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ADULTERATION TEST

For use with the CLIAwaived, Inc. Instant Drug Test Cup Plus (SKU#: CLIA-IDTC-15-BUPA)

Information

Urine sample adulteration is usually achieved by substitution, dilution or the addition of adulterants including so-called "masking agents" sold commercially. The use of adulterants can cause false negative results in drug tests by either interfering with the test and/or destroying drugs present in the urine. Dilution may also be used in an attempt to produce false negative drug test results.

The adulteration test is based on the color response of chemical indicators in the presence of adulterants. oxidant/PCC (OX/OO), pH (PH/PP), specific gravity (SG/SS), glutaraldehyde (GL/GG), nitrite (NI/NN) and creatinine (CR/CC) are tested to determine the integrity of urine samples.

Oxidants/PCC (Pyridinium Chlorochromate) (OX/OO): Bleach, hydrogen peroxide, pyridinium chlorochromate or other oxidizing agents react with an oxidant indicator to form a color complex. A blue-green, brown, or orange color indicates adulteration with bleach or other oxidizing agents. Normal human urine should not contain oxidants.

pH (PH/PP): The pH determination of urine samples is based on the color change of an indicator in an acidic or basic medium. Normal urine pH ranges from 4 to 9. Values outside of this range may indicate the sample has been altered.

Specific Gravity (SG/SS): The specific gravity test is based on the pKa change of certain pretreated polyelectrolytes in relation to the ionic concentration. In the presence of an indicator, the colors change from dark blue to blue-green in urine of low ionic concentration to green and yellow-green in urine of higher ionic concentration. The normal range for specific gravity is from 1.003 to 1.030. Values outside this range generally indicate specimen dilution or adulteration.

Glutaraldehyde (GL/GG): Adulterants such as "Clear Choice" contain glutaraldehyde which may cause disrupting the enzyme used in some immunoassay tests. Glutaraldehyde is not normally found in human urine.

Nitrite (NI/NN): Nitrite reacts with the reagent's aromatic amine to form a diazonium salt which couples with an indicator to yield a pink-red/purple color complex. A urine sample containing nitrite at a level greater than 15 mg/dl is considered adulterated.

Creatinine (CR/CC): Creatinine reacts with an indicator in an alkaline medium to form a purplish-brown color complex. The normal range of creatinine is from 20 to 300 mg/dl. Values outside this range generally indicate a manipulated test.

How to Use

1. Check the reagent areas on the adulteration test strip to know what the tests are.
2. The urine will work with the reagent areas on the adulteration test strip when using the urine drug test device.
3. Compare each reagent area to its corresponding color blocks on the color chart and read at the times specified. Proper read time is important for optimal results.
4. Obtain results by direct color chart comparison.

Note: All reagent areas may be read between 3 - 5 minutes. Changes in color after 5 minutes may be inaccurate.