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B-Chemical analysis of urine

The chemical analysis of urine under taken to evaluate the levels of the following component: -

- Urobilinogen
- Glucose
- Bilirubin
- Ketones
- Blood
- Protein

B-Chemical analysis

- The presence of normal and abnormal chemical elements in the urine are detected using dry reagent strips called dipsticks
- When the tests trip is dipped in urine the reagents are activated and a chemical reaction occurs.
- The chemical reaction results in a specific color change .
- After 60 seconds ,this color change is compared against are ference color chart.

Determination of Urinary Sugar (Glucose):

Glucose is the sugar most commonly found in the urine, although other sugars , such as lactose, fructose , galactose , and pentose, may be found under certain condition. Normally, urine does not contain a sufficient amount of sugar to react with any of the popular enzyme

or reducing tests.

Causes of Glycosuria

- Physiological
- Pathological

Physiological :

Sometimes under physiological situations, glycosuria can occur

a. After large ingestion of carbohydrates

b. Anything that stimulates sympathetic nervous system such as excitement, stress etc.

c. 15 to 20% cases of pregnancy may be associated with physiological glycosuria.

d. Renal Glycosuria: In some persons, glycosuria is found when blood glucose is in normal range. This is known as renal glycosuria. Usually this is a benign condition.

Pathological :

A. Diabetes mellitus

The most common condition for glycosuria is diabetes mellitus, a metabolic disorder due to deficiencies of insulin.

B. Glycosuria due to other endocrine disorders

Deranged function of a number of endocrine disorders can cause

hyperglycemia and this may result in glycosuria, e.g. - Hyperthyroidism

• Dipstick chemical analysis

• Urine dipstick is a narrow plastic strip which has several squares of different colors attached to it.

• Each small square represents a component of the test used to interpret urinalysis.

- Colors generated by each pad are visually compared against a range of colors on brand-specific color charts
- The entire strip is dipped in the urine sample and color changes in each square are noted

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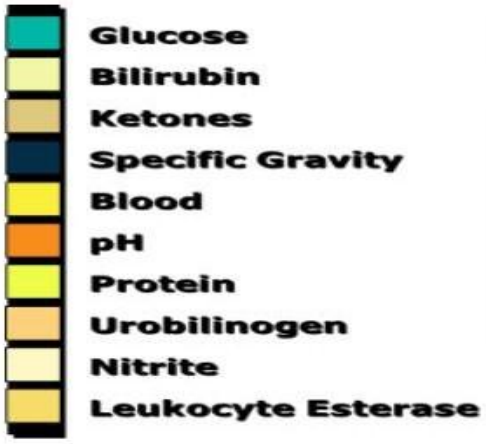

*Nitrite (suggestive of bacteria in urine)

* Bilirubin (possible liver disease or red blood cell break down)

* Urobilinogen (possible liver disease