



Laboratory Services

Important Test Announcement

PHENYLALANINE/TYROSINE, PLASMA AND PHENYLALANINE/TYROSINE, DRIED BLOOD SPOT

Effective 5/27/2025, we will begin offering Phenylalanine/Tyrosine, Plasma (**PATYP**) and Phenylalanine/Tyrosine, Dried Blood Spot (**PATYDB**). These tests (**PATYP** and **PATYDB**) will replace the current Phenylalanine/Tyrosine (**PATY**) assay. Updated reference ranges are shown below. Please note the **reporting units for Phenylalanine are changing from mg/dL to μ mol/L**. Due to the change in units, the alert range for Phenylalanine in the Phenylalanine/Tyrosine, Dried Blood Spot (**PATYDB**) will also be updated from ≥ 20 mg/dL to > 1200 μ mol/L.

Test Code(s): **PATYP**

Live Date: **5/27/2025**

- **Methodology:** Liquid Chromatography-Tandem Mass Spectrometry (LC-MS/MS)
- **Performed:** Monday, Wednesday, Friday; Dayshift
- **Turnaround Time:** 4 days
- **Specimen Required:**
 - **Collect :** Green tube (Lithium heparin), No Gel
 - **Specimen Volume:** 3 mL (1 mL minimum)
 - **Specimen Preparation:** Collect after a 3-4 hour fast.
 - **Storage/Transport/Temperature/Conditions:** Place on ice immediately after collection and transport to the lab immediately after collection.
 - **Unacceptable Conditions:** Collected in a tube with gel separator, patient on TPN therapy, not received at proper temperature.
 - **Stability:** 1 hour refrigerated.

Test Code(s): **PATYDB**

Live Date: **5/27/2025**

- **Methodology:** Liquid Chromatography-Tandem Mass Spectrometry (LC-MS/MS)
- **Performed:** Monday, Wednesday, Friday; Dayshift
- **Turnaround Time:** 4 days
- **Specimen Required:**
 - **Collect :** Blood Spot Paper Card
 - **Specimen Volume:** 2-3 filled blood card spots
 - **Specimen Preparation:** Collect after a 3-4 hour fast and allow for blood spots to dry for 3 hours.
 - **Storage/Transport/Temperature/Conditions:** Transport the sample to the lab as soon as possible at room temperature.
 - **Unacceptable Conditions:** Inadequate filling of circles on filter paper card, expired blood spot card.
 - **Stability:** Transport to the lab within 14 days.

(Old) Phenylalanine/Tyrosine (PATY)				
	0 day - 30 days	1 Month - 15 Years	>15 Years	Units
Phenylalanine	0.7 - 3.0			mg/dL
Tyrosine	21 - 87	29 - 86	21 - 87	μmol/L

(New) Phenylalanine/Tyrosine, Plasma (PATYP)				
	0 Day-30 Days	1 month - 12 month	>12 month	Units
Phenylalanine	30 - 96	30 - 90	30 - 82	μmol/L
Tyrosine	30 - 140	30 - 130	35 - 110	μmol/L

(New) Phenylalanine/Tyrosine, Dried Blood Spot (PATYDB)				
	0 Day-30 Days	1 month - 12 month	>12 month	Units
Phenylalanine	26 - 78			μmol/L
Tyrosine	35 - 145			μmol/L

MSUD MONITOR, DRIED BLOOD SPOT

Effective 5/27/2025, we will begin offering MSUD Monitor, Dried Blood Spot (**MSUDDB**), which will include Alloisoleucine, Isoleucine, Leucine, and Valine.

Test Code(s): **MSUDDB**

Live Date: **5/27/2025**

- **Methodology:** Liquid Chromatography-Tandem Mass Spectrometry (LC-MS/MS)
- **Performed:** Monday, Wednesday, Friday; Dayshift
- **Turnaround Time:** 4 days
- **Specimen Required:**
 - **Collect :** Blood Spot Paper Card
 - **Specimen Volume:** 2-3 filled blood card spots
 - **Specimen Preparation:** Allow to dry for 3 hours.
 - **Storage/Transport/Temperature/Conditions:** Transport the sample lab within 14 days at room temperature.
 - **Unacceptable Conditions:** Inadequate filling of circles on filter paper card, expired blood spot cards.
 - **Stability:** Transport to the lab within 14 days.
 - **Comments:** MSUD Monitor, Dried Blood Spot will have a reference range specific to this sample type. The new reference ranges are compared to the those in the Plasma Amino Acids by LC-MS/MS below.

MSUD MONITOR, DRIED BLOOD SPOT (MSUDDB)			
Test Name	Age Range	Reference Range	Units
Allo-isoleucine (Dried Blood Spot)	All ages	<5	μmol/L
Isoleucine (Dried Blood Spot)	All ages	24-114	μmol/L
Leucine (Dried Blood Spot)	All ages	43-205	μmol/L
Valine (Dried Blood Spot)	All ages	80-348	μmol/L

Plasma Amino Acids (MSAAP)			
Test Name	Age Range	Reference Range	Units
Allo-Isoleucine (Plasma)	All ages	0-5	μmol/L
Isoleucine (Plasma)	0D - 30D	20-110	μmol/L
	≥31D	30-120	
Leucine (Plasma)	0D - 365D	50-180	μmol/L
	≥366D	60-180	
Valine (Plasma)	0D - 30D	80-270	μmol/L
	31D - 365D	90-310	
	≥366D	120-320	

If you have any additional questions about **PATYP**, **PATYDB**, or **MSUDDB**, please refer to the Laboratory Test Directory or call Client Services at 614-722-5477.