

AAMRO MEDICAL REVIEW OFFICER CERTIFICATION

EXAM STUDY GUIDE

The following questions have been prepared to provide a focus for your study. Answers to all these questions can be found in the *Medical Review Officer Handbook*, 9th edition. The section of Title 49 CFR Part 40, if any, that applies is shown in parentheses. If you feel comfortable answering these questions, you will be adequately prepared for the exam.

Federal Chain of Custody Form:

- What constitutes a fatal flaw? (40.199)
- What are considered minor or correctable flaws? (40.203)
- What if the donor refuses to sign? (40.73)

DOT Collection Procedures:

- What are the basic steps of the collection process? (40.61-40.73)
- When **must** an observed collection be ordered by the collector? By the employer? By the MRO? (40.67)
- What steps should be taken if the specimen is outside of temperature range? (40.65)

Shy Bladder:

- What are DOT's regulations regarding shy bladder (insufficient volume)? (40.193)
- Who performs the medical evaluation for shy bladder? (40.193)
- What does the medical evaluation for shy bladder consist of? (40.193)
- What are DOT's regulations regarding long-term disabilities that cause the donor to be unable to provide sufficient urine? [Note that the specific regulations regarding insufficient volume and long-term disabilities are applied for pre-employment, return-to-work, and follow-up tests only, not for random testing.] (40.195)

Laboratory Procedures:

- What is the purpose of the immunoassay tests? What are the cutoff levels used in federally regulated testing? (40.87)
- What is the purpose of the GC/MS confirmation? What are the cutoff levels used in federally regulated testing? (40.87)
- Why are the cutoff levels for marijuana different between immunoassay and GC/MS?
- How may the testing results be transmitted from the laboratory to the MRO? (40.97)
- May the laboratory transmit results to the MRO via a third-party administrator (C/TPA)? (40.97)

- How long must the laboratory retain positive specimens? Negative specimens? (40.99)

Drug Profiles:

- What are the 5 classes of drugs on the DOT testing panel? (40.87)
- How long can these drugs be detected in the body at current cutoff levels?
- For each of these 5 classes of drugs, what type of medications (if any) can cause a positive test on the immunoassay? On the GC/MS confirmation?

Special Issues Concerning Amphetamine and Methamphetamine Verification:

- What types of prescription medications can cause confirmed positive for amphetamine and/or methamphetamine?
- Can the use of Mexican prescription diet pills cause a positive test?
- What over-the-counter medications may cause a presumptive positive on the immunoassay? Which of these will be confirmed by GC/MS?
- How should the MRO report possible safety risks associated with “legal” use? (40.327)
- What can the quantitative levels of amphetamine and methamphetamine indicate?
- When should the MRO request a *d*- and *l*- isomerization? How do these values factor into the verification of amphetamine and/or methamphetamine positives?
- What quantitative levels are indicative of normal use of Vicks Inhaler? What levels could indicate abuse?
- What percentage of *l*-methamphetamine would be consistent with the use of Vicks Inhaler?

Special Issues Concerning Cocaine Verification:

- Is there any medication used in dentistry that metabolizes into benzoylecgonine (other than cocaine)?
- How long after use can the cocaine metabolite benzoylecgonine be detected by urinalysis?
- Can passive inhalation cause a positive test? Is this a viable alternative explanation? (40.151)
- Must the MRO consider the ingestion of coca tea as a viable alternative explanation? (40.151)

Special Issues Concerning Marijuana Verification:

- What prescription medication(s) can cause a THC-positive test?
- How long after marijuana use can THC be detected by urinalysis?
- Is the medical use of marijuana by prescription a valid alternative explanation under DOT regulations? (40.151)

- Can ingestion of legal hemp food products cause a THC-positive test? Is this a valid alternative explanation under DOT regulations? (40.151)
- Can passive inhalation cause a positive test? Is this a viable alternative explanation under DOT regulations? (40.151)

Special Issues Concerning Opiate Verification:

- Into what substances is heroin metabolized in the body?
- Into what substances is codeine metabolized in the body?
- When must a test for 6-acetylmorphine (6-AM) be performed? (40.87)
- What does the presence of 6-acetylmorphine (6-AM) indicate?
- What may the presence of morphine without codeine indicate?
- What quantitative levels of morphine and/or codeine may be attributable to ingestion of poppy seeds alone?
- What quantitative levels of morphine and/or codeine may be attributable to a prescription for codeine?
- Will synthetic narcotics (such as methadone) test positive for morphine and/or codeine?
- In federally regulated testing, what step is required for the MRO during opiate verification that is not required when verifying the other 4 classes of drugs? At what quantitative level is this step NOT required? (40.139)

Quantitative Test Results:

- When can the MRO request quantitative results? (40.97)
- When can they be useful in interpretation of positive test results?
- When can they be released to the employer? (40.163)
- When can they be released to the donor? (40.329)
- What do they indicate regarding impairment at time of collection? [Note: See pages 234-235 of the *Medical Review Officer Handbook*, 9th edition. This subject will be covered in greater detail during the training.]

Dilute Specimens:

- What does DOT define as a dilute specimen (specific gravity/creatinine levels)? (40.93)
- What are some causes of dilute specimens?
- What steps must the MRO take if a specimen is found to be dilute? (40.155)
- What steps may the employer take? (40.197)

Adulterated or Substituted Specimens:

- What does DOT define as a substituted specimen (specific gravity/creatinine levels)? (40.93)
- How is an adulterated or substituted result reported by the lab to the MRO? (40.97)
- How does the MRO report adulteration or substitution to the employer? (40.145)
- What are the consequences for the donor of an adulterated or substituted specimen? (40.23)

MRO Review of Results:

- What functions may be fulfilled by a staff person working under the direct supervision of an MRO? (40.127,131)
- What functions must be performed personally by the MRO? (40.123-161)
- What are the MRO's responsibilities with regard to review of negative results? (40.127)
- May the MRO consider previous or subsequent drug test results when reviewing a positive drug test? (40.151)

MRO Contact and Interview with the Donor:

- What is the time frame for initial contact? (40.131)
- What steps should the MRO take if unable to contact the donor? (40.131,133)
- What steps should be followed when neither the employer nor the MRO is able to contact the donor? (40.133)
- What is the time limit for the donor to respond when told to contact the MRO? (40.131)
- What are the specific objectives to be accomplished during the MRO's interview with the donor? (40.135-145)

MRO's Reporting of Results:

- What are the specific categories of drug test results? (40.163)
- At what point may the MRO report a positive, substituted, adulterated or invalid result to the employer? A negative result? (40.127-161)
- What part of the chain-of-custody form does the MRO need prior to reporting the results to the employer? (40.127-129)
- May the MRO use the lab copy of the chain-of-custody form to report results to the employer? May the MRO use the MRO copy of the form to report results? (40.163)
- May the results be transmitted to the employer via phone? Fax? Mail? (40.167)

- May the results be transmitted to the employer via a third-party administrator (C/TPA)? (40.165)
- How should the MRO report the use of a family member's prescription medication? (40.137,139,327)

Split Sample Procedures:

- What are the MRO's responsibilities in regard to split specimen testing? (40.153,171,187)
- Under what conditions may the donor request a test of the split specimen? Does the donor have the right to request a split specimen test if the original sample has been reported as adulterated or substituted? (40.171)
- What cutoff levels are used in split specimen testing? What specifically is tested for? (40.177)
- Can/should the split specimen test be done at the same laboratory as the first test? (40.171,175)
- Does the MRO delay the reporting of the original results pending the results from the split specimen test? (40.23,167)
- In federally regulated (DOT) testing, what procedures must be followed when the split specimen fails to reconfirm? (40.187)

DOT and FMCSA Regulations:

- Under what circumstances may the MRO report a positive test to the employer without first having spoken with the donor? (40.133)
- What are the consequences of a positive test? (40.23)
- What steps must a driver take before he/she may return to work? (40.305)
- What are the testing requirements after he/she has returned to work? (40.307)
- What may be included in the employee's evaluation by a Substance Abuse Professional? (40.293)
- How long must the MRO keep positive results on file? Negative results? [Note: DOT regulations regarding employer retention of drug test results (40.333) are considered to be the same for the MRO.]
- What are the donor's rights regarding access to his/her records? (40.329)

Substance Abuse Professional (SAP):

- Who is authorized to act as a SAP under DOT regulations? (40.281)
- When is a SAP evaluation required? (40.285)
- What factors are SAPs prohibited from considering when making an evaluation and recommendations? (40.293)

- Can anyone change a SAP's evaluation and recommendations?
- How is follow-up testing performed? How many follow-up tests are required by DOT during the first 12 months after the employee has been returned to a safety-sensitive position?
- Can a SAP recommend both drug and alcohol testing for the follow-up tests?
- What is the next step after the employee completes the SAP's treatment and/or education recommendations?

Alcohol Testing:

- Who is authorized to conduct alcohol testing under DOT regulations? (40.211)
- What are the steps for an initial test? (40.241)
- What are the steps for a confirmation test? (40.251)
- When are saliva alcohol-testing devices allowed in DOT alcohol testing?(40.229)
- When is a confirmation test required? (40.247)
- What is the maximum time allowed between completion of the screening test and the beginning of the confirmation test? What is the minimum time allowed? (40.251)
- What does the screening test technician (STT) do if a saliva screening device does not activate? (40.245)
- Who is authorized to witness the alcohol testing process?(40.233)