

**Reporting Title:** Neurotransmitter Profile 3  
**Performing Location:** Medical Neurogenetics, LLC

**Specimen Requirements:**  
Medical Neurogenetics collection kit (MCL Supply T657) required.  
Each collection kit contains 5 microcentrifuge tubes.

- COLLECTION PROTOCOL:
- 1) CSF should be collected from the first drop into the tubes in the numbered order. Fill each tube to the marked line with the required volumes.
- Tube 1: 0.5 mL  
Tube 2: 1.0 mL  
Tube 3: 1.0 mL (contains antioxidants necessary to protect the same integrity)  
Tube 4: 1.0 mL  
Tube 5: 1.0 mL
- If samples not blood contaminated, the tubes should be placed on dry ice at bedside.  
-If samples are blood contaminated, the tubes should immediately be centrifuged (prior to freezing) and the clear CSF transferred to new similarly labeled tubes, then frozen.  
-Store samples at -80 until they can be shipped.
- 2) Complete Medical Neurogenetics, LLC request form, marking the following three tests: Neurotransmitter Metabolites, Tetrahydrobiopterin and 5-Methyltetrahydrofolate. Also include sample date and date of birth.
- 3) Label tubes with patient name and ID number, leaving the tube number viewable.
- 4) Place samples inside the specimen transport bag and the Medical Neurogenetics, LLC request form inside the pouch of the transport bag.
- 5) Ship samples frozen on dry ice.

Specimen Type	Temperature	Time	Special Container
CSF	Frozen		CSF KIT

**Result Codes:**

Result ID	Reporting Name	Type	Unit	LOINC®
Z1726	5-Methyltetrahydrofolate	Numeric	nmol/L	47547-5
Z1730	Neopterin	Numeric	nmol/L	34146-1
Z1731	Tetrahydrobiopterin	Numeric	nmol/L	Not Provided
Z1732	Interpretation	Numeric		Not Provided
Z1727	5-Hydroxyindoleacetic acid	Numeric	nmol/L	47544-2
Z1728	Homovanillic acid	Numeric	nmol/L	40846-8

Z1729	3-O-methyldopa	Numeric	nmol/L	34596-7
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LOINC® and CPT codes are provided by the performing laboratory.

Supplemental Report:

Referral

Components:

Test Id	Reporting Name	CPT Units	CPT Code	Always Performed	Available Separately
F5MET	5-Methyltetrahydrofolate	1	See p	Yes	Yes, (order F5M)
FNTM	Neurotransmitter Metabolites/Amines	1	See p	Yes	Yes, (order FNEU)
FFTHB	Tetrahydrobiopterin/Neopterin	1	See p	Yes	Yes, (order FFTEN)

CPT Code Information:

- 82542 – 5-Methyltetrahydrofolate
- 82542 – Tetrahydrobiopterin/Neopterin
- 82542, 83497, 83150 – Neurotransmitter Metabolites/Amines

Reference Values:

5-Methyltetrahydrofolate

Age (years)	5MTHF (nmol/L)
0-0.2	40-240
0.2-0.5	40-240
0.5-2.0	40-187
2.0-5.0	40-150
10-15	40-128
Adults	40-120

Neurotransmitter Metabolites/Amines

Age (years)	5HIAA (nmol/L)	HVA (nmol/L)	3-O-MD (nmol/L)
0-0.2	208-1159	337-1299	<300
0.2-0.5	179-711	450-1132	<300
0.5-2.0	129-520	294-1115	<300
2.0-5.0	74-345	233-928	<150
5.0-10	66-338	218-852	<100
10-15	67-189	167-563	<100
Adults	67-140	145-324	<100

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Adults	67-140	145-324	<100

Tetrahydrobiopterin/Neopterin Profile

Age (years)	BH4 (nmol/L)	Neop (nmol/L)
0-0.2	40-105	7-65
0.2-0.5	23-98	7-65
0.5-2.0	18-58	7-65
2.0-5.0	18-50	7-65
5.0-10	9-40	7-40
10-15	9-32	8-33
Adults	10-30	8-28

Note: If test results are inconsistent with the clinical presentation, please call our laboratory to discuss the case and/or submit a second sample for confirmatory testing.

DISCLAIMER required by the FDA for high complexity clinical laboratories: HPLC testing was developed and its performance characteristics determined by Medical Neurogenetics. These HPLC tests have not been cleared or approved by the U.S. FDA.