

MITOswab Test Results

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Lab ID# : MC017001

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MITOswab test:- Mitochondrial respiratory chain complexes (RC-I and RC-IV) activities and Citrate Synthase (CS) enzyme activity are measured in patient's buccal cells to evaluate the mitochondrial function in the buccal cells sample.

Result Values- (Observations)

Activity name	Value *	^Control Mean ±SD	^Control Range mean ± 2SD
Total Buccal Protein yield (micrograms)	18		
Citrate Synthase§	8.2	12.1 ±5.1	4.4 - 22
RC-IV (RC-IV/CS)¶	0.8	0.31 ±0.1	0.15 - 0.6
RC-I (RC-I/CS)¶	2.5	6.8 ±2.0	3.4 ±11.9

Notes-

§: Activity value as nanomoles/min/mg buccal protein

¶: Presented as ratio of the corresponding RC activity to CS activity

*: Number in parenthesis indicates the percent of control mean activity.

^: Based on published data.

Comments- (Explanations)

MITOswab test analysis reveals -

test date

Interpretation-

test date

Notes:- It is important to note that the buccal mitochondrial enzyme testing approach is still a work in continued improvisations. While the published data supports the evidence for the representation of skeletal muscle (skm) RC enzymes activities by buccal tissue (as found in 84% of cases studied), more work is needed to be undertaken to have a more conclusive statement. Similarly, in brain and neurologic cells, although could not be directly verified, strong correlation has been experienced between buccal cell mitochondrial analysis and some brain or neurological system related problems.

In addition, the proportion of (ratio) of defective to normal mitochondria, which varies over a broad range, determines the presence and severity of the disease. Thus an accurate assessment of mitochondrial dysfunction might require more than once and independent testing, which is difficult with muscle biopsy and in fact conveniently and easily possible with buccal testing methods

It is recommended to repeat the buccal testing within six months to see if the deficiency is repeatable.

Disclaimer – Please note that this MITOswab test is a lab developed test (LDT) and not yet approved by FDA.

Signed by-

1. Performed by : _____
2. Reviewed by : _____
3. Medical Director : _____

- Sign and Date: _____
Sign and Date: _____
Sign and Date: _____

