

Enzymatic analysis and enzyme kinetics (See Perkampus for details if necessary.) Let's consider the enzyme glucose-6-phosphate-dehydrogenase (G-6-PDH). This enzyme catalyzes the oxidation of glucose-6-phosphate to 6-phosphogluconolactone. At the same time, NAD (nicotinamide-adenine-dinucleotide-diphosphate) is reduced to NADH (see Scheme). The point is this: The concentrations of NAD and NADP reflect the rate of the enzymatic reaction and NADH is easy to monitor because of its band around 340 nm. Explain the spectra of NAD and of NADH.

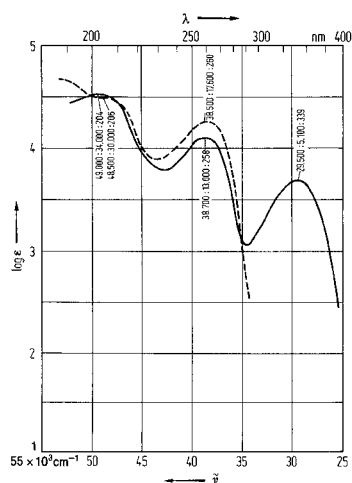
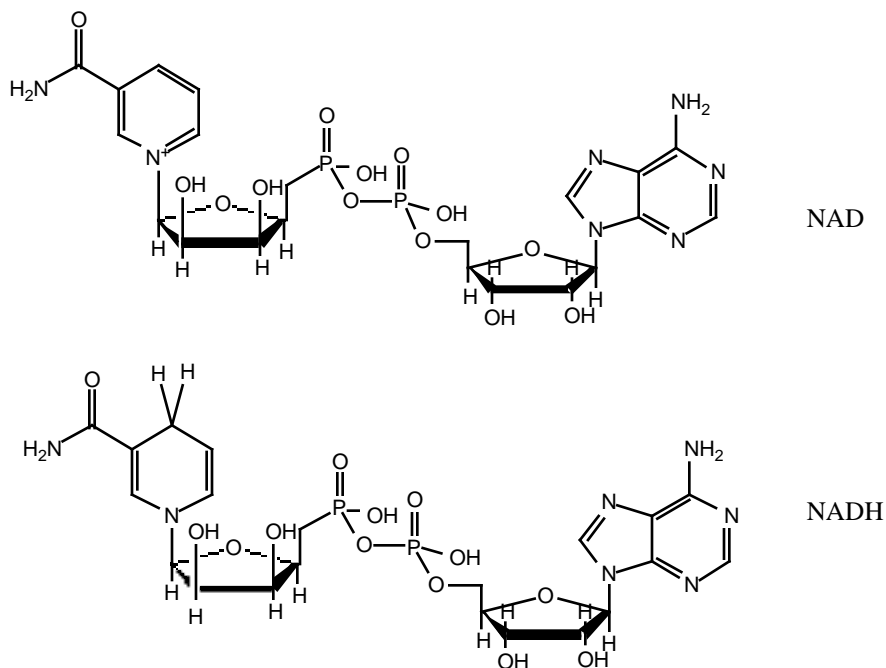


Fig. 13. Absorption spectrum of NAD (---), phosphate buffer pH 6.8; and NADH (—), buffer pH 9.0