UrineCheck 7 Drug Adulteration Test Strip

**pH:** Testing for the presence of acidic or alkaline adulterant. This test is based on the well-known double pH indicator method that gives distinguishable colors over wide pH range. The colors range from orange (low pH) to yellow and green to blue (high pH).

**Specific Gravity:** Testing for sample dilution. This test is based on the apparent pKa change of certain pretreated polyelectrolytes in relation to the ionic concentration. In the presence of an indicator, the colors range from dark blue or blue-green in urine of low ionic concentration to green and yellow in urine of higher ionic concentration.

**Bleach:** Testing for the presence of bleach in urine. In this test, the presence of bleach forms a blue-green color complex.

**Pyridium Chlorochromate:** Testing for the presence of chromate in urine. In this test, the presence of chromate forms a blue-green color complex.

**STORAGE**
1. Store at room temperature between 60°F - 85°F.
2. All test strips should be stored in the original container. Do not remove desiccant from bottle.
3. Do not expose to direct sunlight.
4. Remove only as many strips required for testing and immediately recap the container tightly.
5. Do not use after expiration date.

**PRECAUTIONS**
Do not touch test areas of strips.

**SPECIMEN COLLECTION**
1. Collect urine in a clean glass or plastic container.
2. Test urine sample as soon as possible after collection.

Refrigerate urine sample immediately if the sample cannot be tested within one hour. Bring refrigerated sample to room temperature and mix thoroughly before testing.
3. Do not centrifuge or add preservatives to the urine sample.
4. Handle the urine sample as if it is potentially infectious.
5. Aliquot a small portion of the urine sample into another container for testing in order to avoid contamination of the whole urine sample. Do not dip UrineCheck 7 directly into the primary collection container.

**PROCEDURE**
1. Remove from the bottle only enough strips for immediate use and replace cap tightly.
2. Completely immerse reagent areas of the strip in fresh, well-mixed urine. Remove the strip immediately to avoid dissolving out the reagent areas.
3. While removing, touch the side of the strip against the rim of the urine container to remove excess urine. Blot the lengthwise edge of the strip on an absorbent paper towel to...
further remove excess urine and avoid running over contamination from adjacent reagent pads.

4. Compare each reagent area to its corresponding color blocks on the color chart and read at the times specified. Proper read time is critical for optimal results.

5. Obtain results by direct color chart comparison.

Note: All reagent areas may be read between 1 - 2 minutes for screening positive urine from negative urine. Changes in color after 2 minutes are of no value.

INTERPRETATION OF RESULTS
Semi-quantitative results are obtained by visually comparing the color of each pad with the corresponding test color block pictured on the container label. No equipment is required.

QUALITY CONTROL
For best results, performance of reagent strips should be confirmed by testing known negative and positive specimens or controls whenever a new test is performed or whenever a new bottle is rust opened. Each laboratory should establish its own goals for adequate standard of performance, and should question handling and testing procedures if these standards are not met.

LIMITATIONS
Comparison to the color chart is dependent on the interpretation of the individual. It is therefore, recommended that all laboratory personnel interpreting the results of these strips be tested for color blindness.

Some compounds or physical properties that may affect the test result are listed below. Medications that discolor the urine may also cause abnormal results due to masking of the-reactions of the reagents on the test pads.

EXPECTED VALUES
Creatinine: Daily creatinine excretion, related to muscle mass of the human body, is usually constant. The DOT guideline states that urine specimens with creatinine levels of less than 20 mg/dl are indications of adulteration. Although these ranges are affected by age, sex, diet, muscle mass and local population distribution, sample with creatinine level of lower than 20 mg/dl should be considered adulterated.

Glutaraldehyde: Glutaraldehyde is not a natural component of human urine and it should not be present in normal urine. The presence of glutaraldehyde in the urine sample indicates the possibility of adulteration. However, false positive may result when ketone bodies are present in urine. Ketone bodies may appear in urine when a person is in ketoacidosis, starvation or other metabolic abnormalities.

Nitrite: Although nitrite is not a normal component of urine, nitrite levels of up to 3.6 mg/dl may be found in some urine specimens due to urinary tract infections, bacterial contamination or improper storage. In the UrineCheck 7, nitrite level above 7.5 mg/dl is considered abnormal.

Oxidants: The presence of oxidizing reagents in the urine is indicative of adulteration since oxidizing reagents are not normal constituents of urine. Oxidizing reagents include Hydrogen Peroxide, Ferricyanide, Persulfate, and Pyridinium Chlorochromate, etc.

pH: Normal urine pH ranges from 4.5 to 8.0. Values below pH 4.0 or above pH 9.0 are indicative of adulteration.

Specific Gravity: Random urine may vary in specific gravity from 1.003 - 1.030. Normal adults with normal diets and normal fluid intake will have an average urine specific gravity of 1.016 - 1.022. Elevated urine specific gravity value may be obtained in the presence of moderate quantities of protein. DOT guidelines state that a urine specimen with specific gravity level of less than 1.003 is an indication of adulteration. Specific gravity and creatinine values should be considered together to provide a better picture of whether the sample is adulterated.

Pyridium Chlorochromate: The presence of any chromate in urine is indicative of adulteration as chromate is not a normal constituent of urine.

REFERENCES
UrineCheck 7
Drug Adulteration
Test Strip

**Compare test strip** with **colors on chart**

*Note: Colors are approximate and depend on printer quality.*