

Reporting Title: Fatty Acid Profile, Essential, P

Performing Location: Rochester

Necessary Information:

1. Patient's age is required.
2. Include information regarding treatment, family history, and tentative diagnosis.

Specimen Requirements:

Patient Preparation:

1. For nutritional assessment, patient should fast overnight (12-14 hours); for patients with a suspected fatty acid oxidation disorder, collect prior to next feeding as fasting is contraindicated.
2. Patient must not consume any alcohol for 24 hours before the specimen is collected.

Collection Container/Tube:

Preferred: Green top (sodium heparin)

Acceptable: Lavender top (EDTA) or green top (lithium heparin)

Submission Container/Tube: Plastic vial

Specimen Volume: 0.5 mL

Collection Instructions: Centrifuge and aliquot plasma into plastic vial.

| Specimen Type | Temperature        | Time     | Special Container |
|---------------|--------------------|----------|-------------------|
| Plasma        | Frozen (preferred) | 92 days  |                   |
|               | Refrigerated       | 72 hours |                   |

Result Codes:

| Result ID | Reporting Name             | Type    | Unit    | LOINC®  |
|-----------|----------------------------|---------|---------|---------|
| 36549     | Lauric Acid, C12:0         | Numeric | nmol/mL | 35150-2 |
| 36550     | Myristic Acid, C14:0       | Numeric | nmol/mL | 35157-7 |
| 36551     | Hexadecenoic Acid, C16:1w9 | Numeric | nmol/mL | 35155-1 |
| 36552     | Palmitoleic Acid, C16:1w7  | Numeric | nmol/mL | 35162-7 |
| 36553     | Palmitic Acid, C16:0       | Numeric | nmol/mL | 35161-9 |
| 36554     | g-Linolenic Acid, C18:3w6  | Numeric | nmol/mL | 35163-5 |
| 36555     | a-Linolenic Acid, C18:3w3  | Numeric | nmol/mL | 35164-3 |
| 36556     | Linoleic Acid, C18:2w6     | Numeric | nmol/mL | 35165-0 |
| 36557     | Oleic Acid, C18:1w9        | Numeric | nmol/mL | 35166-8 |
| 36558     | Vaccenic Acid, C18:1w7     | Numeric | nmol/mL | 35167-6 |
| 36559     | Stearic Acid, C18:0        | Numeric | nmol/mL | 35149-4 |
| 36560     | EPA, C20:5w3               | Numeric | nmol/mL | 35173-4 |
| 36561     | Arachidonic Acid, C20:4w6  | Numeric | nmol/mL | 35168-4 |
| 36562     | Mead Acid, C20:3w9         | Numeric | nmol/mL | 35172-6 |
| 36563     | h-g-Linolenic, C20:3w6     | Numeric | nmol/mL | 35171-8 |
| 36564     | Arachidic Acid, C20:0      | Numeric | nmol/mL | 35169-2 |
| 36565     | DHA, C22:6w3               | Numeric | nmol/mL | 35174-2 |
| 36566     | DPA, C22:5w6               | Numeric | nmol/mL | 35181-7 |

|       |                            |              |         |         |
|-------|----------------------------|--------------|---------|---------|
| 36567 | DPA, C22:5w3               | Numeric      | nmol/mL | 35180-9 |
| 36568 | DTA, C22:4w6               | Numeric      | nmol/mL | 35182-5 |
| 36569 | Docosenoic Acid, C22:1     | Numeric      | nmol/mL | 35160-1 |
| 36570 | Nervonic Acid, C24:1w9     | Numeric      | nmol/mL | 35170-0 |
| 36571 | Triene Tetraene Ratio      | Numeric      |         | 35411-8 |
| 36572 | Total Saturated Acid       | Numeric      | mmol/L  | 35175-9 |
| 36578 | Interpretation (PFAPE)     | Alphanumeric |         | 59462-2 |
| 36573 | Total Monounsaturated Acid | Numeric      | mmol/L  | 35176-7 |
| 36574 | Total Polyunsaturated Acid | Numeric      | mmol/L  | 35177-5 |
| 36575 | Total w3                   | Numeric      | mmol/L  | 35178-3 |
| 36576 | Total w6                   | Numeric      | mmol/L  | 35179-1 |
| 36577 | Total Fatty Acids          | Numeric      | mmol/L  | 24461-6 |

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

Supplemental Report:

No

CPT Code Information:

82725

Reference Values:

Lauric Acid, C12:0

- <1 year: 6-190 nmol/mL
- 1-17 years: 5-80 nmol/mL
- > or =18 years: 6-90 nmol/mL

Myristic Acid, C14:0

- <1 year: 30-320 nmol/mL
- 1-17 years: 40-290 nmol/mL
- > or =18 years: 30-450 nmol/mL

Hexadecenoic Acid, C16:1w9

- <1 year: 21-69 nmol/mL
- 1-17 years: 24-82 nmol/mL
- > or =18 years: 25-105 nmol/mL

Palmitoleic Acid, C16:1w7

- <1 year: 20-1,020 nmol/mL
- 1-17 years: 100-670 nmol/mL
- > or =18 years: 110-1,130 nmol/mL

Palmitic Acid, C16:0

- <1 year: 720-3,120 nmol/mL

1-17 years: 960-3,460 nmol/mL

> or =18 years: 1,480-3,730 nmol/mL

Gamma-Linolenic Acid, C18:3w6

<1 year: 6-110 nmol/mL

1-17 years: 9-130 nmol/mL

> or =18 years: 16-150 nmol/mL

Alpha-Linolenic Acid, C18:3w3

<1 year: 10-190 nmol/mL

1-17 years: 20-120 nmol/mL

> or =18 years: 50-130 nmol/mL

Linoleic Acid, C18:2w6

< or =31 days: 350-2,660 nmol/mL

32 days-11 months: 1,000-3,300 nmol/mL

1-17 years: 1,600-3,500 nmol/mL

> or =18 years: 2,270-3,850 nmol/mL

Oleic Acid, C18:1w9

<1 year: 250-3,500 nmol/mL

1-17 years: 350-3,500 nmol/mL

> or =18 years: 650-3,500 nmol/mL

Vaccenic Acid, C18:1w7

<1 year: 140-720 nmol/mL

1-17 years: 320-900 nmol/mL

> or =18 years: 280-740 nmol/mL

Stearic Acid, C18:0

<1 year: 270-1,140 nmol/mL

1-17 years: 280-1,170 nmol/mL

> or =18 years: 590-1,170 nmol/mL

EPA, C20:5w3

<1 year: 2-60 nmol/mL

1-17 years: 8-90 nmol/mL

> or =18 years: 14-100 nmol/mL

Arachidonic Acid, C20:4w6

<1 year: 110-1,110 nmol/mL

1-17 years: 350-1,030 nmol/mL

> or =18 years: 520-1,490 nmol/mL

Mead Acid, C20:3w9

< or =31 days: 8-60 nmol/mL

32 days-11 months: 3-24 nmol/mL

1-17 years: 7-30 nmol/mL

> or =18 years: 7-30 nmol/mL

Homo-Gamma-Linolenic C20:3w6

<1 year: 30-170 nmol/mL

1-17 years: 60-220 nmol/mL

> or =18 years: 50-250 nmol/mL

Arachidic Acid, C20:0

<1 year: 30-120 nmol/mL

1-17 years: 30-90 nmol/mL

> or =18 years: 50-90 nmol/mL

DHA, C22:6w3

<1 year: 10-220 nmol/mL

1-17 years: 30-160 nmol/mL

> or =18 years: 30-250 nmol/mL

DPA, C22:5w6

<1 year: 3-70 nmol/mL

1-17 years: 10-50 nmol/mL

> or =18 years: 10-70 nmol/mL

DPA, C22:5w3

<1 year: 6-110 nmol/mL

1-17 years: 30-270 nmol/mL

> or =18 years: 20-210 nmol/mL

DTA, C22:4w6

<1 year: 2-50 nmol/mL

1-17 years: 10-40 nmol/mL

> or =18 years: 10-80 nmol/mL

Docosenoic Acid, C22:1

<1 year: 2-20 nmol/mL

1-17 years: 4-13 nmol/mL

> or =18 years: 4-13 nmol/mL

Nervonic Acid, C24:1w9

<1 year: 30-150 nmol/mL

1-17 years: 50-130 nmol/mL

> or =18 years: 60-100 nmol/mL

Triene/Tetraene Ratio

< or =31 days: 0.017-0.083  
32 days-17 years: 0.013-0.050  
> or =18 years: 0.010-0.038

Total Saturated Acid

<1 year: 1.2-4.6 mmol/L  
1-17 years: 1.4-4.9 mmol/L  
> or =18 years: 2.5-5.5 mmol/L

Total Monounsaturated Acid

<1 year: 0.3-4.6 mmol/L  
1-17 years: 0.5-4.4 mmol/L  
> or =18 years: 1.3-5.8 mmol/L

Total Polyunsaturated Acid

<1 year: 1.1-4.9 mmol/L  
1-17 years: 1.7-5.3 mmol/L  
> or =18 years: 3.2-5.8 mmol/L

Total w3

<1 year: 0.0-0.4 mmol/L  
1-17 years: 0.1-0.5 mmol/L  
> or =18 years: 0.2-0.5 mmol/L

Total w6

<1 year: 0.9-4.4 mmol/L  
1-17 years: 1.6-4.7 mmol/L  
> or =18 years: 3.0-5.4 mmol/L

Total Fatty Acids

<1 year: 3.3-14.0 mmol/L  
1-17 years: 4.4-14.3 mmol/L  
> or =18 years: 7.3-16.8 mmol/L