

**Reporting Title:** Supersaturation, Random, U

**Performing Location:** Mayo Clinic Laboratories - Rochester Main Campus

**Ordering Guidance:**

A timed 24-hour urine collection is the preferred specimen for measuring and interpreting this profile to determine kidney stone risk factors (SUP24 / Supersaturation Profile, 24 Hour, Urine). Random urine collections with individual analytes normalized to urinary creatinine may be of some clinical use in patients who cannot collect a 24-hour specimen, typically small children. Therefore, this test is offered on random collections for children less than 16 years old.

X-ray dyes and contrast media will affect uric acid test results.

-If a kidney X-ray with dye or computerized tomography (CT) scan with contrast has been performed, patient should wait a minimum of 1 day before starting collection.

-If a cholangiography (bile duct X-ray) has performed, patient should wait 7 days before starting collection.

-Urine must be collected before tablets have been taken for gallbladder X-ray, otherwise patient should wait 7 days before starting collection.

**Necessary Information:**

**Patient's age is required.**

**Specimen Requirements:**

**Supplies:**

-Urine Tubes, 10 mL (T068)

-Sarstedt Aliquot Tube, 5 mL (T914)

**Collection Container/Tube:** 90 mL urine container

**Submission Container/Tube:** 2 x 10 mL plastic urine tubes and 5 x 5 mL plastic urine tubes

**Specimen Volume:** 40 mL

**Collection Instructions:**

1. Collect a random urine specimen, mix collection container thoroughly and divide the urine into 7 plastic tubes (2 x 10 mL and 5 x 5 mL).

2. Refrigerate specimen after collection. Specimen pH should be between 4.5 and 8 and will stay in this range if kept refrigerated. Specimens with pH above 8 indicate bacterial contamination, and testing will be canceled. **Do not** attempt to adjust pH as it will adversely affect results.

**Forms:**

[If not ordering electronically, complete, print, and send a Renal Diagnostics Test Request](#) (T830) with the specimen.

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	14 days	
	Ambient	72 hours	
	Frozen	14 days	

**Result Codes:**

Result ID	Reporting Name	Type	Unit	LOINC®
OXMCO	Oxalate, Random, U (mmol/L)	Numeric	mmol/L	15086-2

OXGCO	Oxalate, Random, U (mg/L)	Numeric	mg/L	2700-3
OXUCR	Oxalate/Creatinine Ratio, Random, U	Numeric	mg/mg	13483-3
31246	Interpretation	Alphanumeric		69051-1
616399	Calcium Oxalate Crystal	Numeric	DG	101931-4
616400	Brushite Crystal	Numeric	DG	101932-2
616401	Hydroxyapatite Crystal	Numeric	DG	101933-0
616402	Uric Acid Crystal	Numeric	DG	101934-8
RAUAC	Uric Acid, Random, U	Numeric	mg/dL	3086-6
UACCR	Uric Acid/Creat Ratio, Random, U	Numeric	mg/mg	3089-0
RASUC	Sulfate, Random, U	Numeric	mg/dL	2975-1
POUCO	Phosphorus, Random, U	Numeric	mg/dL	2778-9
PHOCR	Phosphorus/Creat Ratio, Random, U	Numeric	mg/mg	11141-9
RAPHU	pH, Random, U	Numeric		2756-5
RAOSU	Osmolality, Random, U	Numeric	mOsm/kg	2695-5
RANAC	Sodium, Random, U	Numeric	mmol/L	2955-3
RAMGC	Magnesium, Random, U	Numeric	mg/dL	19124-7
MAGCR	Magnesium/Creat Ratio, Random, U	Numeric	mg/mg	13474-2
RACTU	Creatinine, Random, U	Numeric	mg/dL	2161-8
RAKUC	Potassium, Random, U	Numeric	mmol/L	2828-2
RACLC	Chloride, Random, U	Numeric	mmol/L	2078-4
CITCO	Citrate Excretion, Random, U	Numeric	mg/dL	2128-7
CITCR	Citrate/Creatinine Ratio, Random, U	Numeric	mg/mg	13722-4
RACAC	Calcium, Random, U	Numeric	mg/dL	17862-4
CALCR	Calcium/Creatinine Ratio, Random, U	Numeric	mg/mg	9321-1
RAAMM	Ammonium, Random, U	Numeric	mmol/L	1842-4

LOINC® and CPT codes are provided by the performing laboratory.

### Supplemental Report:

Supplemental

### Components:

Test Id	Reporting Name	CPT Units	CPT Code	Always Performed	Available Separately
SRINT	Supersaturation, Random, U 1			Yes	No
RANAU	Sodium, Random, U	1	84300	Yes	Yes, (order RNAUR)
RAKUR	Potassium, Random, U	1	84133	Yes	Yes, (order RKUR)
RACAL	Calcium, Random, U	1	82310	Yes	Yes, (order CACR3)
RAMAG	Magnesium, Random, U	1	83735	Yes	Yes, (order MAGRU)
RACLU	Chloride, Random, U	1	82436	Yes	Yes, (order RCHLU)
RAPOU	Phosphorus, Random, U	1	84105	Yes	Yes, (order RPHOC)
RASUL	Sulfate, Random, U	1	84392	Yes	No
RACIT	Citrate Excretion, Random, U	1	82507	Yes	Yes, (order CITRA)

RAOXU	Oxalate, Random, U	1	83945	Yes	Yes, (order ROXUR)
RAPHU	pH, Random, U	1	83986	Yes	No
RAURA	Uric Acid, Random, U	1	84560	Yes	Yes, (order RURC1)
RACTU	Creatinine, Random, U	1	82570	Yes	Yes, (order RCTUR)
RAOSM	Osmolality, Random, U	1	83935	Yes	No
RAAMM	Ammonium, Random, U	1	82140	Yes	Yes, (order RAMBO)

**CPT Code Information:**

- 82310-Calcium
- 82436-Chloride
- 82507-Citrate excretion
- 82570-Creatinine
- 83735-Magnesium
- 83935-Osmolality
- 83945-Oxalate
- 83986-pH
- 84105-Phosphorus
- 84133-Potassium
- 84300-Sodium
- 84392-Sulfate
- 84560-Uric acid
- 82140-Ammonium

**Reference Values:**

The following analytes do not have any established reference values:  
Sodium, potassium, chloride, phosphorus, citrate, sulfate, and oxalate  
pH: 4.5-8.0

**CREATININE**

> or =18 years old: 16-326 mg/dL  
Reference values have not been established for patients who are younger than 18 years.

**OSMOLALITY**

0-11 months: 50-750 mOsm/kg  
> or =12 months: 150-1,150 mOsm/kg

**AMMONIUM**

18-77 years: 3-65 mmol/L  
Reference values have not been established for patients who are younger than 18 years or older than 77 years.

**CALCIUM**

1 month-<12 months: 0.03-0.81 mg/mg creat  
12 months-<24 months: 0.03-0.56 mg/mg creat  
24 months-<3 years: 0.02-0.50 mg/mg creat  
3 years-<5 years: 0.02-0.41 mg/mg creat

5 years-<7 years: 0.01-0.30 mg/mg creat

7 years-<10 years: 0.01-0.25 mg/mg creat

10 years-<18 years: 0.01-0.24 mg/mg creat

18 years-83 years: 0.05-0.27 mg/mg creat

Reference values have not been established for patients who are younger than 1 month or older than 83 years.

## MAGNESIUM

Magnesium/Creatinine Ratio:

1 month-<12 months: 0.10-0.48 mg/mg creat

12 months-<24 months: 0.09-0.37 mg/mg creat

24 months-<3 years: 0.07-0.34 mg/mg creat

3 years-<5 years: 0.07-0.29 mg/mg creat

5 years-<7 years: 0.06-0.21 mg/mg creat

7 years-<10 years: 0.05-0.18 mg/mg creat

10 years-<14 years: 0.05-0.15 mg/mg creat

14 years-<18 years: 0.05-0.13 mg/mg creat

18 years-83 years: 0.04-0.12 mg/mg creat

Reference values have not been established for patients who are younger than 1 month or older than 83 years.