



Water (H_2O) is formed.
As the last electron acceptor,
 $\frac{1}{2} O_2$ is reduced when accepts
2 electron from cytochrome c
oxidase (Complex IV) and $2H^+$
from mitochondrial matrix.

$FADH_2$ transferred its high- energy electrons to succinate dehydrogenase (complex II). $FADH_2$ is oxidised to FAD while succinate dehydrogenase is reduced.

From succinate dehydrogenase (complex II) onwards, the electrons move through the same pathway as the electrons from NADH. The final electron acceptor is oxygen, O_2 .

1 NADH transferred its high- energy electrons to NADH dehydrogenase (complex I). NADH is _____ to NAD^+ while NADH dehydrogenase is _____.

2 NADH dehydrogenase (complex I) return to its _____ state when it passes the electrons next to ubiquinone (mobile carrier). Ubiquinone (mobile carrier) is now in _____ state

3 Ubiquinone (mobile carrier) then passes the electrons to cytochrome c reductase (complex III). Ubiquinone (mobile carrier) is _____ while cytochrome c reductase (complex III) is _____.

4 Cytochrome c reductase (complex III) return to its _____ state when it passes the electrons next to cytochrome c (mobile carrier). Cytochrome c (mobile carrier) is now in _____ state.

5 Cytochrome c (mobile carrier) then passes the electrons to cytochrome c oxidase (complex IV). Cytochrome c (mobile carrier) is _____ while cytochrome c oxidase (complex IV) _____.

6 Cytochrome c oxidase (complex IV) return to its _____ state when it passes the electrons to the final electron acceptor which is _____ (electronegative atom).

Each oxygen atom picks up a pair of hydrogen ions from the aqueous solution to form water.

