

**INTENDED USE:**

Urine for urinalysis, culture and Special chemistry can be placed into the NCS Transport Tube containing a preservative, which allows specimens to be transported without the need for refrigeration. This product is for in vitro use only.

**SUMMARY AND PRINCIPLES****Urinalysis :**

Dip-stix chemistry and microscopic examination can be performed on samples maintained at room temperature for up to 72 hours before testing. The preservative maintains an acid pH and prevents bacterial proliferation, thereby preventing false positive readings for occult blood and protein. Also, the identification of formed elements, such as cells and casts, which are enhanced while in vitro crystal formation is prevented. Pathologic components are not obscured.

**Urine Culture**

The proper diagnosis of Urinary Tract Infection (UTI) relies on several factors : 1. The use of proper collection techniques. 2). A transport device that preserves the integrity of the specimen and 3). A suitable diagnostic test method properly performed to identify the pathogens present in the specimen. A mid stream urine is usually used to accomplish this diagnosis. In general, the presence of bacterial level in excess of 100,000 colony forming units (CFUs) in urine is considered as an indication of UTI. Any delay in the transportation of urine specimen to a laboratory may result in either a proliferation or decrease of bacterial levels and may lead to erroneous results. The effect is more significant if the specimen is left at room temperature. The common practice is to place the urine specimen under refrigeration prior to sending it to the laboratory. Upon arrival at the laboratory, the specimen will be kept refrigerated until it is ready for processing. It is not always possible to preserve the urine specimen under the optimum storage conditions and this creates the need for commercial systems to preserve specimens during transport. The UPT System is designed to preserve urine specimens by the use of a specially formulated powder (also available in tablet form) eliminating the need to store specimens under refrigeration. The chemical preservative will minimize proliferation or decrease of bacteria.

**Special Chemistry:**

*A. Drugs of Abuse. An evaluation was carried out with 5 NIDA, (National Institute of Drugs of Abuse). Amphetamine, phencyclidine (PCP), opiates (Morphine), benzoylgonine (cocaine) and THF (marijuana) as well as benzodiazepine and barbiturates.*

Specimens of urines were collected in the NCS Tube and testing carried out using the Syva Rapid Test as well as the Arcusign Unit test method.

**RESULTS : - *There were no false positives or negatives on the specimens taken and transported in the NCS Container.***

*B. Photosensitive constituents of urine such as Urobilinogen and Bilirubin can now be collected into the NCS Amber Tube. Many of the urinary constituents can be assayed using the NCS Urine Preservative System but for light sensitive constituents, the Amber Vial Tube is recommended*

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## **MATERIALS SUPPLIED**

The chemical preservative is placed inside the UPT vial or container as a tablet or in powder form.

**Additional Items Required:** Growth culture media, instrument for streaking the specimen and a container to hold the urine.

## **STORAGE AND STABILITY**

The UPT System can be stored at room temperature, and is stable up to the indicated expiry date. After specimen collection the Urine preservative transport system can be stored at room temperature for up to 72 hours.

## **PRECAUTION**

This product is for In vitro use only. Do not ingest the preservative tablet or powder. Do not use the specimen if the level of urine is less than mid-point of the urine preservative transport container. Autoclave all contaminated articles after use.

## **SPECIMEN COLLECTION PROCEDURE**

### **\*Only urine specimen should be collected with the UPT System**

1. Collect clean-voided mid-stream urine from the patient, according to hospital routine procedure for collection of urine. A clean sterile container should be used.
2. Fill the UPT vial or container with the specimen to minimum fill mark on the label.
3. Replace cap and hand tighten.
4. Shake urine transport system vial or container well to enhance dissolution of the tablet or powder. Record any required information onto the label and send to the laboratory as soon as is practical to do so.
5. It is recommended that two UPT vials or containers be used for each specimen.

## **LIMITATIONS OF PROCEDURE**

1. Only urine specimens should be collected in the UPT vial or container.
2. The chemical preservative cannot inactivate antibiotics. For this reason specimens collected from patients who are currently on antibiotics should not have their specimens sent for culture and sensitivity, as these may show negative results.
3. If the fluid level is less than the mid-point in the urine preservative transport system, the sample should not be used.
4. If the patient passes urine which is not an amber yellow specimen but is coloured by the metabolite of either food or pharmaceutical agent, then false negative or positive results may occur which has nothing to do with the preservative.

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