Participants may be attempting to mask or hide drug or alcohol use by intentional acts of specimen dilution, substitution or adulteration.

Recovery Management programs are justifiably concerned about participants that may be attempting to mask drug/alcohol use and/or to compromise the drug monitoring program by intentional acts of specimen dilution, substitution, or adulteration. Participants in professional health Recovery Management programs are intelligent, knowledgeable about the drug testing process and able to devise means to compromise that process. When possible, FSSolutions recommends that all urine collections in Recovery Management programs be directly observed. Unfortunately, this is not always possible, and as a result, FSSolutions recommends that all urine specimens be tested for specimen validity at the testing laboratory. Specimen Validity Testing (SVT) measures urine creatinine level, specific gravity and specimen pH, these measurements may be used as indicators of potentially suspect specimens.

Based on the research and findings of the Department of Health and Human Services and the US Department of Transportation for Federal drug testing programs, the following are general guidelines that FSSolutions recommends for RMS programs in reference to creatinine and specific gravity information.

1) Specimens reported as negative with creatinine 5-20 mg/mL AND specific gravity >1.0010 and <1.0030—should be considered negative dilute. If the program wants to require a re-collection of the specimen it should be done as soon as practical and with little prior notice to the participant. If the second specimen is also negative dilute, the test should be considered acceptable. Dietary practices, including intake of water or other fluids as part of a healthy lifestyle can produce dilute urine specimens. It is difficult to distinguish “intentional water-loading” several hours prior to a specimen collection from a regular regime of significant fluid intake, but one important thing to look for is any significant change in creatinine and specific gravity from one specimen to another. Ongoing regular hydration may be expected to produce ongoing regular creatinine and specific gravity values however these values do fluctuate during the day to some degree. Significant changes between specimens are not always signs of “intentional water-loading”, but they still warrant evaluation.
2) Specimens reported as negative with creatinine between 2 and 5 mg/dL AND specific gravity >1.0010 and <1.0030, should be reviewed and interpreted by an MRO. If the collection of this specimen was not observed, an immediate re-collection under direct observation should be performed. The program might also consider requiring an alternative specimen for testing. Data shows that it is highly unlikely that dietary practices, fluid intake or physiological conditions will produce urine specimens with creatinine in the 2-5 mg/dL range. The MRO interview with the participant and review of pertinent medical and other data may be able to aid in determining whether this is a circumstance of attempt to defraud or subvert the testing program.

3) Specimens with creatinine <2 mg/dL AND specific gravity ≤1.0010 or ≥1.0200 are considered substituted - they are not physiologically possible as human urine. These specimens should be considered a refusal to test and a program violation. It is recommended that the participant be offered an MRO interview/review if they disagree with the laboratory findings.

4) Specimens with creatinine <2 mg/dL AND specific gravity >1.0010 and <1.0200 are considered to be creatinine/specific gravity mismatches and are reported as invalid. These specimens are highly suspect and some manipulation by the participant is considered likely but is not able to be forensically proven. MRO review is recommended. If the collection was not observed, an immediate re-collection under direct observation should be performed, and/or alternative specimen testing should be considered.

Based on all the information FSSolutions has available, we strongly advise RMS programs against taking disciplinary actions based SOLEY ON CREATININE LEVELS. The creatinine measurement should always be interpreted in conjunction with the specific gravity.

For further information, please contact FSSolutions at 800-732-3784 or info@fssolutions.com

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