

# Test Definition: HGEM

Hydroxyglutaric Acids, Glutaric Acid,  
Ethylmalonic Acid, and Methylsuccinic Acid,  
Blood Spot

**Reporting Title:** HGEM, BS  
**Performing Location:** Rochester

**Necessary Information:**  
Patient's age is required.

**Specimen Requirements:**  
**Supplies:** Card-Blood Spot Collection (Filter Paper) (T493)  
**Container/Tube:**

**Preferred:** Card-Blood Spot Collection (Filter Paper) from heel or finger stick  
**Acceptable:** PerkinElmer (formerly Ahlstrom 226) filter paper, Munktell filter paper, Whatman Protein Saver 903 paper, available newborn screening card, blood collected in tubes containing sodium heparin or EDTA and dried on filter paper  
**Specimen Volume:** 2 Blood spots

- Collection Instructions:**
- 1. Do not use device or capillary tube containing ACD to collect specimen. Sodium heparin or EDTA are acceptable but must be spotted on card the same day as collected.
  - 2. Completely fill at least 2 circles on the filter paper card (approximately 100 microliters blood per circle).
  - 3. Let blood dry on filter paper at room temperature in a horizontal position for 3 or more hours.
  - 4. Do not stack wet specimens.
  - 5. Do not expose specimen to heat or direct sunlight.
  - 6. Keep specimen dry.

- Additional Information:**
- 1. For collection instructions, see [Blood Spot Collection Instructions](#).
  - 2. For collection instructions in Spanish, see [Blood Spot Collection Card-Spanish Instructions](#) (T777).
  - 3. For collection instructions in Chinese, see [Blood Spot Collection Card-Chinese Instructions](#) (T800).

- Forms:**
- 1. [Biochemical Genetics Patient Information](#) (T602)
  - 2. If not ordering electronically, complete, print, and send a [Biochemical Genetics Test Request](#) (T798) with the specimen.

Specimen Type	Temperature	Time	Special Container
Whole blood	Ambient (preferred)	123 days	FILTER PAPER
	Frozen	123 days	FILTER PAPER
	Refrigerated	123 days	FILTER PAPER

**Result Codes:**

Result ID	Reporting Name	Type	Unit	LOINC®
36048	2-OH Glutaric acid	Numeric	nmol/mL	75037-2
36049	3-OH Glutaric acid	Numeric	nmol/mL	82505-9
36050	Glutaric acid	Numeric	nmol/mL	82504-2

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36051	Methylsuccinic acid	Numeric	nmol/mL	82503-4
36052	Ethylmalonic acid	Numeric	nmol/mL	82502-6
36053	Interpretation (HGEM)	Alphanumeric		59462-2
36054	Reviewed By	Alphanumeric		18771-6

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

Supplemental Report:

No

CPT Code Information:

83918

Reference Values:

2-OH Glutaric acid: < or =25 nmol/mL

3-OH Glutaric acid: < or =1.5 nmol/mL

Glutaric acid: < or =1.5 nmol/mL

Methylsuccinic acid: < or =0.45 nmol/mL

Ethylmalonic acid: < or =3.5 nmol/mL