Bilirubin: This test is based on azo-coupling reaction of bilirubin with diazotized 2,4-dichloroaniline to form a diazonium salt. The pink color is due to reaction of the diazonium salt with 3,3',5,5'-tetramethylbenzidine (TMB). The reaction is utilized as a colorimetric test for bilirubin in blood and urine samples. The test can be used for detection of bilirubin as low as 0.05-0.1 mg/dL in urine with a low specific gravity and less than 30 mg/dL ascorbic acid.

Ketone: This test is based on detection of acetoacetic acid as low as 0.05-0.1 mg/dL in urine. The test is used to detect ketone bodies in urine, which are produced by the liver as a result of starvation or diabetes mellitus. The test is also used to detect peroxides and peroxalates in urine.

Protein: This test is based on detection of albumin in urine as low as 0.05-0.1 g/L. The test is used to detect proteinuria in urine, which can be an indicator of kidney disease or other conditions.

Urobilinogen: This test is based on detection of urobilinogen as low as 0.05-0.1 g/L in urine. The test is used to detect urobilinogen in urine, which is a product of heme breakdown in the body. The test is also used to detect porphobilinogen in urine.

Leukocytes: This test reveals the presence of granulocyte esterases. The test is based on the reaction of esterases with 1 N-(1-naphthyl) ethylenediamine to produce a pink color. The reaction is utilized as a colorimetric test for leukocytes in blood and urine samples. The test can be used for detection of leukocytes as low as 9-15 white blood cells Leu/µL in clinical urine.

Interpretation of visual results: For visual readings, if the color of a pad is in-between negative and trace, the result should be read as a negative.