Adulterant Survey Algorithm

Urine specimen is tested for:

- Suspect specimen substitution
- Suspect diluted specimen
- Suspect specimen adulteration
- Invalid specimen

Creatinine (Cr) and specific gravity (SG)

pH

Cr: <2.0 mg/dL AND SG: ≤1.001 or ≥1.020
Cr: ≥2.0 mg/dL AND SG: ≤1.001
Cr: ≥2.0 mg/dL to <20.0 mg/dL AND SG: >1.001 to <1.003

Suspect specimen substitution
Invalid specimen

Suspect diluted specimen

Suspect specimen adulteration

Invalid specimen

Normal; No additional comment

Cr: ≥2.0 mg/dL AND SG: ≤1.001
Cr: ≥2.0 mg/dL to <20.0 mg/dL AND SG: >1.001 to <1.020

Cr: <2.0 mg/dL AND SG: ≥1.001 to <1.020

Oxidant

POSITIVE
NEGATIVE

Nitrite

POSITIVE
NEGATIVE

Normal; No additional comment

Ph: <4.0
Ph: ≥11.0
Ph: ≥4.0 to <4.5
Ph: >9.0 to <11.0
Ph: 4.5 to 9.0

* Drug of abuse tests performed in the Clinical and Forensic Toxicology Laboratory are used to monitor compliance with treatment programs and should be utilized in a clinical setting where test results can be used definitively to make a diagnosis. Specimen adulteration can have a significant, potentially damaging, effect on treatment decisions. For this reason, the Clinical and Forensic Toxicology Laboratory utilizes a multistep process to evaluate specimens for adulteration.

* The specimen adulteration evaluation involves the following tests: creatinine, specific gravity, pH, and oxidants. When 1 or more of these results are outside the normal reference value, an adulterant comment is added to the final report that identifies the specific adulterant found.