

**Reporting Title:** Comprehensive Metabolic Panel, S  
**Performing Location:** Rochester

**Shipping Instructions:**

Ship specimen protected from light.

**Necessary Information:**

Patient's age and sex are required.

**Specimen Requirements:**

Supplies: Amber Frosted Tube, 5 mL (T915)

Collection Container/Tube:

Preferred: Serum gel

Acceptable: Red top

Submission Container/Tube: Amber vial

Specimen Volume: 0.6 mL

Collection Instructions:

1. Serum gel tubes should be centrifuged and protected from light within 2 hours of collection.
2. Red-top tubes should be centrifuged, and the serum aliquoted into an amber vial within 2 hours of collection.

**Specimen Minimum Volume:**

0.5 mL

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated	24 hours	

**Result Codes:**

Result ID	Reporting Name	Type	Unit	LOINC®
KS	Potassium, S	Numeric	mmol/L	2823-3
	<b>Also used by tests: ELPSR, KS, NAKS</b>			
NAS	Sodium, S	Numeric	mmol/L	2951-2
	<b>Also used by tests: ELPSR, NAKS, NAS</b>			

Result ID	Reporting Name	Type	Unit	LOINC®
CL	Chloride, S <b>Also used by tests: ELPSR, CL</b>	Numeric	mmol/L	2075-0
HCO3	Bicarbonate, S <b>Also used by tests: HCO3, ELPSR</b>	Numeric	mmol/L	1963-8
AGAP	Anion Gap <b>Also used by tests: ELPSR</b>	Numeric		33037-3
BUN	Bld Urea Nitrog (BUN), S <b>Also used by tests: BUN</b>	Numeric	mg/dL	3094-0
CRTSA	Creatinine, S <b>Also used by tests: CRTS1</b>	Numeric	mg/dL	2160-0
EGFR1	Estimated GFR (eGFR) <b>Also used by tests: CRTS1</b>	Numeric	mL/min/BSA	98979-8
CA	Calcium, Total, S <b>Also used by tests: CA</b>	Numeric	mg/dL	17861-6
GLURA	Glucose, Random, S <b>Also used by tests: GLURA</b>	Numeric	mg/dL	2345-7
TP	Protein, Total, S <b>Also used by tests: LIVPR, TP</b>	Numeric	g/dL	2885-2
ALB	Albumin, S <b>Also used by tests: ALB, LIVPR</b>	Numeric	g/dL	1751-7
AST	Aspartate Aminotransferase (AST), S <b>Also used by tests: LIVPR, AST</b>	Numeric	U/L	30239-8
ALP	Alkaline Phosphatase, S <b>Also used by tests: LIVPR, ALP</b>	Numeric	U/L	6768-6
ALT	Alanine Aminotransferase (ALT), S <b>Also used by tests: LIVPR, ALT</b>	Numeric	U/L	1743-4
BILIT	Bilirubin Total, S <b>Also used by tests: LIVPR, BILIT</b>	Numeric	mg/dL	1975-2

LOINC and CPT codes are provided by the performing laboratory.

**Supplemental Report:**  
 No

**Components:**

Test ID	Reporting Name	CPT Units	CPT Code	Always Performed	Orderable Separately
KS	Potassium, S			Yes	Yes
NAS	Sodium, S			Yes	Yes
CL	Chloride, S			Yes	Yes
HCO3	Bicarbonate, S			Yes	Yes
AGAP	Anion Gap			Yes	No
BUN	Bld Urea Nitrog (BUN), S			Yes	Yes
CRTS1	Creatinine with eGFR, S			Yes	Yes
CA	Calcium, Total, S			Yes	Yes
GLURA	Glucose, Random, S			Yes	Yes
TP	Protein, Total, S			Yes	Yes
ALB	Albumin, S			Yes	Yes
AST	Aspartate Aminotransferase (AST), S			Yes	Yes
ALP	Alkaline Phosphatase, S			Yes	Yes
ALT	Alanine Aminotransferase (ALT), S			Yes	Yes
BILIT	Bilirubin Total, S			Yes	Yes

**CPT Code Information:**

KS-84132  
NAS-84295  
CL-82435  
HCO3-82374  
BUN-84520  
CRTS1-82565  
CA-82310  
GLURA-82947  
TP-84155  
ALB-82040  
AST-84450  
ALP-84075  
ALT-84460  
BILIT-82247

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**Reference Values:****SODIUM**

<1 year: Not established  
> or =1 year: 135-145 mmol/L

**POTASSIUM**

<1 year: Not established  
> or =1 year: 3.6-5.2 mmol/L

**CHLORIDE**

1-17 years: 102-112 mmol/L  
> or =18 years: 98-107 mmol/L

Reference values have not been established for patients who are younger than 12 months of age.

**BICARBONATE****Males**

12-24 months: 17-25 mmol/L  
3 years: 18-26 mmol/L  
4-5 years: 19-27 mmol/L  
6-7 years: 20-28 mmol/L  
8-17 years: 21-29 mmol/L  
> or =18 years: 22-29 mmol/L

**Females**

1-3 years: 18-25 mmol/L  
4-5 years: 19-26 mmol/L  
6-7 years: 20-27 mmol/L  
8-9 years: 21-28 mmol/L  
> or =10 years: 22-29 mmol/L

Reference values have not been established for patients that are younger than 12 months of age.

**ANION GAP**

> or =7 years: 7-15

Reference values have not been established for patients who are younger than 7 years of age.

**BLOOD UREA NITROGEN (BUN)****Males**

1-17 years: 7-20 mg/dL  
> or =18 years: 8-24 mg/dL

Reference values have not been established for patients who are younger than 12 months of age.

**Females**

1-17 years: 7-20 mg/dL  
> or =18 years: 6-21 mg/dL

Reference values have not been established for patients who are younger than 12 months of age

**CREATININE****Males:**

0-11 months: 0.17-0.42 mg/dL

1-5 years: 0.19-0.49 mg/dL  
6-10 years: 0.26-0.61 mg/dL  
11-14 years: 0.35-0.86 mg/dL  
> or =15 years: 0.74-1.35 mg/dL

Females:

0-11 months: 0.17-0.42 mg/dL  
1-5 years: 0.19-0.49 mg/dL  
6-10 years: 0.26-0.61 mg/dL  
11-15 years: 0.35-0.86 mg/dL  
> or =16 years: 0.59-1.04 mg/dL

ESTIMATED GLOMERULAR FILTRATION RATE (eGFR)

>= 18 years old: > or =60 mL/min/BSA

Estimated GFR calculated using the 2021 CKD\_EPI creatinine equation.

Note: eGFR results will not be calculated for patients younger than 18 years old.

CALCIUM

<1 year: 8.7-11.0 mg/dL  
1-17 years: 9.3-10.6 mg/dL  
18-59 years: 8.6-10.0 mg/dL  
60-90 years: 8.8-10.2 mg/dL  
>90 years: 8.2-9.6 mg/dL

GLUCOSE

0-11 months: Not established  
> or =1 year: 70-140 mg/dL

TOTAL PROTEIN

> or =1 year: 6.3-7.9 g/dL  
Reference values have not been established for patients who are younger than 12 months of age.

ALBUMIN

> or =12 months: 3.5-5.0 g/dL  
Reference values have not been established for patients who are younger than 12 months of age.

ASPARTATE AMINOTRANSFERASE (AST)

Males:

0-11 months: Not established  
1-13 years: 8-60 U/L  
> or =14 years: 8-48 U/L

Females:

0-11 months: Not established  
1-13 years: 8-50 U/L  
> or =14 years: 8-43 U/L

ALKALINE PHOSPHATASE (ALP)

Males

0-14 days: 83-248 U/L

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15 days-<1 year: 122-469 U/L  
1-<10 years: 142-335 U/L  
10-<13 years: 129-417 U/L  
13-<15 years: 116-468 U/L  
15-<17 years: 82-331 U/L  
17-<19 years: 55-149 U/L  
> or =19 years: 40-129 U/L

Females

0-14 days: 83-248 U/L  
15 days-<1 year: 122-469 U/L  
1-<10 years: 142-335 U/L  
10-<13 years: 129-417 U/L  
13-<15 years: 57-254 U/L  
15-<17 years: 50-117 U/L  
> or =17 years: 35-104 U/L

ALANINE AMINOTRANSFERASE (ALT)

Males:

> or =1 year: 7-55 U/L

Reference values have not been established for patients who are younger than 12 months of age.

Females:

> or =1 year: 7-45 U/L

Reference values have not been established for patients who are younger than 12 months of age.

TOTAL BILIRUBIN

0-6 days: Refer to [www.bilitool.org](http://www.bilitool.org) for information on age-specific (postnatal hour of life) serum bilirubin values.

7-14 days: 0.0-14.9 mg/dL

15 days to 17 years: 0.0-1.0 mg/dL

>18 years 0.0-1.2 mg/dL