Cofactors

Asked for adsorption

- Coenzymes
- Cofactors
- prosthetic groups.

Coenzymes
- Vitamins
- Non-Vitamins.

Vitamins: vitamine derived coenzymes NAD and coenzyme A.

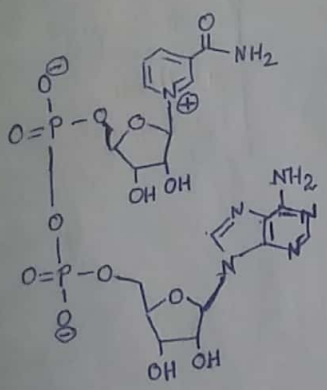
NAD = nicotanimide adenine dinucleotide.
derived from vitamin B3
involves in electron transport chain in citric acid cycle that occurs in mitochondria. *

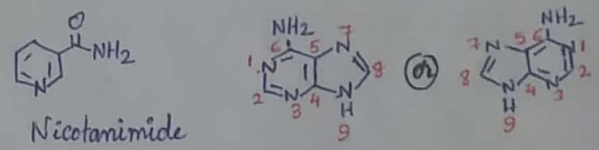
NAD^+ (oxidized) $\rightleftharpoons$ NAD $\rightleftharpoons$ NADH (reduced)

Coenzyme A: = also known as acetyl Co-A.
naturally derived from Vitamin B5.
initiates citric acid cycle for the production of ATP. *

Non-Vitamin Coenzyme: example adenosine triphosphate, most widely distributed coenzyme in the body. *

* structure of nicotinamide adenine dinucleotide (NAD):





* The main role of NAD^+ in metabolism is the transfer of electrons from one molecule to another. When bound in the active site of an oxidoreductase, the nicotanimide ring of the coenzyme is positioned so that it can accept a hydride from the other substrate.

A simplified outline of of redox metabolism.