

Client  
Gurugram  
Pathkind Diagnostics Pvt. Ltd.  
Plot No. 55-56, Udhog Vihar Ph-IV, Gurugram - 122015

Processed By  
Pathkind Diagnostics Pvt. Ltd.  
Plot No. 55-56, Udhog Vihar Ph-IV, Gurugram - 122015

Name	: Mr. BC429	Billing Date	: 07/07/2023 12:32:22
Age	: 35 Yrs	Sample Collected on	: 10/07/2023 10:01:31
Sex	: Male	Sample Received on	: 10/07/2023 11:02:13
P. ID No.	: P1000100012961	Report Released on	: 21/07/2023 13:06:18
Accession No	: 10002305017	Barcode No.	: 10002305017-01
Referring Doctor	: Self	Ref no.	:
Referred By	:		

Report Status - Final

Test Name	Result	Biological Ref. Interval	Unit
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**BIOCHEMISTRY**

# Stone Analysis (Other Calculus)

Calculus (Stone) Analysis by automated FTIR (other)

METHOD FTIR -	Fourier Transform Infrared Spectrometry
SAMPLE TYPE	Stone (Kindly confirm & correlate with the site of stone)
SIZE	stone ( 7 mm x 7 mm)
WEIGHT	0.059 gms
RESULT (STONE COMPOSITION)	Calcium oxalate monohydrate (60%), Calcium oxalate dihydrate (40%)

Interpretation

Renal Stones:

The composition of urinary stones may vary from a simple crystal to a complex mixture containing several different species of crystals. The composition of the nidus (center) may be entirely different from that of the peripheral layers. Knowledge of stone composition is necessary to guide therapy of patients with recurrent stone formation. Commonly observed renal stones are - Calcium oxalate (whewellite/weddellite) 35%, Ca-Ox/Apatite 35%, Uric Acid/Acid Ammonium Urate 11%, Apatite/Brushite 8%, Struvite (MgNH<sub>4</sub>PO<sub>4</sub>)/Apatite 10%, Cystine & Xanthine 1%.

1. Calcium oxalate stones: -Production of calcium oxalate stones consisting of oxalate dihydrate indicate that the stone is newly formed while oxalate monohydrate indicate an old (>2 months since formed) stone and current urine composition may



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not be meaningful. "Conservative" Dietary Recommendations For Calcium Oxalate Stone Formers - Drink more water, Normal dietary calcium- avoid supplements, Moderate protein intake, Low salt ,Avoid high oxalate foods (spinach, peanuts, chocolate. Coffee, tea, sweet potato, brinjal, green beans).

2.Magnesium ammonium phosphate stones (struvite): -Production of magnesium ammonium phosphate stones often associated with infection (urea splitting organisms).Treatment of the infection is important to inhibit further stone formation.

3.Uric acid stones:- to prevent stone formation, avoid food rich in uric acid or purines (cauliflower, pumpkin,mushroom, red meat, red wine).

#### Gall Stones:

The composition of gallstones is affected by age, diet. High fibre, low fat diet, adequate vitamin intake are general recommendations to prevent gallstones. On the basis of their composition, gallstones can be divided into the following types:

- Cholesterol stones- comprised at least 80% cholesterol by weight
- Pigment stones- comprise bilirubin and calcium salts that are found in bile & contain less than 20% of cholesterol by weight
- Mixed stones - Mixed gallstones typically contain 20-80% cholesterol by weight & other constituents like calcium carbonate, palmitate, phosphate, bilirubin, and other bile pigments.

\*\* End of Report\*\*



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10002305017 Mr. BC429

