



## Delaware Professionals' Health Monitoring Program Program Guidelines

**Title: Dilute and Low Creatinine Specimen Results**

**Pages: 2**

**Revision Date: 2/9/2022, 12/31/2019**

### **Guideline:**

This guideline is based on the standard established by the Federal Department of Transportation (DOT) for dilute specimens. The DOT defines a specimen as a dilute if the specimen has a creatinine of less than 20mg/dl and a specific gravity less than 1.003.

Given normal water consumption, typical ranges for creatinine and specific gravity are as follows

- Normal creatinine ranges for females are approximately 37-300 mg/dl
- Normal creatinine ranges for males are approximately 44 - 250 mg/dl
- Normal specific gravity is 1.002 - 1.030

There are specimens that have a normal specific gravity but a creatinine level that is less than 20 mg/dl. This can be a normal physiological variant or may be due to attempts to dilute the urine.

Delaware Professionals' Health Monitoring Program (DPHMP) defines "dilute" tests as those with a creatinine of less than 15 mg/dl and specific gravity of less than 1.003, and "low creatinine" tests as those with a creatinine of less than 15 mg/dl and specific gravity greater than or equal to 1.003. The process for managing dilute and low creatinine tests is the same, as outlined below:

- 1) The first time in a rolling year that the licensee has a dilute or low creatinine specimen:
  - a) The licensee will receive an email from DPHMP with information on the test result, suggested ways to avoid a repeat occurrence, and a copy of the Guideline on Dilute and Low Creatinine Specimen Results.
  - b) The licensee will be scheduled for another toxicology test within one business day from the date that DPHMP received the dilute or low creatinine test result from the laboratory.
- 2) If a licensee has a second dilute or low creatinine specimen in a rolling year:
  - a) The case will be reviewed by the DPHMP Agreement Monitor, the DPHMP Program Manager and the Operations Manager. A follow-up plan will be determined that may include alternative testing (e.g. PEth blood testing, hair testing), observed (rather than monitored) testing, additional urine testing, and/or testing the current specimen to the lowest level of detection. The licensee is responsible for the costs of these tests.
  - b) The licensee will be contacted by the Agreement Monitor to discuss the result and any required actions for the licensee regarding follow-up testing, including additional fees to be paid for testing. The Agreement Monitor will answer any questions and re-educate the licensee regarding how to avoid having a dilute or low creatinine specimen.



- 3) If a licensee has more than two dilute or low creatinine specimens within any one year rolling time period, the procedures for a second dilute will be followed. In addition, the DPHMP team may:
  - a) Consult with the DPHMP Psychiatric Consultant;
  - b) Incorporate alternative testing into the ongoing toxicology test plan for the licensee;
  - c) Require the licensee to have a medical evaluation to determine if there is a medical reason for the licensee to be producing dilute or low creatinine specimens; and/or
  - d) Report the licensee as non-compliant.
- 4) Following a medical evaluation, if it is identified that:
  - a) There is a medical issue causing the dilute or low creatinine results, and that medical issue cannot reasonably be resolved, this will be noted, and further dilute or low creatinine specimens will be periodically followed with additional testing.
  - b) There is a medical problem that can be remedied, the specimen results will be reviewed according to the general policy for all specimens once the medical issue has resolved.
  - c) No medical problem is found, the licensee's record will be reviewed by the DPHMP Psychiatric Consultant and/or Medical Director, taking into consideration any behaviors that may indicate possible drug and/or alcohol use. Further actions, including increased toxicology testing, alternative testing, third-party evaluation, and/or report of non-compliance, will be determined on a case-by-case basis.

If a licensee has a positive dilute or low creatinine specimen, the specimen is reported as a positive test by the Medical Review Officer. Please refer to the "Guideline for Management of Non Negative Toxicology Test Results."