



# Mitochondrial Respiratory Chain Enzyme (Skeletal Muscle) Request Form



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**Neurometabolic Use (Only)**  
Date & Time Received:  
Freezer Rack Position:  
In-house Code:  
Homogenate location:  
Laboratory Number:

**Surname:**  
**Forename:**  
**Sex: M/F**  
**DOB:**  
**NHS No:**

**Hospital:**  
**Hospital No:**  
**Specimen date & Time:**  
**Consultant:**  
**Name of individual performing biopsy:**

**Clinical details:** .....

**Drug therapy:** .....

*PLEASE NOTE: the clinical details and drug therapies are essential for the accurate interpretation of results.*

### Collection Instructions

- 1) Label an appropriate tube using permanent marker with patient surname, first name, date of birth, hospital number, and specimen date.
  - 2) Muscle specimen should be between **50-100mg**. This specimen should be no smaller than 50mg (approx. same size as orange pip) for accurate analysis to be possible.
  - 3) Collect the muscle biopsy into the labelled tube.
  - 4) ALL specimens should be frozen immediately at the bedside on dry ice or liquid nitrogen and *transported to the laboratory frozen*, or stored at  $-70^{\circ}\text{C}$  until transit.
  - 5) Please ensure all samples arrive during lab opening hours: 9:00am – 17:30pm Monday to Friday (see user manual for more details).
- For **MUSCLE Ubiquinone (CoQ<sub>10</sub>) analysis**, please indicate YES  or NO  ?
  - For **LIVER** respiratory chain enzyme analysis please contact the laboratory directly.
  - SPECIMENS FAILING TO ADHERE TO ALL STATED SAMPLE REQUIREMENTS AND LABELLING MAY NOT BE PROCESSED - please contact the laboratory with any queries.

### Neurometabolic use (Only):

Total muscle weight: \_\_\_\_\_ mg      Residual muscle: \_\_\_\_\_ mg  
Assayed weight: \_\_\_\_\_ mg      Residual muscle location: \_\_\_\_\_

Test	Result (nmol/min/ml)	$\bar{x}$ Result	Ratio to CS	Reference Range
Complex I				0.118 - 0.332
Complex II/III				0.072 - 0.335
Complex IV				0.013 - 0.039
Citrate synthase (CS)			N/A	N/A

Results Generated by: ..... Date: .....      Results Transcribed by: ..... Date: .....      Second Check by: ..... Date: .....      Authorised By: ..... Date: .....

Please refer to the current published User Manual on our website for further information for patients and users.

Internal Users: <http://insight/departments/medicineboard/pathology/BiochemicalMedicine/neurometabolicunit/Pages/default.aspx>

External users: <https://www.uclh.nhs.uk/OurServices/ServiceA-Z/Neuro/NMU/Pages/Home.aspx>