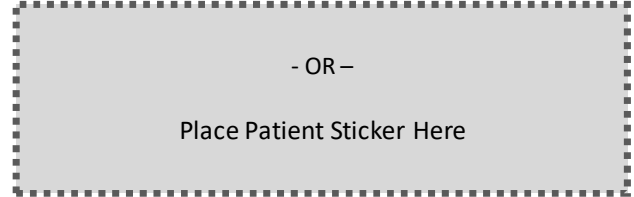


## METABOLITE TEST REQUISITION FORM

updated 4/20/2022

### PATIENT INFORMATION

Last Name: \_\_\_\_\_  
 First Name: \_\_\_\_\_  
 DOB: \_\_\_\_\_  
 Sex:  Male  Female  
 Medical Record #/Patient ID #: \_\_\_\_\_



### SPECIMEN INFORMATION

Accession/Lab ID #: \_\_\_\_\_  
 Specimen Type: \_\_\_\_\_  
 Specimen Date: \_\_\_\_\_ Time: \_\_\_\_\_

### PHYSICIAN INFORMATION

Ordering Physician: \_\_\_\_\_  
 Phone: \_\_\_\_\_  
 Fax: \_\_\_\_\_

### ADDITIONAL INFORMATION

Primary presenting symptom(s): \_\_\_\_\_  
 Abnormal lab(s): \_\_\_\_\_  
 Suspected diagnosis: \_\_\_\_\_  
 Diet or infant formula: \_\_\_\_\_  
 Medication(s): \_\_\_\_\_

*If this space is not sufficient please attach clinical summary or patient history.*

### TEST(S) REQUESTED

- 5- Methyltetrahydrofolate - CSF
- Acylcarnitine profile - DBS, plasma or serum
- Amino acids - plasma, serum or CSF
- Carnitine levels - DBS, plasma or serum
- GABA (free and total) - CSF
- Homocysteine (total) - CSF, plasma or serum (CSF is a research test)
- Lactate - CSF
- Monoamine neurotransmitter metabolites - CSF\*
- Neopterin - CSF
- Organic acids - urine
- Tetrahydrobiopterin and neopterin - CSF\*
- S-Adenosylmethionine/S-Adenosylhomocysteine - plasma (research test)

**\*Must be collected in Baylor CSF collection tubes**

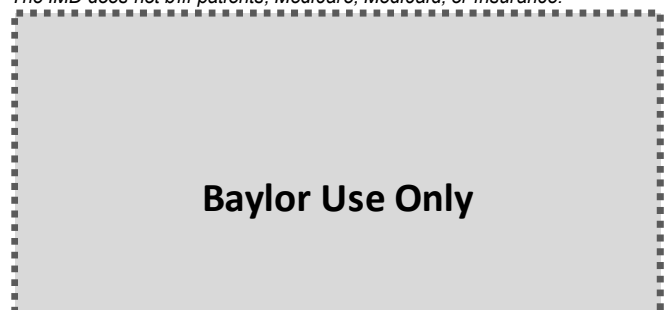
### RESULTS INFORMATION

Name: \_\_\_\_\_  
 Results Address: \_\_\_\_\_  
 \_\_\_\_\_  
 Phone: \_\_\_\_\_  
 Fax: \_\_\_\_\_

### BILLING INFORMATION

Name: \_\_\_\_\_  
 Billing Address: \_\_\_\_\_  
 \_\_\_\_\_  
 Phone: \_\_\_\_\_  
 Fax: \_\_\_\_\_

*The IMD does not bill patients, Medicare, Medicaid, or insurance.*



## METABOLITE SPECIMEN REQUIREMENT INFORMATION

TEST NAME	SPECIMEN REQUIREMENTS	SHIPPING	TURNAROUND TIME	CPT CODE
5-Methyltetrahydrofolate	<ul style="list-style-type: none"> <li>• <u>CSF</u>- 0.5 mL; minimum 250 µL; store at -20°C until transport <i>Can be collected in a large sterile tube or in a Baylor provided CSF collection kit.</i></li> </ul>	<ul style="list-style-type: none"> <li>• 3-4 pounds dry ice</li> </ul>	12 business days	82542
Acylcarnitine profile	<ul style="list-style-type: none"> <li>• <u>DBS (preferred*)</u>- 3 completely filled spots; minimum is 1 spot; air-dry for 4-6 hours and then store individually until transport in glassine envelope at room temperature for up to 1 week or at 2-8°C for up to 2 weeks, or 1 month if stored -at 20°. Storage time includes transport.</li> <li>• <u>Plasma/Serum</u>- 0.2 mL of heparinized/EDTA plasma/serum; minimum is 0.1 mL; store at -20°C until transport.</li> </ul>	<ul style="list-style-type: none"> <li>• <u>DBS</u> - room temperature or cold packs depending on how the specimen was stored prior to transport</li> <li>• <u>Plasma/Serum</u>- 3-4 pounds dry ice</li> </ul>	3 business days	82017
Amino acids	<ul style="list-style-type: none"> <li>• <u>CSF</u>- 0.5 mL; minimum 250 µL; store at -20°C until transport <i>Can be collected in a large sterile tube or in a Baylor provided CSF collection kit.</i></li> <li>• <u>Plasma (preferred)/Serum</u>- 1 mL of plasma (green or purple-top)/serum (pink or tiger-top); minimum is 250 µL; separate within 1 hour of collection and store at -20°C until transport.</li> </ul>	<ul style="list-style-type: none"> <li>• 3-4 pounds dry ice (all specimen types)</li> </ul>	7 business days	82139
Carnitine levels	<ul style="list-style-type: none"> <li>• <u>DBS</u>- 3 completely filled spots; minimum is 1 spot; air-dry for 4-6 hours and then store individually until transport in glassine envelope at room temperature for up to 1 week or at 2-8°C for up to 2 weeks, or 1 month if stored at -20°C. Storage time includes transport.</li> <li>• <u>Plasma(preferred**)/Serum</u>- 0.2 mL of heparinized/EDTA plasma/serum; minimum is 0.1 mL; store at -20°C until transport.</li> </ul>	<ul style="list-style-type: none"> <li>• <u>DBS</u> - room temperature or cold packs depending on how the specimen was stored prior to transport</li> <li>• <u>Plasma/Serum</u>- 3-4 pounds dry ice</li> </ul>	3 business days	82379

\* Acylcarnitine profile- The preferred specimen is dried blood spots (DBS) because the long-chain acylcarnitines are absorbed on the surface of the red cells so that the normal levels are much higher for DBS than in plasma. Therefore, the elevations of these in some milder forms of long-chain fatty acid oxidation disorders may not be as reliably detected in the plasma as they are in the DBS. Serum levels are acceptable.

\*\* Carnitine levels- The preferred specimen is plasma because the free carnitine levels in plasma reflect the circulating available free carnitine and physicians are more familiar with the normal ranges for plasma free carnitine. Serum specimens are acceptable. The reference ranges for DBS free carnitine is lower than for plasma due to lower levels in red cells.

TEST NAME	SPECIMEN REQUIREMENTS	SHIPPING	TURNAROUND TIME	CPT CODE
GABA (free and total)	<ul style="list-style-type: none"> <li>CSF- 1 mL; minimum 250 µL; store at -20°C until transport <i>Can be collected in a large sterile tube or in a Baylor provided CSF collection kit.</i></li> </ul>	<ul style="list-style-type: none"> <li>3-4 pounds dry ice</li> </ul>	12 business days	83789
Homocysteine (total)	<ul style="list-style-type: none"> <li>Plasma /Serum- 1 mL of plasma (green or purple-top)/serum (pink or tiger-top); minimum is 250 µL; separate within 2 hours of collection and store at 2-8°C for up to 24 hours or at -20°C (1 month) until transport</li> <li>CSF- 1 mL; minimum 250 µL; store at -20°C until transport (Research Method)</li> </ul>	<ul style="list-style-type: none"> <li>3-4 pounds dry ice</li> </ul>	7 business days (plasma/serum) 15 business days (CSF)	83090
Lactate	<ul style="list-style-type: none"> <li>CSF- 1 mL; minimum 250 µL; store at -20°C until transport <i>Can be collected in a large sterile tube or in a Baylor provided CSF collection kit.</i></li> </ul>	<ul style="list-style-type: none"> <li>3-4 pounds dry ice</li> </ul>	12 business days	83605
Monoamine neurotransmitter metabolites (HVA, 3-OMD and 5-HIAA)	<ul style="list-style-type: none"> <li>CSF<sup>^</sup>- 0.5 mL; minimum 250 µL; store at -20°C until transport <i>Must be collected in a Baylor provided CSF collection kit.</i></li> </ul>	<ul style="list-style-type: none"> <li>3-4 pounds dry ice</li> </ul>	12 business days	82542 x3
Neopterin	<ul style="list-style-type: none"> <li>CSF- 1 mL; minimum 0.2 mL; store at -20°C until transport <i>Can be collected in a large sterile tube or in a Baylor provided CSF collection kit.</i></li> </ul>	<ul style="list-style-type: none"> <li>3-4 pounds dry ice</li> </ul>	12 business days	82542
Organic acids	<ul style="list-style-type: none"> <li>Urine- 3 mL; minimum is 1 mL; store at 2-8°C immediately and freeze at -20°C within 4 hours</li> </ul>	<ul style="list-style-type: none"> <li>3-4 pounds dry ice (if local, ice packs may be used)</li> </ul>	7 business days	83918
S-adenosylmethionine and S-adenosylhomocysteine (SAM/SAH)	<ul style="list-style-type: none"> <li>CSF – 0.5 mL; minimum 0.25 mL; store at -20°C until transport (Research Method)</li> <li>Plasma/Serum -0.5 mL; minimum 0.25 mL separated within 1 hour of collection and store at 2-8°C for up to 4 hours or at -20°C (1 month) until transport. (Research Method)</li> </ul>	<ul style="list-style-type: none"> <li>3-4 pounds dry ice</li> </ul>	15 business days	Research
Tetrahydrobiopterin and neopterin	<ul style="list-style-type: none"> <li>CSF<sup>^</sup>- 1 mL; minimum 0.2 mL; store at -20°C until transport <i>Must be collected in a Baylor provided CSF collection kit.</i></li> </ul>	<ul style="list-style-type: none"> <li>3-4 pounds dry ice</li> </ul>	12 business days	82542 x2

<sup>^</sup> Follow the steps located on the CSF collection protocol sheet.



**Baylor Scott and White Research Institute**  
**Institute of Metabolic Disease**  
<http://BSWHealth.med/IMD>  
3434 Live Oak Street, Dallas, TX 75204  
Tel: 214 820 4533 | Fax: 214 820 4853

## **ADDITIONAL INFORMATION**

- All specimens must be labeled with at least two patient identifiers that match the test requisition. All specimens will be rejected if they are received without two matching patient identifiers.
- Use indelible ink or gummed labels to label specimens.
- As per CLIA and CAP regulations, all specimens must be submitted with a complete test requisition.
- Place specimens inside a specimen transport bag and the associated documents inside the pouch in the specimen transport bad. Do NOT place the documentation inside the specimen transport bag with the specimen.
- Laboratory Hours: Monday through Friday, 8:30 am – 5:00 pm (CST).
- Always ship Monday-Thursday using an overnight trackable courier.
- No Saturday deliveries accepted.
- For STAT analysis, please contact the CLIA Director, Erland Arning, Ph.D. CC (NRCC) ([Erland.Arning@BSWHealth.org](mailto:Erland.Arning@BSWHealth.org))
- Only critical results are reported immediately by telephone and fax.
- Preliminary results are available by telephone, fax or email within the turnaround time specified.
- Result reports are faxed to the submitter and physician (if provided).
- The IMD does not bill patient, Medicare, Medicaid or insurance.
- Please contact client services at (214)820-4533 with question about test price, CPT codes, billing or invoicing.

## **SHIPPING ADDRESS**

Institute of Metabolic Disease  
ATTN: Sample Processing  
3434 Live Oak Street  
Dallas, TX 75204

## CSF COLLECTION PROTOCOL

### REQUIREMENTS

- The CSF must be collected in our sample collection tubes for the measurement of Monoamine Neurotransmitter Metabolites and Tetrahydrobiopterin and Neopterin Profile metabolite assays (these specimens may be used for 5-MTHF, Amino Acids, Lactate, and GABA as well, if requested).
- Call Institute of Metabolic Disease (214-820-4533) to obtain appropriate sample collection tubes.
- Each sample collection set consists of 5 microcentrifuge tubes in a cardboard holder. Tube #3 contains antioxidants necessary to protect the sample integrity. One set of tubes is required per patient.
- Please contact us at 214-820-4533 if you have any additional questions.
- If the sample has been already been collected without using our Special Collection Kit, please contact us at 214-820-4533 to discuss testing options.

### COLLECTION INSTRUCTIONS

1. The CSF must be collected from the first drop into the designated tubes in the order indicated in the following table. **DO NOT COLLECT THE CSF IN ONE LARGE TUBE AND ALIQUOT INTO THE TUBE SET.**
2. Fill each tube to the marked line with the following volumes, indicated in the following table.

Tube Number	Required volume	The total CSF volume required is at least 3.5 mL
1	0.5 mL	
2	0.5 mL	
3	1.0 mL	
4	1.0 mL	
5	0.5 mL	

**FAILURE TO FOLLOW THE COLLECTION INSTRUCTIONS MAY RESULT IN SAMPLE REJECTION.**

3. If the samples are not blood contaminated, place the tubes on ice (or dry ice if available) at the bedside. Transfer the samples to a -80°C freezer ASAP. If the 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 and stored at -80°C ASAP. **BLOOD CONTAMINATED SAMPLES WILL BE REJECTED!**
4. Store all samples at -80°C until transport.