Virginia, 2015.

<sup>232</sup> Carey, S.M., Mackin, J.R., & Finigan, M.W. (2012). What works? The ten key components of drug court: Research-based best practices. *Drug Court Review*, 8(1), 6–42.

<sup>233</sup> Ibid

<sup>234</sup> Ibid



## APPENDIX A

### Glossary

#### -A-

**Adulterants:** Foreign substances either ingested or added directly to a urine specimen to prevent the detection of any drug use.

**Adulterated Specimen:** A urine specimen containing a substance that is not a normal constituent or containing an endogenous substance at a concentration that is not a normal physiological concentration.

**Alcohol Concentration Level:** The amount of alcohol in blood typically tested either by a breath test (Breath Alcohol Concentration Level (BrAC)) or directly testing the blood (Blood Alcohol Concentration (BAC)).

**Alcohol Screening Test:** An analytic procedure to determine whether a person has a prohibited **Alcohol Concentration Level** in a breath, saliva or urine specimen.

**Aliquot:** A portion of a larger whole, especially a sample taken for chemical analysis or other treatment.

**Analyte:** A substance that is the target of analysis. It is the compound that is tested at or above the administrative reporting cutoff.

#### -C-

**Calibrator:** A solution of known concentration used to calibrate a measurement procedure or to compare the response obtained with the response of the test specimen/sample.

**Chain of Custody:** The process used to document the collection, handling and storage of a specimen for evidentiary purposes.

**Clinical Laboratory Improvement Amendments (CLIA):** Federal regulatory standards that apply to all U.S. facilities or sites that test human specimens for health assessment or to diagnose, prevent, or treat disease. It does not apply to laboratories that test for illegal drugs.

**Collection Container:** A container into which a person urinates or in which some other bodily fluid is collected to provide a specimen for a drug test.

**Collection Site:** A location selected by the tester where people to be tested present themselves for the purpose of providing a specimen for a drug test.

**Collector:** A person who instructs and assists test subjects at a collection site; who receives and makes an initial inspection of the specimen provided by those subjects; and, who initiates and completes the Chain of Custody Form.

**Confirmatory Test:** A second analytical procedure to identify the presence of a specific substance or metabolite which is independent of the initial screening test and which uses a different technique and chemical principal from that of the original test in order to ensure reliability and accuracy.

**Control:** A known sample used to monitor the status of an analysis to maintain its performance within desired limits.

**Creatinine:** A chemical waste product in the blood that passes through the kidneys to be filtered and eliminated in urine. Urine with a creatinine level of less than 20 mg/dL should be considered **dilute**. The absence of creatinine (<5mg/dl) is indicative of a specimen not consistent with human urine.

**Cutoff Level:** The minimum concentration amount of a drug and/or metabolite that must be present in a sample to determine if it is a negative or positive test.

**-D-**

**Dilute Urine Specimen:** A urine specimen that has a **creatinine** of greater than 5 mg/dl or less than 20 mg/dL and a **specific gravity** that is less than 1.002, or greater than 1.030.

**-E-**

**Enzyme Linked Immunosorbant Assay (ELISA):** An antibody-based assay test used to detect the presence of antibodies or antigens in a sample such as blood, urine or oral fluid.

**EBT:** Evidential breath test used to determine the **alcohol concentration level**, performed with a testing device.

**EtG:** Ethyl glucuronide is a direct, non-volatile, water soluble, metabolite of ethanol. It is a highly sensitive and specific bio-marker and can be detected anywhere from one to three days after alcohol consumption as opposed to eight to 12 hours when testing for ethanol.

**EtS:** Ethyl sulfate issued in conjunction with **EtG** for confirmation purposes. EtS is a direct, bio-marker of alcohol ingestion that is not susceptible to degradation by bacteria hydrolysis.

**-G-**

**GC/MS:** Gas chromatography/mass spectrometry. A testing method that combines the features of gas-liquid chromatography and mass spectrometry to definitively identify and quantitate identify different substances within a test sample.

**-H-**

**Handheld Device or Point of Contact Test:** A device that requires manual sampling and visual manual observation to produce a qualitative result.

**-I-**

**Immunoassay:** A biochemical test that utilizes drug-specific antibodies and measures the presence or concentration of a **macromolecule** and not only macromolecules but also drug molecules and metabolites in a solution through the use of an antibody.

**Immunoassay Analyzer:** Automated biochemical test used in laboratories to objectively detect the presence and concentration of substances in urine samples.

**Initial Drug Screen:** The first test performed during a drug testing process to determine if there are any drug or **metabolites** present at specified cutoff concentrations.

**Instant Test Kit:** An **immunoassay** test that can be purchased commercially by anyone for the purpose of detecting the presence of drugs in a person's specimen.

**-L-**

**LC/MS/MS: (Liquid Chromatography / Tandem Mass Spectrometry):** A testing method that combines the features of liquid chromatography and tandem mass spectrometry to definitively identify and quantitate identify different substances within a test sample.

**Limit of Detection (LoD):** Term used to describe the smallest concentration of a substance that can be reliably measured by an analytical procedure that can reliably be distinguished from a drug-free specimen.

**Limit of Quantitation (LoQ):** Term used to describe the smallest concentration of a measure that can be reliably measured by an analytical procedure.

**-M-**

**Macromolecule:** A very large molecule, such as a protein, consisting of many smaller structural units linked together.

**Matrices:** A type of specimen used for analysis in a drug test. Examples include blood, urine, oral fluid, hair, nails, sweat, and breath.

**Metabolites:** A chemical that is formed when the body breakdowns products of drugs.

**-N-**

**Nitrite:** A chemical which is often used as an adulterant. Normal urine should contain negligible traces of nitrites. A positive result indicates the presence of an **adulterant**.

**-P-**

**pH Test:** The measure of the amount of acid or base present in a specimen. Normal urine pH levels should be in the range of 4.0 to 9.0. Values outside of this range may indicate the sample has been altered.

**Pipette:** A slender tube attached to or incorporating a bulb, for transferring or measuring out small quantities of liquid, especially in a laboratory.

**Point of Collection Test (POCT):** A urine or oral fluid point of collection test, also called a **screening test**, is an analysis of a urine or oral fluid sample that takes place at the collection site. These tests are commonly on-site test cups or instant test strips.

**-Q-**

**Qualitative Test:** A test to determine the presence or the absence of a substance in a urine sample being tested. It cannot determine how much of a specific drug was used. Most instant **immunoassay** tests are qualitative.

**Quantitative Test:** Testing that specifies and reports a result with a specified numerical value for the concentration of the **analyte** in the sample.

## **-S-**

**Screening Drug Test:** An **immunoassay** test to eliminate “negative” urine specimens from further consideration and to identify presumptive positive specimens that may require a **Confirmatory Drug Test** or further testing.

**Split Specimen:** Dividing the specimen into two containers with one being sealed and remaining unopened and stored for future challenges by the donor.

**Specific Gravity:** A test to measure the density of all chemical particles in urine. In Treatment Courts, it is frequently used to determine a **dilute urine specimen**. The acceptable range for specific gravity is from 1.002 to 1.030. Values outside this range generally indicate specimen dilution or adulteration.

**Specimen Validity Testing:** The analysis of a urine specimen to determine if it is adulterated with an agent or substance or it has been substituted or is unusually dilute or concentrated.

## **-T-**

**Temperature Strip:** A device used to determine whether or not the urine sample is in the expected 90-100 Degree Fahrenheit (32-38 Degree Celsius) range.

## **-U-**

**Urine Collection Device (UCD):** A device that allows the collection of urine for analysis.

**Urine Substitution:** The replacement of the individual’s urine sample with clean urine from another person, animal or their own urine from a period when they were drug free.

## APPENDIX B

### Elimination Benchmarks for Marijuana

In order to differentiate between new marijuana use and continued residual excretion from past use, all treatment courts should set an elimination benchmark. An elimination benchmark is a period of time after which a participant would be expected to test negative regardless of past usage. This benchmark then becomes the baseline for abstinence; any positive test beyond this baseline indicates new drug use.

Programs should consider giving donors no more than 30 days from their enrollment / acceptance date to test negative. This is a sufficient amount of time for THC to pass through the system. By the end of the 30 days the donor should be testing negative. Any positive test after the 30-day timeframe should be interpreted as new use.

### New Use vs. Continued Residual Excretion of Marijuana

There are two different approaches a program can employ during the 30-day elimination period to determine if positive test results are from new use or continued residual excretion.

1. Non-normalized approach
2. Creatinine-normalized approach

The non-normalized approach is easy to use. It does not require the use of a mathematic formula and it relies solely on the qualitative (positive or negative) test result. Once a donor has two consecutive negative tests, at least two days apart, he or she may be deemed drug free. Any positive tests after two consecutive negative tests (during this elimination benchmark period) can be considered new use.

The creatinine-normalized method is more complex, requires the use of a mathematical formula and has several factors that must be taken into consideration.

The creatinine – normalized approach:

1. Is to be used with cannabinoids only;
2. Can only compare identical testing methods (instrumented);
3. Must compare consecutive tests;
4. Is to be used in conjunction with elimination bench marks; and,

5. Cannot be used on samples considered to be dilute.

If the creatinine is expressed in mg/dL the formula is as follows:

$$\text{Urine Cannabinoid (ng/mL) / Creatinine (mg/dL) x100 =}$$

“normalized” THC - Creatinine ratio

If the creatinine is expressed in mg/mL the formula is as follows:

$$\text{Urine Cannabinoid (ng/mL) / Creatinine (mg/mL) = “normalized” THC -}$$

Creatinine ratio

Once the THC - Creatinine ratio has been determined it is used to calculate the specimen ratio between two consecutive positive tests. The following formula would be applied:

$$\text{“normalized” THC - Creatinine ratio / THC -Creatinine ratio of an earlier}$$

positive sample = the specimen ratio

In Treatment Court proceedings, an increase in the specimen ratio of 1.5 or more for two consecutive positive urine samples is indicative of new marijuana intake. When using this 1.5 specimen ratio standard, research indicates that new marijuana usage will be accurately predicted approximately 75% of the time, with a false positive rate of less than one percent.<sup>235</sup> (See the cited article for a more detailed explanation).

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<sup>235</sup> C Paul, L. M.S. The Use of Creatinine-Normalized Cannabinoid Results to Determine Continued Abstinence or to Differentiate between New Marijuana Use and Continuing Drug Excretion from Previous Exposure. *Drug Court Review, Vol. IV,1 (2002)*. National Drug Court Institute.

## APPENDIX C

### Cutoff Concentrations for Drug Tests for Federally Regulated Transportation

Most programs utilize the SAMHSA/DOT established standards for initial screening and confirmation cutoff levels. These cutoff levels are obtained within the chart below and reflect the most current changes to initial screening levels effective May 4, 2012. This chart is part of 49 CFR subpart F § 40.87.

The Department of Transportation's (DOT) rule, 49 CFR Part 40, describes required procedures for conducting workplace drug and alcohol testing for the Federally regulated transportation industry.

## DOT Rule 49 CFR Part 40 Section 40.87

### Subpart F - Drug Testing Laboratories

#### § 40.87 What are the cutoff concentrations for drug tests?

- (a) As a laboratory, you must use the cutoff concentrations displayed in the following table for initial and confirmatory drug tests. All cutoff concentrations are expressed in nanograms per milliliter (ng/mL).

Initial test analyte	Initial test cutoff concentration	Confirmatory test analyte	Confirmatory test cutoff concentration
Marijuana metabolites	50 ng/mL	THCA <sup>1</sup>	15 ng/mL
Cocaine metabolites	150 ng/mL	Benzoylcegonine	100 ng/mL
<b>Opiate metabolites</b>			
Codeine/Morphine <sup>2</sup>	300 ng/mL ***	Codeine	300 ng/mL ***
		Morphine	2000 ng/mL
6-Acetylmorphine	10 ng/mL	6-Acetylmorphine	10 ng/mL
Phencyclidine	25 ng/mL	Phencyclidine	25 ng/mL
<b>Amphetamines <sup>3</sup></b>			
AMP/MAMP <sup>4</sup>	500 ng/mL	Amphetamine	250 ng/mL



		Methamphetamine <sup>5</sup>	250 ng/mL
MDMA <sup>6</sup>			
	500 ng/mL	MDMA	250 ng/mL
		MDA <sup>7</sup>	250 ng/mL
		MDEA <sup>8</sup>	250 ng/mL

<sup>1</sup> Delta-9-tetrahydrocannabinol-9-carboxylic acid (THCA).

<sup>2</sup> Morphine is the target analyte for codeine/morphine testing.

<sup>3</sup> Either a single initial test kit or multiple initial test kits may be used provided the single test kit detects each target analyte independently at the specified cutoff.

<sup>4</sup> Methamphetamine is the target analyte for amphetamine/methamphetamine testing.

<sup>5</sup> To be reported positive for methamphetamine, a specimen must also contain amphetamine at a concentration equal to or greater than 100 ng/mL.

<sup>6</sup> Methylenedioxymethamphetamine (MDMA).

<sup>7</sup> Methylenedioxyamphetamine (MDA).

<sup>8</sup> Methylenedioxyethylamphetamine (MDEA).

(b) On an initial drug test, you must report a result below the cutoff concentration as negative. If the result is at or above the cutoff concentration, you must conduct a confirmation test.

(c) On a confirmation drug test, you must report a result below the cutoff concentration as negative and a result at or above the cutoff concentration as confirmed positive.

(d) You must report quantitative values for morphine or codeine at 15,000 ng/mL or above.

**\*\*\* These are the recommended cutoff levels for criminal justice clients for this drug class. The SAMSHA / DOT established cutoff levels are actually 2000 ng/mL for initial screening and 2000 ng/mL for confirmation.**

[65 FR 79526, Dec. 19, 2000, as amended at 75 FR 49862, August 16, 2010; 77 FR 26473, May 4, 2012]

## APPENDIX D

### Revised Cutoff Concentrations For Drug Tests For Federal Workplaces

#### 82 FR 7920 - REVISED MANDATORY GUIDELINES FOR FEDERAL WORKPLACE DRUG TESTING PROGRAMS

The Department of Health and Human Services (HHS), by authority of Section 503 of Public Law 100-71 (PDF | 31 KB) 5 U.S.C. Section 7301 and Executive Order 12564, establishes the scientific and technical guidelines for federal workplace drug-testing programs. HHS also establishes standards for certified labs that conduct urine drug-testing for federal agencies.

The Department of Health and Human Services (“HHS” or “Department”) has revised the Mandatory Guidelines for Federal Workplace Drug Testing Programs (Guidelines), 73 FR 71858 (November 25, 2008) for urine testing.

**DATES:** *Effective Date:* October 1, 2017.

*Taken from: The Federal Register, Notice by the Substance Abuse and Mental Health Services Administration on 1/23/2017*

#### Section 3.4 What are the drug test cutoff concentrations for urine?

Initial test analyte	Initial test cutoff 1	Confirmatory test analyte	Confirmatory test cutoff concentration
Marijuana metabolites (THCA) 2	50 ng/mL 3	THCA	15 ng/mL
Cocaine metabolite (Benzoylecgonine)	150 ng/mL 3	Benzoylecgonine	100 ng/mL
Codeine/Morphine	300 ng/mL ***	Codeine	300 ng/mL ***
		Morphine	300 ng/mL ***
Hydrocodone/Hydromorphone	300 ng/mL	Hydrocodone	100 ng/mL.
		Hydromorphone	100 ng/mL
Oxycodone/Oxymorphone	100 ng/mL	Oxycodone	100 ng/mL
		Oxymorphone	100 ng/mL
6-Acetylmorphine	10 ng/mL	6-Acetylmorphine	10 ng/mL

Phencyclidine	25 ng/mL	Phencyclidine	25 ng/mL
Amphetamine/Methamphetamine	500 ng/mL	Amphetamine	250 ng/mL
		Methamphetamine .	250 ng/mL
MDMA 4/MDA 5	500 ng/mL	MDMA	250 ng/mL
		MDA	250 ng/mL

- 1 For grouped analytes (i.e., two or more analytes that are in the same drug class and have the same initial test cutoff):

*Immunoassay:* The test must be calibrated with one analyte from the group identified as the target analyte. The cross-reactivity of the immunoassay to the other analyte(s) within the group must be 80 percent or greater; if not, separate immunoassays must be used for the analytes within the group.

*Alternate technology:* Either one analyte or all analytes from the group must be used for calibration, depending on the technology. At least one analyte within the group must have a concentration equal to or greater than the initial test cutoff or, alternatively, the sum of the analytes present (i.e., equal to or greater than the laboratory's validated limit of quantification) must be equal to or greater than the initial test cutoff.

- 2 An immunoassay must be calibrated with the target analyte, D-9-tetrahydrocannabinol-9-carboxylic acid (THCA).
- 3 Alternate technology (THCA and benzoylecgonine): The confirmatory test cutoff must be used for an alternate technology initial test that is specific for the target analyte (i.e., 15 ng/mL for THCA, 100 ng/mL for benzoylecgonine).
- 4 Methylenedioxyamphetamine (MDMA).
- 5 Methylenedioxyamphetamine (MDA).

**\*\*\* These are the recommended cutoff levels for criminal justice clients for this drug class. The SAMSHA / DOT established cutoff levels are actually 2000 ng/mL for initial screening and 2000 ng/mL for confirmation.**



## APPENDIX F

### Sample EtG/EtS Treatment Court Client Contract

The following document is an *example* client contract for use with Treatment Court participants undergoing alcohol abstinence monitoring that employs the laboratory test for ethyl glucuronide (EtG). As with any client contract, the primary purpose is to outline the behavioral requirements and compliance standards necessary for continued participation in Treatment Court. In addition, this client contract serves to educate, alert and advise Treatment Court participants to the potential (incidental) sources of alcohol that could produce a positive urine EtG test result. This contract is designed to inform Treatment Court clients of the numerous commercial products that contain ethyl alcohol and to provide them with a list of substances to avoid while in a Treatment Court program. Courts utilizing EtG testing should consider this contract as a tool for advising participants on inadvertent sources of alcohol. This contract may also be useful in the sanctioning of Treatment Court clients when used in combination with a positive EtG test result. Programs should revise this example contract as needed to conform to specific program goals and objectives.

#### URINE ABSTINENCE TESTING AND INCIDENTAL ALCOHOL EXPOSURE CONTRACT

Recent advances in the science of alcohol detection in urine have greatly increased the ability to detect even trace amounts of alcohol consumption. In addition, these tests are capable of detecting alcohol ingestion for significantly longer periods of time after a drinking episode. Because these tests are sensitive, in rare circumstances, exposure to non-beverage alcohol sources can result in detectable levels of alcohol (or its break down products). In order to preserve the integrity of the Treatment Court testing program, it has become necessary for us to restrict and/or advise Treatment Court participants regarding the use of certain alcohol-containing products.

It is **YOUR** responsibility to limit your exposure to the products and substances detailed below that contain ethyl alcohol. It is **YOUR** responsibility to read product labels, to know what is contained in the products you use and consume and to stop and inspect these products **BEFORE** you use them. ***Use of the products detailed below in violation of this contract will NOT be allowed as an excuse for a positive test result. When in doubt, don't use, consume or apply.***

**Cough syrups and other liquid medications:** Treatment Court participants have always been prohibited from using alcohol- containing cough/cold syrups, such as Nyquil®. Other cough syrup brands and numerous other liquid medications, rely upon ethyl alcohol as a solvent. Treatment Court participants are required to read product labels carefully to determine if they contain ethyl alcohol (ethanol). All prescription and over-the-counter medications should be reviewed with your case manager before use. Information on the composition of prescription medications should be available upon request from your pharmacist. Non-alcohol containing cough and cold remedies are readily available at most pharmacies and major retail stores.

**Non-Alcoholic Beer and Wine:** Although legally considered non-alcoholic, NA beers (e.g. O'Douls®, Sharps®) do contain a residual amount of alcohol that may result in a positive

test result for alcohol, if consumed. Treatment Court participants are not permitted to ingest NA beer or NA wine.

**Food and Other Ingestible Products:** There are numerous other consumable products that contain ethyl alcohol that could result in a positive test for alcohol. Flavoring extracts, such as vanilla or almond extract, and liquid herbal extracts (such as Ginko Biloba), could result in a positive screen for alcohol or its breakdown products. Communion wine, food cooked with wine, and flambé dishes (alcohol poured over a food and ignited such as cherries jubilee, baked Alaska) must be avoided. Read carefully the labels on any liquid herbal or homeopathic remedy and do not ingest without approval from your case manager.

**Mouthwash and Breath Strips:** Most mouthwashes (Listermint®, Cepacol®, etc.) and other breath cleansing products contain ethyl alcohol. The use of mouthwashes containing ethyl alcohol can produce a positive test result. Treatment Court participants are required to read product labels and educate themselves as to whether a mouthwash product contains ethyl alcohol. Use of ethyl alcohol-containing mouthwashes and breath strips by Treatment Court participants is not permitted.

Non-alcohol mouthwashes are readily available and are an acceptable alternative. If you have questions about a particular product, bring it in to discuss with your case manager.

**Hand sanitizers:** Hand sanitizers (e.g. Purell®, Germex®, etc.) and other antiseptic gels and foams used to disinfect hands contain up to 70% ethyl alcohol. Excessive, unnecessary or repeated use of these products could result in a positive urine test. Hand washing with soap and water are just as effective for killing germs.

**Hygiene Products:** Aftershaves and colognes, hair sprays and mousse, astringents, insecticides (bug sprays such as Off®) and some body washes contain ethyl alcohol. While it is unlikely that limited use of these products would result in a positive test for alcohol (or its breakdown products) excessive, unnecessary or repeated use of these products could affect test results. Participants must use such products sparingly to avoid reaching detection levels. Just as the court requires Treatment Court participants to regulate their fluid intake to avoid dilute urine samples, it is likewise incumbent upon each participant to limit their use of topically applied (on the skin) products containing ethyl alcohol.

**Solvents and Lacquers:** Many solvents, lacquers and surface preparation products used in industry, construction, and the home, contain ethyl alcohol. Both excessive inhalation of vapors, and topical exposure to such products, can potentially cause a positive test result for alcohol. As with the products noted above, Treatment Court participants must educate themselves as to the ingredients in the products they are using. There are alternatives to nearly any item containing ethyl alcohol. Frequency of use and duration of exposure to such products should be kept to a minimum. A positive test result will not be excused by reference to use of an alcohol-based solvent. If you are in employment where contact with such products cannot be avoided, you need to discuss this with your Case Manager. Do not wait for a positive test result to do so.

**Remember! When in doubt, don't use, consume or apply.**

**I HAVE READ AND UNDERSTAND MY RESPONSIBILITIES:**

\_\_\_\_\_

PARTICIPANT

\_\_\_\_\_

DATE

Paul Cary would like to thank Michael Hollenbeck and Ron Michaelson of the Dearborn, MI Drug Court program for the concept of this contract and the original draft used to produce this example.

## APPENDIX G

### Approximate Detection Time of Drugs in Urine

Drug	Approximate Detection Time in Urine
<b>Amphetamine</b>	1-4 days
<b>Barbiturates</b>	1-7 days
<b>Benzodiazepines</b>	1-7 days
<b>Cannabinoids</b>	<p>At 50 ng/mL cutoff:</p> <ul style="list-style-type: none"> <li>• Up to 3 days for single event/occasional use</li> <li>• Up to 10 days for heavy chronic use</li> </ul> <p>At 20 ng/mL</p> <ul style="list-style-type: none"> <li>• Up to 7 days for single event/occasional use</li> <li>• Up to 21 days for heavy chronic use</li> </ul>
<b>Cocaine Metabolite</b>	1-3 days
<b>Opiates</b>	1-4 days
<b>Phencyclidine (PCP)</b>	1-6 days
<b>Alcohol (as ethyl alcohol)</b>	Variable, usually measured in hours
<b>As alcohol metabolites EtG/EtS</b>	At the 500/100 ng/mL cutoff: 24-48 hours



## APPENDIX H

### Sample Participant Agreements

#### A. Sample Contract from: Buffalo, New York



#### DRUG COURT CONTRACT

---

THE PEOPLE OF THE STATE OF NEW  
YORK

File No.

vs.

\_\_\_\_\_  
Defendant  
\_\_\_\_\_

I, \_\_\_\_\_,  
the defendant in the above-captioned case do hereby agree to enter into the Drug  
Court Program and agree to the following conditions:

1. I hereby knowingly and voluntarily waive my constitutional and  
statutory rights to a speedy trial and to a preliminary hearing so long as I am  
enrolled in the Drug Court Program. I make this waiver after consulting with my  
attorney. I understand that if I fail to complete the program my case will be  
remanded to Buffalo City Court for a preliminary hearing and/or further  
proceedings.

2. I understand that my right to file pre-trial motions will be reserved. Should I be terminated from this program, I will have forty-five (45) days from the termination date to make such motions.

3. I agree to fully cooperate with all evaluation and all treatments as required by the court and by my case manager.

4. I agree to random urine testing and random breathalyzer testing.

5. I agree to return to the Drug Court as ordered by the Court for progress reports from my case manager. I understand that if I miss any court dates, a bench warrant will be issued, and if the warrant is outstanding for more than one month, then I will be released from the diversion program and the original charges will be reinstated for prosecution. I further understand that if I have plead guilty to a criminal charges that I can then be sentenced should I miss any court dates.

6. I understand that if I violate any terms of this contract and / or fail to work diligently toward the goals of the treatment program, my case will be return to Buffalo City Court for prosecution of the original charge(s).

7. I agree to keep all treatment providers and the Court advised of my current address at all times during my participation in the program.

8. I understand that any new arrest while I am in the Drug Court Program must be reported to my case manager and will be grounds for immediate termination from the program.

9. I understand and agree that the Drug court Judge alone will determine whether or not I have complied with or failed any of the terms of this agreement.

10. I understand that if I successfully complete the Drug Court Program the Court will:

a. Grant me an adjournment in contemplation of dismissal if my pending charge is a misdemeanor;

b. The District Attorney will reduce my charge to a class "B" misdemeanor if my present pending charge is a felony.

Dated: Buffalo, New York

\_\_\_\_\_  
DATE

\_\_\_\_\_  
Signature of Defendant

\_\_\_\_\_  
Name Printed

\_\_\_\_\_  
Signature of Defense Attorney

\_\_\_\_\_  
Name Printed

## **I. Non-Compliance**

**The following are example of non-compliance that may result in Court ordered sanction:**

- a) Failure of defendant/client to keep mandated treatment appointment date(s) with the service provider;
- b) Failure of defendant/client to keep ALL SCHEDULED court appearance dates;
- c) Failure of defendant/client to consistently remain drug free as evidenced by positive lab results demonstrating drug usage;
- d) Failure of defendant/client to lead a law-abiding life as a result of re-arrest/conviction.

## **II. SANCTIONS**

The following is a list of Court ordered sanctions that may be imposed as a result of non-compliance:

- a) In-court admonishment;

- b) Requiring defendant/client to attend additional days for treatment with the service provider;
- c) Requiring defendant/client to attend additional court appearance;
- d) Extending defendant/client treatment period or period under the Drug Court Program;
- e) Punitive period of incarceration to encourage compliance with Drug Court mandates;
- f) Termination for the Drug Court Program.

I have read, understood and received a copy of the conditions of non-compliance and resulting sanctions.

\_\_\_\_\_  
Signature of Defendant/Client

\_\_\_\_\_  
Date

\_\_\_\_\_  
Judge

**B. Sample Contract from: Dekalb County, Illinois**

PARTICIPANT CONTRACT, DEKALB COUNTY DRUG/DUI COURT: C.L.E.A.N. PROGRAM  
(CHOOSING LIFE AND ENDING ABUSE NOW) IN THE CIRCUIT COURT FOR TWENTY-THIRD  
JUDICIAL CIRCUIT  
DEKALB COUNTY, ILLINOIS

**PARTICIPANT CONTRACT**

1) I, \_\_\_\_\_,  
with a birth date of \_\_\_\_\_, and an address of \_\_\_\_\_

\_\_\_\_\_

have entered a guilty plea in:

Charge \_\_\_\_\_ Case No. \_\_\_\_\_  
Charge \_\_\_\_\_ Case No. \_\_\_\_\_  
Charge \_\_\_\_\_ Case No. \_\_\_\_\_

to wit; I understand that by entering into the DeKalb County Drug/DUI Court: C.L.E.A.N. Program (Choosing Life and Ending Abuse Now) Participant Contract, I am bound by its terms.

**General Provisions:**

- 2) I agree that I am a DeKalb County resident, and will live in DeKalb County throughout the drug court program, unless the Judge and Drug/DUI Court Team gives me permission to live outside of DeKalb County. \_\_\_\_\_
- 3) I agree not to leave the state of Illinois without obtaining permission from the Judge and Drug/DUI Court Team. I understand that I must make a written request to leave at least a week before the anticipated trip if it is not an emergency and have a urine/breath test immediately before and after returning to DeKalb County. \_\_\_\_\_
- 4) I understand that in the event of a work related emergency, I must present the request to the Drug/DUI Court Team and the judge will advise me of approval or denial to be excused from treatment or court date. \_\_\_\_\_
- 5) I understand in the event of a non-work related emergency, I must present a short handwritten statement of the emergency to the treatment provider when possible. The treatment provider will present the request to the Drug/DUI Court Team and the Judge will advise me of approval or denial. \_\_\_\_\_
- 6) I may not participate in Drug/DUI Court if I am currently an affiliated gang member. Therefore, I affirm that I am not a gang member. \_\_\_\_\_
- 7) I understand that if I enter this program and fail to complete it, I may be barred from future participation. \_\_\_\_\_

- 8) I understand that I may not possess any weapons while I am in Drug/DUI Court. I will dispose of any and all weapons in my possession, and disclose the presence of any weapons possessed by anyone else in my household. Failure to dispose and/or disclose may result in termination from Drug/DUI Court and possible prosecution for any illegal possession of any weapon. \_\_\_\_\_
- 9) I agree to inform any law enforcement officer that I come in contact that I am in Drug/DUI Court. \_\_\_\_\_
- 10) For the purposes of regular Drug/DUI Court review hearings, I agree to waive my right to have my attorney of record present. I understand that my case may be discussed without my attorney or the prosecutor present but no decisions made without my attorney and the prosecutor present. \_\_\_\_\_
- 11) Upon my successful completion of the Drug/DUI Court program, the State's Attorney office may make a motion to dismiss the Drug/DUI Court case(s), or the pertinent charges as previously agreed upon unless there is objection from the court. \_\_\_\_\_

**Assessments and Treatment:**

- 1) I agree to execute the Consent for Disclosure of Confidential Substance Abuse Information. I understand that any information obtained from this release will be kept apart from the Court file. \_\_\_\_\_
- 2) I understand that my individual course of treatment may include residential treatment, intensive outpatient, one-on-one counseling, education, and/or self-improvement courses such as anger management, parenting or relationship counseling. \_\_\_\_\_
- 3) I understand that my treatment plan may be modified by the treatment provider of the DeKalb County Drug/DUI Court Team as circumstances arise, and I agree to comply with the requirements of any such modifications. \_\_\_\_\_
- 4) I agree to participate in and successfully complete all substance abuse treatment programs, psychological therapies, educational programs and vocational training the Judge and Drug/DUI Court Team orders, and will sign releases to permit all providers to communicate with the Judge and Drug/DUI Court staff. \_\_\_\_\_
- 5) I agree if ordered by the Drug/DUI Court to wear a Transdermal Alcohol Device bracelet and/or install a BAIID device in my car to monitor any alcohol use. I understand that DUI Court will assist me in payment of SCRAM based on my tax returns or pay stub from work but I will be expected to repay all financial support. \_\_\_\_\_
- 6) I will inform all treating physicians/nurse practitioners that I am a recovering addict and give the treating health care professionals the Doctor's Note found in the Participant Handbook.

If a treatment physician wishes to treat me with narcotic or addictive medications or drugs or medication containing alcohol after I have disclosed I am an addict and handed them the Doctor's Note, I must disclose this to my treatment provider and inform the Drug/DUI Court Team. \_\_\_\_\_

- 7) I agree to take all medications prescribed for me by my treating physician and/or psychiatrist, and will sign releases for my treatment physician or psychiatrist to communicate with the Judge and Drug/DUI Court staff. \_\_\_\_\_
- 8) I agree to attend a self-help sobriety group as often as the Judge and Drug/DUI Court Team orders me to go. \_\_\_\_\_
- 9) I agree to abide by electronic home monitoring or house arrest if ordered by the Judge and the Drug/DUI Court Team. \_\_\_\_\_
- 10) I agree that I will not withdraw from any treatment provider (residential or IOP) without prior approval of my treatment provider and the Drug/DUI Court Team. If I leave without permission of Drug Court a no bond warrant will be issued for my arrest. \_\_\_\_\_

**Use of Drugs and Other Substances and Testing for Their Presence:**

- 1) I understand that I will be tested for the presence of drugs or alcohol in my system on a random basis according to procedures established by the Drug/DUI Court Team and/or treatment provider. I understand that I will be given a location and time to report for my drug test. I understand that it is my responsibility to report to the assigned location at the time given for the test. I understand that if I am late for a test, or miss a test, it will be considered a positive test and I may be sanctioned. \_\_\_\_\_
- 2) I understand that substituting, altering, diluting or trying in any way to change my body fluids for purposes of testing could be grounds for immediate termination from drug/DUI court or a class 4 Felony. \_\_\_\_\_
- 3) I understand a "diluted" urine test will be interrupted as a positive test. \_\_\_\_\_
- 4) I understand that I may dispute positive test results, but that any requested re-testing by a laboratory will be at my expense if it is confirmed. \_\_\_\_\_
- 5) I understand that participating in Drug/DUI Court requires me to be drug free at all times. I will not possess drugs (including marijuana), alcohol, or drug paraphernalia.

I will not associate with people who use or possess drugs, nor will I be present while drugs are being used by others. \_\_\_\_\_

- 6) I agree to be drug and alcohol tested at any time by a police officer, probation officer, treatment provider, case manager, Drug Court staff, or at the request of the court or any agency designated by the court. \_\_\_\_\_
- 7) I agree to be responsible for what goes into my body that may affect drug test results. Before taking medication of any kind, I will check with the pharmacist or Drug Court staff to ensure that it is non-narcotic, non-addictive and contains no alcohol. I will inform the Drug Court staff, team and treatment provider for any and all medications, prescribed or over-the-counter. \_\_\_\_\_
- 8) I agree not to abuse any over-the-counter medication. I understand that abuse is defined as taking dosages in excess of label guidelines, taking an over-the-counter medication designed for a condition which I do not have, and taking an over-the-counter medication in a manner in which it was not designed to be ingested (such as crushing and inhaling a medication designed to be taken orally with liquids). I will not use over the counter medications containing “dextromethorphan.” \_\_\_\_\_
- 9) I agree to furnish the Drug/DUI Court Team verification from my physician for any prescribed medication in advance of testing to reduce the claims of cross-reactions. I understand that any medication that is prescribed must be reported to the Drug Court staff and my substance abuse treatment provider provider. (Except in cases of a certifiable medical emergency). \_\_\_\_\_
- 10) I agree not to eat foods containing “poppy seeds”, any item containing “alcohol”, and prescription medications not prescribed to the client. \_\_\_\_\_
- 11) I agree not to purchase or use any “designer drugs” that can be purchased legally, over the counter without a physician’s prescription. \_\_\_\_\_
- 12) I agree not to purchase or use any “smoking mixtures’ (other than products specifically designated to contain only tobacco). \_\_\_\_\_
- 13) I agree not to purchase or use products sold or marketed under false pretenses with the warning “Not for Human Consumption”. \_\_\_\_\_

### **Cooperation with Judge and Drug Court Staff:**

- 1) I agree to follow all the Courtroom Behavior and Rules that are listed in the Participant Handbook that I was given. \_\_\_\_\_
- 2) I understand that during the entire course of the Drug/DUI Court program, I will be required to attend court sessions, treatment sessions, submit to random drug/alcohol testing, remain clean



and sober, and law-abiding. I agree to abide by the rules and regulations imposed by the Drug/DUI Court Team. I understand that if I do not abide by these rules and regulations, I may be sanctioned or terminated from the program. \_\_\_\_\_

- 3) I understand that if I miss a court date without prior permission from the Drug /DUI Court staff a no-bond warrant for my arrest may be issued. \_\_\_\_\_
- 4) I understand that participation in the DeKalb County DRUG COURT program involves a minimum time commitment of fourteen months. I understand that in order to be successfully discharged, I must have a minimum of 90 consecutive days or 3 months immediately prior to discharge during which I have not used any prohibited substances. \_\_\_\_\_
- 5) I understand that participation in the DeKalb County DUI COURT program involves a minimum time commitment of twelve months. I understand that in order to be successfully discharged, I must have a minimum of 3 consecutive months or 90 days immediately prior to discharge during which I have not used any prohibited substances. \_\_\_\_\_
- 6) I agree to meet with the DeKalb County Drug/DUI Court staff as often as directed. \_\_\_\_\_
- 7) I agree to permit Drug/DUI Court staff to visit me at my residence and employment and anywhere else necessary to perform their duties. \_\_\_\_\_
- 8) I understand that during the early phases of treatment recovery, I may be precluded from working or from gaining employment. I further understand that within the time directed by the Drug/DUI Court Team, I will seek employment, job training and/or further education as approved by the Drug/DUI Court Team, and that failure to do so may result in sanctions or termination. \_\_\_\_\_
- 9) I agree to keep the Drug Court Team, treatment provider and law enforcement liaison, if any, advised of my current address and phone number at all times and whenever changed. My place of residence is subject to Drug/DUI Court approval, and I will not leave the DeKalb County without prior approval from the Judge and Drug/DUI Court Team. \_\_\_\_\_

**Searches of Defendant’s Person or Property:**

- 1) As a condition of participation in this program, I agree to the search of my person, property, place of residence, vehicle or personal effects at any time with or without a warrant, and with or without reasonable cause, when required by a Drug/DUI Court staff, probation officer, case manager or other law enforcement officer when accompanying Drug Court staff.

\_\_\_\_\_

**Other Program Requirements:**

- 1) I agree to pay a portion of the costs of assessment, treatment, education, vocational training, and Drug/DUI Court staff monitoring based upon my ability to pay such costs. Such payment shall be in cash, cashier's check or money order to the Circuit Clerk's Office. \_\_\_\_\_
- 2) I agree to pay court costs, fine, and/or restitution as ordered by the Judge and Drug/DUI Court Team. \_\_\_\_\_
- 3) I understand that if I have not paid my Drug/DUI Court fees prior to graduation that I will have a judgment to return to court at predetermined intervals to make payments until the fees are paid. \_\_\_\_\_
- 4) I agree to participate in community service work program, as ordered by the Judge and Drug/DUI Court Team. \_\_\_\_\_
- 5) I agree to participate in a speakers program if ordered by the Judge and Drug/DUI Court Team. \_\_\_\_\_
- 6) I agree not to be in any business where selling alcohol is its primary purpose. \_\_\_\_\_

**Violations, Sanctions and Termination from the DeKalb County Drug Court:**

- 1) I understand that sanctions may include time in custody, increased testing, community service and such other sanctions as listed in the Participant Handbook I have been given and as may be deemed appropriate by the Drug/DUI Court Team. \_\_\_\_\_
- 2) I agree that the Judge may, without prior notice, receive evidence including but not limited to reports from the Drug Court professionals and staff, that:
  - a) I am not performing satisfactorily in my assigned program; or
  - b) I am not benefiting from education, treatment or rehabilitation; or
  - c) I have engaged in criminal conduct, whether or not that conduct has resulted in charges against me, which makes me unsuitable for the program; or
  - d) I have otherwise violated the terms and conditions of the program or sentence; or
  - e) I have for any reason become unable to participate in the program; or
  - f) I have been charged with a new felony offense in any jurisdiction in which the criminal conduct is alleged to have occurred after my entry into the DeKalb County Drug/DUI Court.

\_\_\_\_\_

3) I agree that upon receipt of such evidence, the Judge may impose an immediate reasonable sanction, including jail time, without having to give me prior notice and without the filing of written petition to revoke bail, except when the sanction is termination from the program for a violation under 2 (a) – (f) of this section. The Judge may also impose other sanctions in addition to or instead of jail time for violations. These sanctions include monetary fines, community service work, electronic monitoring or house arrest, increased frequency of court appearances and community monitoring, increased frequency of drug testing, and any other reasonable sanction designed to ensure my compliance with an progress in the DeKalb County Drug/DUI Court. \_\_\_\_\_

\_\_\_\_\_  
Participant's Signature Date

\_\_\_\_\_  
Attorney for Participant Date

\_\_\_\_\_  
State's Attorney Date

\_\_\_\_\_  
Drug/DUI Court Judge Date

Approved 9/14/2006, Revised 6/20/07, Revised 6/9/09, Revised 4/6/11, Revised 3/13/12,  
Revised 3/5/13; Revised 4/16/13

Original to Court File; copy to Drug Court staff; copy to attorney; copy to participant

## APPENDIX I

### Checklist for Chain of Custody

Checklist				
A.	Testing Forms			
	Is the following information included (and legible) on the form?	Yes	No	N/A
1	Date Test was Conducted			
2	Time Test was Conducted			
3	PARTICIPANTS Printed Name			
4	PARTICIPANTS Signature			
5	Reason For Test Box Checked			
6	Remarks: applicable DOT authority (i.e., FTA) noted			
7	Court/Company Name			
8	Participant Name and Phone Number provided			
9	Technician Type Box Checked			
10	Device Type Box Checked			
12	Screening Test Information Written on form			
13	Employee's Signature and Correct Date			
14	Are the results of the test affixed to the test Form?			
15	Are the Testing Devices identified on the test Form or printout?			
B.	Chain of Custody form			
	Is the following information included (and legible) on the chain of custody form?	Yes	No	N/A
1	Date Drug Test was Conducted			
2	Time Drug Test was Conducted			
3	Collector's Name			
4	Collector's Signature			
5	Remarks (if any)			
6	Court/Company Name			
7	Name and Business Address (No PO Box)			
8	Specimen ID Number Printed on form			
9	Testing Authority Box Checked			
10	Reason For Test Box Checked			
11	Drug Tests to be Performed Box Checked			
12	Collection Site Address			
13	Collector Phone and Fax Numbers			
14	Temperature Box Checked			
15	Split Specimen Box Checked			
16	If Observed Box Checked - must include Remarks			
17	Delivery/Courier Service Named/Identified if required			
18	Was the specimen sealed as required for chain of custody			

# APPENDIX J

## Chain of Custody Form

Name of Participant \_\_\_\_\_

Signature of the Participant \_\_\_\_\_

Participant's ID # \_\_\_\_\_

Specimen collected by \_\_\_\_\_

Collection Observed by \_\_\_\_\_

Date and time \_\_\_\_\_

For the analysis of \_\_\_\_\_

### Verification, Identity, and Custody of the Specimen Maintained by:

Released by	Received by	Date and Time

### To Be Completed By Testing Personal Only:

Seal Broken By	
Test Performed By	
Test Verified By	

## APPENDIX K

### Current List of HHS-Certified Laboratories and Instrumented Initial Testing Facilities Which Meet Minimum Standards To Engage in Urine Drug Testing for Federal Agencies

#### Department of Health and Human Services

The Department of Health and Human Services (HHS) notifies federal agencies of the laboratories and Instrumented Initial Testing Facilities (IITF) currently certified to meet the standards of the Mandatory Guidelines for Federal Workplace Drug Testing Programs (Mandatory Guidelines). The Mandatory Guidelines were first published in the **Federal Register** on April 11, 1988 (53 FR 11970), and subsequently revised in the **Federal Register** on June 9, 1994 (59 FR 29908); September 30, 1997 (62 FR 51118); April 13, 2004 (69 FR 19644); November 25, 2008 (73 FR 71858); December 10, 2008 (73 FR 75122); and on April 30, 2010 (75 FR 22809).

A notice listing all currently HHS-certified laboratories and IITFs is published in the **Federal Register** during the first week of each month. If any laboratory or IITF certification is suspended or revoked, the laboratory or IITF will be omitted from subsequent lists until such time as it is restored to full certification under the Mandatory Guidelines.

If any laboratory or IITF has withdrawn from the HHS National Laboratory Certification Program (NLCP) during the past month, it will be listed at the end and will be omitted from the monthly listing thereafter.

This notice is also available on the Internet at <http://www.samhsa.gov/workplace>.

#### FOR FURTHER INFORMATION CONTACT:

Giselle Hersh, Division of Workplace Programs, SAMHSA/CSAP, 5600 Fishers Lane, Room 16N03A, Rockville, Maryland 20857; 240-276-2600 (voice).

#### SUPPLEMENTARY INFORMATION:

The Mandatory Guidelines were initially developed in accordance with Executive Order 12564 and section 503 of Public Law 100-71. The “Mandatory Guidelines for Federal Workplace Drug Testing Programs,” as amended in the revisions listed above, requires strict standards that laboratories and IITFs must meet in order to conduct drug and specimen validity tests on urine specimens for federal agencies.

To become certified, an applicant laboratory or IITF must undergo three rounds of performance testing plus an on-site inspection. To maintain that certification, a laboratory or IITF must participate in a quarterly performance testing program plus undergo periodic, on-site inspections.

Laboratories and IITFs in the applicant stage of certification are not to be considered as meeting the minimum requirements described in the HHS Mandatory Guidelines. A HHS-certified laboratory or IITF must have its letter of certification from HHS/SAMHSA (formerly: HHS/NIDA), which attests that it has met minimum standards.

In accordance with the Mandatory Guidelines dated November 25, 2008 (73 FR 71858), the following HHS-certified laboratories and IITFs meet the minimum standards to conduct drug and specimen validity tests on urine specimens:

#### ***HHS-CERTIFIED INSTRUMENTED INITIAL TESTING FACILITIES***

Dynacare, 6628 50th Street NW., Edmonton, AB Canada T6B 2N7, 780-784-1190, (Formerly: Gamma-Dynacare Medical Laboratories)

#### ***HHS-CERTIFIED LABORATORIES***

ACM Medical Laboratory, Inc., 160 Elmgrove Park, Rochester, NY 14624, 844-486-9226

Aegis Analytical Laboratories, Inc., 345 Hill Ave., Nashville, TN 37210, 615-255-2400, (Formerly: Aegis Sciences Corporation, Aegis Analytical Laboratories, Inc., Aegis Analytical Laboratories)

Alere Toxicology Services, 1111 Newton St., Gretna, LA 70053, 504-361-8989/800-433-3823, (Formerly: Kroll Laboratory Specialists, Inc., Laboratory Specialists, Inc.)

Alere Toxicology Services, 450 Southlake Blvd., Richmond, VA 23236, 804-378-9130, (Formerly: Kroll Laboratory Specialists, Inc., Scientific Testing Laboratories, Inc.; Kroll Scientific Testing Laboratories, Inc.)

Baptist Medical Center-Toxicology Laboratory, 11401 I-30, Little Rock, AR 72209-7056, 501-202-2783, (Formerly: Forensic Toxicology Laboratory Baptist Medical Center)

Clinical Reference Laboratory, Inc., 8433 Quivira Road, Lenexa, KS 66215-2802, 800-445-6917

DrugScan, Inc., 200 Precision Road, Suite 200, Horsham, PA 19044, 800-235-4890

Dynacare \*, 245 Pall Mall Street, London, ONT, Canada N6A 1P4, 519-679-1630, (Formerly: Gamma-Dynacare Medical Laboratories)

ElSohly Laboratories, Inc., 5 Industrial Park Drive, Oxford, MS 38655, 662-236-2609

Fortes Laboratories, Inc., 25749 SW Canyon Creek Road, Suite 600, Wilsonville, OR 97070, 503-486-1023

Laboratory Corporation of America Holdings, 7207 N. Gessner Road, Houston, TX 77040, 713-856-8288/800-800-2387

Laboratory Corporation of America Holdings, 69 First Ave., Raritan, NJ 08869, 908-526-2400/800-437-4986, (Formerly: Roche Biomedical Laboratories, Inc.)

Laboratory Corporation of America Holdings, 1904 Alexander Drive, Start Printed Page 135 Research Triangle Park, NC 27709, 919-572-6900/800-833-3984, (Formerly: LabCorp Occupational Testing Services, Inc., CompuChem Laboratories, Inc.; CompuChem Laboratories, Inc., A Subsidiary of Roche Biomedical Laboratory; Roche CompuChem Laboratories, Inc., A Member of the Roche Group)

Laboratory Corporation of America Holdings, 1120 Main Street, Southaven, MS 38671, 866-827-8042/800-233-6339, (Formerly: LabCorp Occupational Testing Services, Inc.; MedExpress/National Laboratory Center)

LabOne, Inc. d/b/a Quest Diagnostics, 10101 Renner Blvd., Lenexa, KS 66219, 913-888-3927/800-873-8845, (Formerly: Quest Diagnostics Incorporated; LabOne, Inc.; Center for Laboratory Services, a Division of LabOne, Inc.)

MedTox Laboratories, Inc., 402 W. County Road D, St. Paul, MN 55112, 651-636-7466/800-832-3244

MetroLab-Legacy Laboratory Services, 1225 NE 2nd Ave., Portland, OR 97232, 503-413-5295/800-950-5295

Minneapolis Veterans Affairs Medical Center, Forensic Toxicology Laboratory, 1 Veterans Drive, Minneapolis, MN 55417, 612-725-2088, Testing for Veterans Affairs (VA) Employees Only

National Toxicology Laboratories, Inc., 1100 California Ave., Bakersfield, CA 93304, 661-322-4250/800-350-3515

One Source Toxicology Laboratory, Inc., 1213 Genoa-Red Bluff, Pasadena, TX 77504, 888-747-3774, (Formerly: University of Texas Medical Branch, Clinical Chemistry Division; UTMB Pathology-Toxicology Laboratory)

Pacific Toxicology Laboratories, 9348 DeSoto Ave., Chatsworth, CA 91311, 800-328-6942, (Formerly: Centinela Hospital Airport Toxicology Laboratory)



Pathology Associates Medical Laboratories, 110 West Cliff Dr., Spokane, WA 99204, 509-755-8991/800-541-7891x7

Phamatech, Inc., 15175 Innovation Drive, San Diego, CA 92128, 888-635-5840

Quest Diagnostics Incorporated, 1777 Montreal Circle, Tucker, GA 30084, 800-729-6432,  
(Formerly: SmithKline Beecham Clinical Laboratories; SmithKline Bio-Science Laboratories)

Quest Diagnostics Incorporated, 400 Egypt Road, Norristown, PA 19403, 610-631-4600/877-642-2216, (Formerly: SmithKline Beecham Clinical Laboratories; SmithKline Bio-Science Laboratories)

Quest Diagnostics Incorporated, 8401 Fallbrook Ave., West Hills, CA 91304, 818-737-6370,  
(Formerly: SmithKline Beecham Clinical Laboratories)

Redwood Toxicology Laboratory, 3700 Westwind Blvd., Santa Rosa, CA 95403, 800-255-2159

STERLING Reference Laboratories, 2617 East L Street, Tacoma, Washington 98421, 800-442-0438

US Army Forensic Toxicology Drug Testing Laboratory, 2490 Wilson St., Fort George G. Meade, MD 20755-5235, 301-677-7085, Testing for Department of Defense (DoD) Employees Only

The following laboratory has voluntarily withdrawn from the National Laboratory Certification Program, as of January 6, 2017:

Southwest Laboratories, 4625 E. Cotton Center Boulevard, Suite 177, Phoenix, AZ 85040, 602-438-8507/800-279-0027

Upon finding a Canadian laboratory to be qualified, HHS will recommend that DOT certify the laboratory (**Federal Register**, July 16, 1996) as meeting the minimum standards of the Mandatory Guidelines published in the **Federal Register** on November 25, 2008 ([73 FR 71858](#)). After receiving DOT certification, the laboratory will be included in the monthly list of HHS-certified laboratories and participate in the NLCP certification maintenance program.

Charles LoDico,  
Chemist.

## Footnotes

*\*The Standards Council of Canada (SCC) voted to end its Laboratory Accreditation Program for Substance Abuse (LAPSA) effective May 12, 1998. Laboratories certified through that program were accredited to conduct forensic urine drug testing as required by U.S. Department*

*of Transportation (DOT) regulations. As of that date, the certification of those accredited Canadian laboratories will continue under DOT authority. The responsibility for conducting quarterly performance testing plus periodic on-site inspections of those LAPSA-accredited laboratories was transferred to the U.S. HHS, with the HHS' NLCP contractor continuing to have an active role in the performance testing and laboratory inspection processes. Other Canadian laboratories wishing to be considered for the NLCP may apply directly to the NLCP contractor just as U.S. laboratories do.*

**Michigan Association of Treatment Court Professionals**

824 N. Capitol Avenue  
Lansing, Michigan 48906  
[www.matcp.org](http://www.matcp.org)

