

## Overview

### Useful For

Evaluation of hypo- or hyper-phosphatemic states

Evaluation of patients with nephrolithiasis

### Special Instructions

- [Urine Preservatives-Collection and Transportation for 24-Hour Urine Specimens](#)

### Method Name

MolybdicAcid

### NY State Available

Yes

## Specimen

### Specimen Type

Urine

### Necessary Information

24-Hour volume is required.

### Specimen Required

**Container/Tube:** Plastic, 5-mL tube (T465)

**Specimen Volume:** 4 mL

### Collection Instructions:

1. Collect urine for 24 hours.
2. Refrigerate specimen within 4 hours of completion of 24-hour collection.

**Additional Information:** See [Urine Preservatives-Collection and Transportation for 24-Hour Urine Specimens](#) in Special Instructions for multiple collections.

### Forms

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

### Urine Preservative Collection Options

**Note:** The addition of preservative or application of temperature controls **must occur within 4 hours of completion** of the collection.

Ambient	OK
Refrigerate	Preferred

Frozen	OK
50% Acetic Acid	OK
Boric Acid	OK
Diazolidinyl Urea	OK
6M Hydrochloric Acid	OK
6M Nitric Acid	OK
Sodium Carbonate	No
Thymol	OK
Toluene	No

### Specimen Minimum Volume

1 mL

### Reject Due To

All specimens will be evaluated at Mayo Clinic Laboratories for test suitability.

### Specimen Stability Information

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	14 days	
	Frozen	14 days	
	Ambient	7 days	

## Clinical and Interpretive

### Clinical Information

Approximately 80% of filtered phosphorus is reabsorbed by renal proximal tubule cells. The regulation of urinary phosphorus excretion is principally dependent on regulation of proximal tubule phosphorus reabsorption. A variety of factors influence renal tubular phosphate reabsorption, and consequent urine excretion. Factors which increase urinary phosphorus excretion include high phosphorus diet, parathyroid hormone, extracellular volume expansion, low dietary potassium intake and proximal tubule defects (eg, Fanconi Syndrome, X-linked hypophosphatemic Rickets, tumor-induced osteomalacia). Factors which decrease, or are associated with decreases in, urinary phosphorus excretion include low dietary phosphorus intake, insulin, high dietary potassium intake, and decreased intestinal absorption of phosphorus (eg, phosphate-binding antacids, vitamin D deficiency, malabsorption states).

A renal leak of phosphate has also been implicated as contributing to kidney stone formation in some patients.

### Reference Values

<1,100 mg/24 hours

### Interpretation

Interpretation of urinary phosphorus excretion is dependent upon the clinical situation, and should be interpreted in conjunction with the serum phosphorus concentration.

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**Cautions**

No significant cautionary statements

**Clinical Reference**

Agarwal R, Knochel JP: Hypophosphatemia and hyperphosphatemia. In The Kidney. Sixth edition. Edited by Barry M Brenner. WB Saunders Company, Philadelphia, PA, 2000, pp 1071-1125

**Performance****Method Description**

Inorganic phosphorus reacts with ammonium molybdate in an acidic solution to form ammonium phosphomolybdate. The ammonium phosphomolybdate is quantified in the ultraviolet range (340 nm). (Package insert: Roche Phosphorus, Roche Diagnostic Corp., Indianapolis IN)

**PDF Report**

No

**Day(s) and Time(s) Test Performed**

Monday through Sunday; Continuously

**Analytic Time**

1 day

**Maximum Laboratory Time**

3 days

**Specimen Retention Time**

7 days

**Performing Laboratory Location**

Rochester

**Fees and Codes****Fees**

- Authorized users can sign in to [Test Prices](#) for detailed fee information.
- Clients without access to Test Prices can contact [Customer Service](#) 24 hours a day, seven days a week.
- Prospective clients should contact their Regional Manager. For assistance, contact [Customer Service](#).

**Test Classification**

This test has been cleared, approved or is exempt by the U.S. Food and Drug Administration and is used per manufacturer's instructions. Performance characteristics were verified by Mayo Clinic in a manner consistent with CLIA requirements.

**CPT Code Information**

84105

**LOINC® Information**



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Test ID	Test Order Name	Order LOINC Value
POU	Phosphorus, U	2779-7

Result ID	Test Result Name	Result LOINC Value
POUU	Phosphorus, U	2779-7
TM12	Collection Duration	13362-9
VL10	Urine Volume	3167-4
PHOCN	P Concentration	21458-5