## METABOLITE TEST REQUISITION FORM

*updated 2/19/20*

### PATIENT INFORMATION

<table>
<thead>
<tr>
<th>Last Name:</th>
<th>First Name:</th>
<th>DOB or Age:</th>
<th>Sex: Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medical Record #: / Patient ID #:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### SPECIMEN INFORMATION

<table>
<thead>
<tr>
<th>Accession/Lab ID #:</th>
<th>Specimen Type:</th>
<th>Specimen Date:</th>
<th>Time:</th>
</tr>
</thead>
</table>

### PHYSICIAN INFORMATION

<table>
<thead>
<tr>
<th>Ordering Physician:</th>
<th>Phone:</th>
<th>Fax:</th>
</tr>
</thead>
</table>

### ADDITIONAL INFORMATION

- **Primary presenting symptoms:**
- **Abnormal labs:**
- **Suspected diagnosis:**
- **Diet or infant formula:**
- **Medication(s):**

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

### TEST(S) REQUESTED

- S- Methyltetrahydrofolate - CSF
- Acylcarnitine profile - DBS, plasma, serum or whole blood
- Amino acids - plasma, serum or CSF
- Carnitine levels - DBS, plasma, serum or whole blood
- GABA (free and total) - CSF
- Homocysteine (total) - 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)

### RESULTS INFORMATION

<table>
<thead>
<tr>
<th>Name:</th>
<th>Results Address:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phone:</td>
<td>Fax:</td>
</tr>
</tbody>
</table>

### BILLING INFORMATION

<table>
<thead>
<tr>
<th>Name:</th>
<th>Billing Address:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phone:</td>
<td>Fax:</td>
</tr>
</tbody>
</table>

*Must be collected in Baylor CSF collection tubes*

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Baylor Use Only

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Demographic Entry Quality Check

Sample Process: _____________________________

Testing Department: _______________________

Client Services: _________________________

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**Baylor Use Only**
<table>
<thead>
<tr>
<th>TEST NAME</th>
<th>SPECIMEN REQUIREMENTS</th>
<th>SHIPPING</th>
<th>TURNAROUND TIME</th>
<th>CPT CODE</th>
</tr>
</thead>
</table>
| 5-Methyltetrahydrofolate | • CSF- 0.5 mL; minimum 250 µL; store at -70°C until transport  
  *Can be collected in a large sterile tube or in a Baylor provided CSF collection kit.* | • 3-4 pounds dry ice  | 12 business days | 82542    |
| Acylcarnitine profile   | • DBS (preferred*)- 3 completely filled spots; minimum is 1 spot; air-dry for 4-6 hours and then store individually in glassine envelope at 2-8°C until transport  
  • Plasma/Serum- 0.2 mL of heparinized/EDTA plasma/serum; minimum is 0.1 mL; store at -20°C until transport  
  • Whole blood- 3 mL; collected in heparin (green-top) or EDTA (purple-top) tube; minimum is 2 mL; store at room temperature up to 24 hrs, refrigerator if >24 hrs. | • DBS-/Whole blood-room temperature  
  • Plasma/Serum- 3-4 pounds dry ice | 3 business days | 82017    |
| Amino acids              | • CSF- 0.5 mL; minimum 250 µL; store at -20°C until transport  
  *Can be collected in a large sterile tube or in a Baylor provided CSF collection kit.*  
  • Plasma (preferred)/Serum- 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 | • 3-4 pounds dry ice (all specimen types) | 7 business days | 82139    |
| Carnitine levels         | • DBS- 3 completely filled spots; minimum is 1 spot; air-dry for 4-6 hours and then store individually in glassine envelope at 2-8°C until transport.  
  • Plasma (preferred**) / Serum- 0.2 mL of heparinized/EDTA plasma/serum; minimum is 0.1 mL; store at -20°C until transport  
  • Whole blood- 3 mL; collected in heparin (green-top) or EDTA (purple-top) tube; minimum is 2 mL; store at room temperature up to 24 hrs, refrigerator if >24 hrs. | • DBS-/Whole blood-room temperature  
  • Plasma/Serum- 3-4 pounds dry ice | 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.

Updated: 2/19/20
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</tr>
</thead>
</table>
| GABA (free and total)                                                     | • CSF- 1 mL; minimum 250 µL; store at -20°C until transport  
  Can be collected in a large sterile tube or in a Baylor provided CSF collection kit. | • 3-4 pounds dry ice                | 12 business days | 83789          |
| Homocysteine (total)                                                     | • Plasma /Serum- 1 mL of plasma (green or purple-top)/serum (pink or tiger-top); minimum is 250 µL; separate within 30 minutes of collection and store at 2-8°C for (up to 4 hours) or at -20°C (1 month) until transport  
  • CSF- 1 mL; minimum 250 µL; store at -20°C until transport (Research Method) | • 3-4 pounds dry ice, or cold packs, or wet-ice | 12 business days (plasma/serum) | 15 business days (CSF) | 83090          |
| Lactate                                                                  | • CSF- 1 mL; minimum 250 µL; store at -20°C until transport  
  Can be collected in a large sterile tube or in a Baylor provided CSF collection kit. | • 3-4 pounds dry ice                | 12 business days | 83605          |
| Monoamine neurotransmitter metabolites (HVA, 3-OMD and 5-HIAA)           | • CSF<sup>^</sup>- 0.5 mL; minimum 250 µL; store at -70°C until transport  
  Must be collected in a Baylor provided CSF collection kit. | • 3-4 pounds dry ice                | 12 business days | 82542 x3       |
| Neopterin                                                                | • CSF- 1 mL; minimum 0.2 mL; store at -70°C until transport  
  Can be collected in a large sterile tube or in a Baylor provided CSF collection kit. | • 3-4 pounds dry ice                | 12 business days | 82542          |
| Organic acids                                                            | • Urine- 3 mL; minimum is 1 mL; store at 2-8°C immediately and freeze at -4°C within 4 hours | • 3-4 pounds dry ice (if local, ice packs may be used) | 7 business days | 83918          |
| S-adenosylmethioine and S-adenosylhomocysteine (SAM/SAH)                 | • CSF<sup>^</sup>- 0.5 mL; minimum 0.25 mL; store at -70°C until transport (Research Method)  
  • Plasma/Serum -0.5 mL; minimum 0.25 mL separated within 30 minutes of collection; store at -70°C until transport (Research Method) | • 3-4 pounds dry ice                | 15 business days | 82542          |
| Tetrahydrobiopterin and neopterin                                        | • CSF<sup>^</sup>- 1 mL; minimum 0.2 mL; store at -70°C until transport  
  Must be collected in a Baylor provided CSF collection kit. | • 3-4 pounds dry ice                | 12 business days | 82542 x2       |

<sup>^</sup> Follow the steps located on the CSF collection protocol sheet.
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 bag. 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)
- Only critical results are reported immediately by telephone and fax.
- Results are available for a verbal report (or if possible, a preliminary fax on request) 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

Updated: 2/19/20
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 indicate 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, indicate in the following table.

<table>
<thead>
<tr>
<th>Tube Number</th>
<th>Required volume</th>
<th>The total CSF volume required is at least 3.5 mL</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0.5 mL</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>0.5 mL</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>1.0 mL</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>1.0 mL</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>0.5 mL</td>
<td></td>
</tr>
</tbody>
</table>

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.