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## **SPECIFICATIONS**

## $\beta$ -NAD<sup>+</sup>-Na

β-Nicotinamide-adenine dinucleotide, oxidized form, monosodium salt

 $(\beta-NAD^+, \beta-DPN^+, Coenzyme-I)$ 

Formula: C<sub>21</sub>H<sub>27</sub>N<sub>7</sub>O<sub>14</sub>P<sub>2</sub>

Formula weight: 663.4 (as anhydrous free acid)

685.4 (as monosodium anhydrate) 721.4 (as monosodium dihydrate)

Purity  $\geq$  95% when determined by enzymatic analysis

with alcohol dehydrogenase at pH 10

Sodium contents  $3.0\pm0.5\%$  by atomic absorption spectrophotometry

Water contents < 8% by Karl Fischer method

Spectral analysis

1. ε at 260 nm and pH 7.5

$$(18.0\pm0.5)\times10^3 \text{ L}\cdot\text{mole}^{-1}\cdot\text{cm}^{-1}$$

2. Ratio at pH 7.5  $A_{250} / A_{260} = 0.83 \pm 0.03$ 

 $A_{280} / A_{260}$   $0.21 \pm 0.02$ 

3. ε when reduced with alcohol dehydrogenase at 340 nm and pH 10

$$(6.3 \pm 0.2) \times 10^3 \,\mathrm{L \cdot mole^{-1} \cdot cm^{-1}}$$

4. Ratio when reduced with alcohol dehydrogenase at pH 10

 $A_{340} / A_{260}$   $0.43 \pm 0.01$