



Medical Laboratory Techniques Department

Microscopic examination of urine



Dr. Duha Mahdi ----Msc. Sarah Kamil

5-Different types of Crystals

*Formed by precipitation of urinary salts when alteration in multiple factors affect their solubility like pH , temperature and concentration

•Crystals found in acidic urine

1-Calciumoxalate 2-Uric acid 3-Amorphousurate 4-Sodiumurate

5-Calcium sulphate 6-Cystine 7-Tyrosine

1-Calciumoxalate

-These are colorless and envelop shaped

-These can be present in urine after the ingestion of tomatoes ,Oranges and Vitamin C

-Can cause extensive tubular injury



2-Uric acid

-Appear mostly as diamond rhombic or rosette form

-Increase amount are associated with increase levels of purine and nucleic acids, also, in patients with leukemia receiving therapy





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3-Amorphousurate

-Pink to red dust , they do not form a crystalline



4-Sodiumurate

-These are in the form of elongated prisms or plates



5-Calciumsulphate

-These are long ,thin needle arranged in star-like manner



6-Cystine

-These are hexagonal plates with equal or unequal sides





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7-Tyrosine

-These appear in the form of fine, needles that forms rosettes

