

Centre for Human Metabolomics (CHM)

Test:	Mitochondrial respiratory chain enzyme analyses (muscle)(NHLS)
PLIEM Mnemonic:	PMITOnhls
NHRPL Tariff code:	4256 x 6 (6 enzymes) + 4117 x 1 (protein assay)
Tariff (including VAT):	R 5000.00 (Tariff only applicable to NHLS-referrals)
Description:	Assay, quantification, and results interpretation for complexes I, II, II+III, III, IV and citrate synthase.
Turnaround time:	35-60 work days from receipt of sample at our laboratory
Transit stability / Sample viability:	Send muscle sample (preferably early in the week to prevent weekend delays) with courier service. The sample should be sent in a polystyrene box with sufficient dry ice (sample must be kept frozen at all times).
Comments:	Analysis cannot be performed on samples that have thawed at any time after collection. More than the mentioned size is not necessary, except if microscopy must be done (in which case this has to be arranged separately with the diagnostic laboratory that provides that service).
Sample required:	<ol style="list-style-type: none"> 1. A minimum of 100 mg skeletal muscle sample (preferably from <i>vastus lateralis</i>) is required (size: ± half the size of a ten cent coin). 2. The biopsy must be placed as is (<u>without</u> any additional preservatives or liquids) in a 1.5ml eppendorf tube (eppie) on dry ice, IMMEDIATELY after the muscle was collected. 3. Freeze the tube with sample <u>immediately</u> after collection at -80°C. The samples should be <u>stored at -80°C until it can be transported</u> to our laboratory. 4. The samples <u>must</u> be <u>shipped on dry ice</u>. <p>Note: Samples will not be analysed if above protocol is not followed.</p>
Information Required with sample(s):	<p><u>Absent clinical details may affect the interpretation of results and recommendations for further / additional testing (to assist with a differential diagnosis) cannot be made.</u></p> <ol style="list-style-type: none"> 1. Clinical history of the patient. The referring clinician could complete and submit the clinical history on our website at https://pliem.co.za/test-request-form OR download the clinical history form from our website (same link) and email the completed form back to ansie.mienie@nwu.ac.za. 2. Other significant medical reports for the patient (e.g. MRI brain, EEG, X-Ray reports, sonar reports, biopsy reports, genetic testing reports, etc). The referring clinician must please email these additional reports to ansie.mienie@nwu.ac.za. 3. Cumulative, routine pathology results of the patient (including archive results available) - this must be provided to our laboratory by the referring pathology laboratory. Please email to ansie.mienie@nwu.ac.za OR send together with the sample(s) of the patient.
Method:	Spectrophotometric assay
Reference range & units:	Units will be provided in nmol/min/UCS (UCS = μmol/min citrate synthase activity). Information with regards to reference ranges will be provided with profile.
Contact for results & other inquiries:	Sample reception and resulting
Telephone number:	018 299 2312 / 018 285 2652 (leave message)
Fax number:	018 299 2316
E-mail address:	pliem@nwu.ac.za
Delivery address for samples:	URGENT: Muscle biopsy sample on dry ice. Center for Human Metabolomics (CHM), Sample reception (PLIEM/NBS/CRS) Building F3, Room Number G19, 11 Hoffmann street North West University, Potchefstroom, 2531

