

## Health Professionals' Services Program Program Guidelines

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

**Pages: 2**

**Revision Date: 10/26/21; 5/15/2013; 9/2012**

### **Guideline:**

1 This guideline is based on the standard established by the Federal Department of Transportation (DOT)  
2 for dilute specimens. The DOT defines a specimen as a dilute if the specimen has a creatinine of less  
3 than 20mg/dl and a specific gravity less than 1.003.  
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5 Given normal water consumption, typical ranges for creatinine and specific gravity are as follows  
6 - Normal creatinine ranges for females are approximately 37-300 mg/dl  
7 - Normal creatinine ranges for males are approximately 44 - 250 mg/dl  
8 - Normal specific gravity is 1.002 - 1.030

9 There are specimens that have a normal specific gravity but a creatinine level that is less than 20 mg/dl.  
10 This can be a normal physiological variant or may be due to attempts to dilute the urine.  
11

12 HPSP defines "dilute" tests as those with a creatinine of less than 15 mg/dl and specific gravity of less  
13 than 1.003, and "low creatinine" tests as those with a creatinine of less than 15 mg/dl and specific  
14 gravity greater than or equal to 1.003. The process for managing dilute and low creatinine tests is the  
15 same, as outlined below.  
16

- 17 1) The first time in a rolling year that the licensee has a dilute or low creatinine specimen:
- 18 a) The licensee will receive an email from HPSP with information on the test result, suggested  
19 ways to avoid a repeat occurrence, and a copy of the Guideline on Dilute and Low Creatinine  
20 Specimen Results.
- 21 b) The licensee will be scheduled for another toxicology test within one business day from the date  
22 that HPSP received the dilute or low creatinine test result from the laboratory.
- 23 2) If a licensee has a second dilute or low creatinine specimen in a rolling year:
- 24 a) The case will be reviewed by the HPSP Agreement Monitor, the HPSP Program Manager and the  
25 Operations Manager. A follow-up plan will be determined that may include alternative testing  
26 (e.g. PEth blood testing, hair testing), additional urine testing, and/or testing the current

- 27 specimen to the lowest level of detection. The licensee is responsible for the costs of these  
28 tests.
- 29 b) The licensee will be contacted by the Agreement Monitor to discuss the result and any required  
30 actions for the licensee regarding follow-up testing, including additional fees to be paid for  
31 testing. The Agreement Monitor will answer any questions and re-educate the licensee  
32 regarding how to avoid having a dilute or low creatinine specimen.
- 33 3) If a licensee has more than two dilute or low creatinine specimens within any one year rolling time  
34 period, the procedures for a second dilute will be followed. In addition, the HPSP team may:
- 35 a) Consult with the HPSP Medical Director;
- 36 b) Incorporate alternative testing into the ongoing toxicology test plan for the licensee;
- 37 c) Require the licensee to have a medical evaluation to determine if there is a medical reason for  
38 the licensee to be producing dilute or low creatinine specimens; and/or
- 39 d) Report the licensee as non-compliant to their licensing board.
- 40 4) Following a medical evaluation, if it is identified that:
- 41 a) There is a medical issue causing the dilute or low creatinine results, and that medical issue  
42 cannot reasonably be resolved, this will be noted, and further dilute or low creatinine specimens  
43 will be periodically followed with additional testing.
- 44 b) There is a medical problem that can be remedied, the specimen results will be reviewed  
45 according to the general policy for all specimens once the medical issue has resolved.
- 46 c) No medical problem is found, the licensee's record will be reviewed by the HPSP Medical  
47 Director, taking into consideration any behaviors that may indicate possible drug and/or alcohol  
48 use. Further actions, including increased toxicology testing, alternative testing, third-party  
49 evaluation, and/or report of non-compliance, will be determined on a case-by-case basis.
- 50 If a licensee has a positive dilute or low creatinine specimen, the specimen is reported as a positive test  
51 by the Medical Review Officer. Please refer to the "Guideline for Non Negative Toxicology Test Results."