Bill to Submitter/Client



Children's Hospital Colorado Department of Pathology & Laboratory Medicine Mitochondrial Laboratory Requsition Phone (720) 777-6711 Fax (720) 777-7118 Specimen Shipping Address: *Please use ONLY FedEx or UPS - DO NOT USE POSTAL SERVICE Children's Hospital Colorado Clinical Lab - Mitochondrial Lab 13123 E. 16th Ave, Room B0200 Aurora, CO 80045

Children's Hospital Color	ado	Γαλ	(120) ///-/110		А	urora,	CO 80045		
			LOW FIELDS WILL DEL						
	**		IPLETE BILLING INFORM	MATIO	N**	_			
Submitting Institution Na	ame (Submitter)		act Information omitting Institution Address						
	t								
		City	y, State, Zip						
		Pho	one		F	Result	Fax		
Client Specimen Label Inter			nal Specimen Label						
Chem Speemen Luser			er hur opeennen Luber						
		 Patia	ent Information						
Last Name (Legal)		Middle I Birthdate (MM/DD/YYYY) Sex							
(First Name (Legal)							
Ordering Provider (Last,	First, and Middle Initial)	Ordering Provider Phone*	dering Provider Phone* Ordering Pr			Provider NPI			
		Specin	nen Information						
Date Collected (MM/DD/Y	(Y)	Client External ID			ICD-10 C	code(s)	Tissue Source:		
		Draw Type			1		□ Biopsy		
Time Collected (HHMM)					2		□ Autopsy (collected Hrs after death)		
	AM / PM				2		Type of Tissue:		
Specimen Storage Prior to	Shipment:	Use of Antibiotics linezolid, macrolides, chloramphenicol in las			3		$\Box \text{ Heart} \Box \text{ Musc}$	le	
	□ -20°C □ -70°C	$\Box Y$ $\Box N$					\Box Liver \Box Skin		
			gnostic Test Information						
		Please complete the	clinical information portion below		ľ				
_	ry Chain, Tissue - (LAB7086)	Mitochondrial Respiratory C			-		sembly Western Blot, Fibro	blast - (LAB9301)	
Weight:			Mycoplasma tested** \Box Y \Box N			Mycoplasma tested ^{**} □ Y □ N Pyruvate Dehydrogenase, Fibroblast (I A B7085)			
□ Blue Native Eletrophore	, , ,	-	te Ivalive Eletropholesis, i loroblast - (EAD7070)			Pyruvate Dehydrogenase, Fibroblast - (LAB7085)			
Weight:mg Mycoplasma tested**			Y D I If Yes, SEND REPORT. I			Mycoplasma tested** \Box Y \Box N			
		** Mycoplasma tested? Clinical Informa	ation (check all that apply)	PORT.					
General	Endocrine	Eye	Laboratory St	udies		Ra	diology		
O failure to thrive	O diabetes mellitus	O optic atrophy	O Lactate:	-			O abnormal basal ganglia		
O short stature	O hypoparathyroidism	O retinitis pigmentosa/ret	tinal dystrophy O Blood:	mM		O abnormal brain stem			
Brain	Kidney	o cataracts		O CSF: mM			O abnormal dentate nucleus O brain atrophy O cerebellar atrophy		
O microcephaly	O renal Fanconi	o ophthalmoplegia	O lactate/pyruv			O leukodystrophy			
O encephalophaly	O glomerulosclerosis	Heart O cardiomyopathy:	O 3OHB/AcAc O 3-methylgluta				other:	_	
O seizures:		O low total carnitine							
O seizures. O proteinuria – nepintite syndronic O dilated O myclonic seizures O hypertrophic				O lactate on MRS			Genetic Information O Mito DNA		
O infantile	ile Liver O Conduction defect			ine:	_μM	U1			
O other seizures	O elevated transaminases O fibrosis/steatosis	O Arrhythmias		O incr. Krebs cycle metab					
O chorea O dystonia	O liver insufficiency	Muscle	O other:						
O garkinson	O hypoglycemia	O myopathy	Recognized Sy O Leigh disease						
O ataxia	via O early fatigue								
O neurodegeneration				O Kearns-Sayre O MELAS					
O stroke-like episodes	O pancreatitis	O rhabdomyolysis O MERRF							
O central apnea	O pancreatic insufficiency	O elevated CK:U	/L O NARP			Atta	ch additional genetics	results	
O leukodystrophy	O pseudo-obstruction O malabsorption	O Biopsy: O ragged red fibers	O MNGIE		Attach additional genetics results.				
O other:	_	O abnormal e.m.	O Diabetes-dea		If you are interested in electron				
Skin Hearing				O Diabetes- retinitis pigmentosa O CPEO			microscopy testing please let us know.		
O hyperpigmentation									
			LETE WILL DELAY RESUL						
Billing Contact Informat	ion		Address same as Submitter Listed Billing Eacility and Address are DIFFERENT than Submitter Listed Bill To:						
		Billing Facility and Address are DIFFERENT than Submitter Listed, Bill To:							
Name:	Institution Name:	Institution Name:							
Email:			Address (incl City, S	Address (incl City, State, Zip):					
Phone:			Phone:Fax:						
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FOR ALL MITOCHONDRIAL ASSAY SPECIMENS:

Please enclose both the completed requisition and clinical information forms for mitochondrial enzyme assays. Direct contact information for the requesting physician is of importance to allow direct notification as needed, so please provide the clinician's phone number. Incomplete paperwork can result in delayed processing.

Additional Collection and Handling Instructions are on the back/2nd page of this requisition.

By submitting this requisition you agree to the standard terms and agreements of Children's Hospital Colorado, to obtain a copy of these please reach out to LabClientServices@childrenscolorado.org

Instructions for Collecting, Handling & Shipping Specimens

FOR ALL MITOCHONDRIAL ASSAY SPECIMENS:

Please enclose both the completed requisition and clinical information forms for mitochondrial enzyme assays. Direct contact information for the requesting physician is of importance to allow direct notification as needed, so please provide the clinician's phone number. Incomplete paperwork can result in delayed processing.

Primary contact for mitochondrial enzyme assays: Marisa Friederich, PhD Phone: 720-777-0528 | Email: <u>Marisa.Friederich@ChildrensColorado.org</u>

Fibroblast for Respiratory Chain Enzyme Assays, BNPage with In-Gel Activity Staining Assay, complex I assembly assay, and Pyruvate Dehydrogenase Enzyme Assay:

- Please send two T-25 flasks containing confluent fibroblasts (with plug-seal caps, filled completely with media) in a Styrofoam box at room temperature. Make sure to avoid any freezing during transportation.
- Fibroblasts must be mycoplasma free. Please provide documentation of mycoplasma testing results. We will perform mycoplasma testing if no result is provided.
- Skin Biopsies should be collected using an aseptic technique and the skin punch should be placed in container filled completely with media. Please indicate anatomic source/location of tissue biopsy on the requisition.

Mitochondrial Respiratory Chain Enzyme Assays (muscle, liver, and heart):

- Tissue must be <u>frozen immediately</u> in liquid nitrogen or on dry ice, within at most a few minutes no longer (do not delay freezing until after wound closure as this will result in a degraded sample).
- Tissue cannot be placed in any preservative including OCT.
- Tissue must be stored in a microvial at -70° C until shipment on dry ice. (- 20°C is not sufficient)
- If possible, weigh biopsy before placing in the container. If the specimen was not weighed before it was frozen, DO NOT attempt to weigh a frozen sample as the tissues degrade very easily. Instead, ship the sample to the Mitochondrial Diagnostic Laboratory without a weight. Lab personnel will weigh the sample.
- Postmortem samples must be obtained within 2 hours of death, but as soon as possible as interpretation will become more difficult with time.

Specimen Requirements for Tissue Types:

- Muscle Tissue: Minimum of 60 mg required
 - Muscle biopsies must be obtained without the use of electrocautery and must be completely processed within 5 to 10 minutes of being excised. Muscle biopsies should be preferably about 120 mg in size.
- Liver Tissue: Minimum 20 mg required. Samples of <60 mg will require microassay, which is less robust.
 - Liver samples can be obtained as a wedge biopsy or as a needle biopsy. It is important to ensure that sufficient liver tissue is obtained. If using a needle biopsy, obtain two (2) needle biopsies 14 Gauche Bard monopty instrument 2 cm length.
- Heart Tissue: Minimum 20 mg required
 - Heart biopsies must be obtained without the use of electrocautery and must be completely processed within 5 to 10 minutes of being excised. Heart biopsies should be at least 20 mg in size.

BNPage with In-Gel Activity Staining (muscle, liver, and heart)

Instructions for obtaining samples are the same as detailed for Respiratory Chain Enzyme Analysis

Specimen Requirements for Tissue Types:

- **Muscle:** 100 mg required. If ordering both Respiratory Chain Enzyme Assays and BNPage Analysis, minimum requirement is 150mg.
- Liver: 50 mg required. If ordering both Respiratory Chain Enzyme Assays and BNPage Analysis, minimum requirement is 80 to 120 mg.
- Heart: 50 mg required. If ordering both Respiratory Chain Enzyme Assays and BNPage Analysis, minimum requirement is 50 to 100 mg.

For all assays, samples smaller than minimal size may result in the lab not being able to process the sample or in reduced accuracy and reliability of the assay.