Title:	**NADMED-0011 and 0012**
Document type:	**Certificate of Analysis**
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1. CERTIFICATE OF ANALYSIS

Product: Q-NADMED blood kit

Catalog number: IVD - 001

Lot: 0011 and 0012

Specification: Performance evaluation upon manufacturing

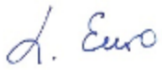
Tested parameters:

1. UV-Vis spectra of NAD+ and/or NADH standard stocks
2. Performance of the Standards in the assay
3. Volume of individual components in the kit

Status: All parameters are within reference range

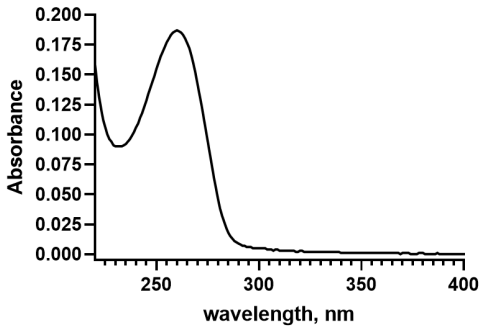
Date:

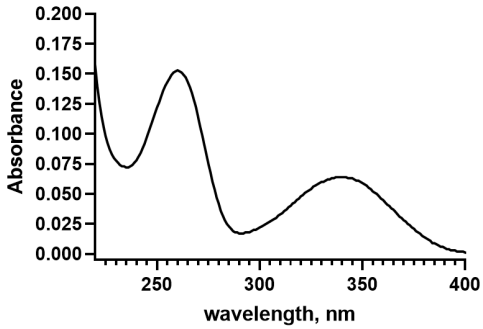
Approved by Chief Scientific Officer, Liliya Euro, PhD



2. Summary of UV-Vis spectroscopy analysis of kit standards

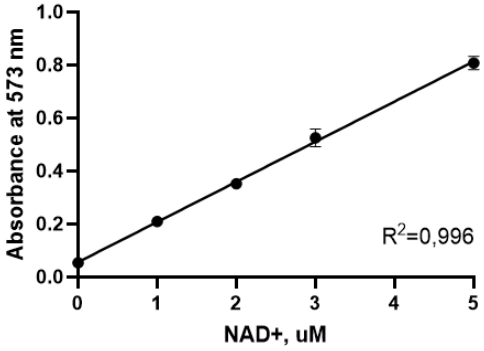
Summary of UV-Vis spectroscopy analysis of kit standards	
Purpose: measurement of compound concentration in NAD+ and NADH standard stocks	
	Standard: 1 mM NAD+ Extinction coefficient at 260 nm: 18 $mM*cm^{-1}$ Dilution: x100 with water to 10 µM Measurement:1 cm quartz cuvette Instrument: Shimadzu UV-2401pc Absorbance at 260 nm: 0,183 Optical Units (mean of two measurements) Theoretical value for absorbance of 10 µM NAD+: 0.180 Accepted range for absorbance measurement based on instrument characteristics: 0.178 - 0.185 Standard: 1 mM NADH





Extinction coefficient at 340 nm: 6.22 $mM*cm^{-1}$
Dilution: x100 with water to 10 µM
Measurement:1 cm quartz cuvette
Instrument: Shimadzu UV-2401pc
Absorbance at 340 nm: 0.062 Optical Units (mean of two measurements)
Theoretical value for absorbance of 10 µM NADH: 0.0622
Accepted range for absorbance measurement based on instrument characteristics: 0.059-0.066

3. Summary of Standard performance in the assays

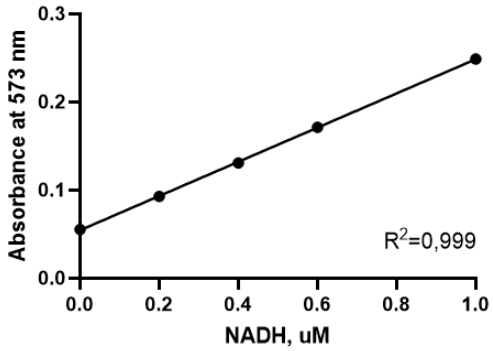
Assay	Absorbance at 573 nm	Standard curve fitting
NAD+ Standards	Reaction time – 4 min 10 sec	

NAD+, uM	1 meas	2 meas
0	0,054	0,053
1	0,212	0,207
2	0,356	0,349
3	0,549	0,501
5	0,826	0,79

NADH Standards	Reaction time – 6 min	

NADH, uM	1 meas	2 meas
0	0,057	0,054
0.2	0,095	0,091
0.4	0,134	0,128

0.6	0,172	0,171
1.0	0,249	0,249



4. Criteria for acceptance assay performance results

Parameter	Reference values	Quality Control
Absorbance range for 0 - 5 µM NAD+ Assay Standards (assay time 4 min)	0.04 - 0.800 Accepted variation between replicates - 0.05 Optical Units	passed
Absorbance range for 0 - 1 µM NADH Assay Standards (assay time 6 min)	0.04 - 0.260 Accepted variation between replicates - 0.05 Optical Units	passed
R^2 of liner fit for NAD+ standard curve	>0.99	passed
R^2 of liner fit for NADH standard curve	>0.99	passed
Volumes of single components were enough to perform two 96-well plate assays	Yes	passed

5. Attachments