

# CPET Basic Results

Last Name	<b>Opina, Martin</b>			Weight	65.0 kg
ID				Height	171 cm
Age	23				
Sex	male				
Date	5/10/2019 11:07 AM			Workload Protocol	
Duration	0:14:57				
Operator	Bernaciková, Martina				
Device	MetaLyzer 3B-R3			Ambient Conditions	
Workload Device	Lode Excalibur 38k4			Temperature	24.5°C
				Pressure	977mBar

## Summary Table

Variable	Unit	Rest	VT1			VT2			V'O <sub>2</sub> peak		
			Value	% Norm	% Max	Value	% Norm	% Max	Value	% Norm	Norm.
V'O <sub>2</sub> /kg	ml/min/kg	6.24	37.25	82	63	52.50	116	89	59.11	131	45.21
V'O <sub>2</sub> /HR	ml	6.31	17.61	106	82	20.43	123	95	21.49	129	16.60
HR	/min	65	138	78	77	167	94	93	179	101	177
WR	W	0	198	75	60	279	106	84	331	125	264
V'E/V'O <sub>2</sub>		28.10	22.17	-	68	25.99	-	80	32.44	-	-
V'E/V'CO <sub>2</sub>		29.12	22.44	-	80	24.55	-	87	28.15	-	-
RER		0.97	0.99	-	86	1.06	-	92	1.15	-	-
V'E	L/min	13.22	56.86	48	44	93.28	79	71	130.56	111	117.48
VT	L	1.03	2.38	-	81	2.75	-	93	2.96	-	-
BF	/min	13	24	58	54	34	82	77	44	107	41

## Lipid Metabolism

Variable	Unit	Value
HR	/min	109-110
WR	W	88-90
FAT	g/h	30-32
CHO	g/h	16-29
EE	kcal/h	392-436

Maximum lipid metabolism = 30-32g/h  
at Heart Rate Range = 109-110/min

## Absolute Maximum Values

Variable	Unit	Value
V'O <sub>2</sub> /kg	ml/min/kg	61.56
V'O <sub>2</sub> /HR	ml	23.43
HR	/min	183
WR	W	342
V'E/V'O <sub>2</sub>		37.59
V'E/V'CO <sub>2</sub>		31.65
RER		1.20
V'E	L/min	152.80
VT	L	3.21
BF	/min	57

## Medical Findings

The patient performed a maximum exercise test to 331W and reached a V'O<sub>2</sub>peak of 3.842L/min. This is above the normal value 2.939L/min (131%). The relative maximum oxygen uptake (V'O<sub>2</sub>/kg) is 59.11ml/min/kg. Based on Classification by AHA the fitness level is assessed as Excellent.

At maximum exercise the respiratory exchange ratio (RER) was 1.15 and the heart rate (HR) was 179/min, what is 101% of the normal value. The test was aborted by reasons of Loss of performance.

The VT1 is 2.421L/min or 37.25ml/min/kg. This is 82% of the normal maximum oxygen uptake or 63% of the reached maximum oxygen uptake.

**CPET Basic Results****Patient**  
Opina, Martin**Date**  
5/10/2019 11:07 AM**Normal Values**

Variable	Author	Value	Unit
Maximum Oxygen Uptake	<i>Wasserman weight algorithm</i>	2.939	L/min
Maximum Heart Rate	<i>Traditional formula for bicycle test</i>	177	/min
Maximum Oxygen Pulse	<i>Wasserman equation</i>	16.60	ml
Maximum Work Rate	<i>Based on normal maximum oxygen uptake</i>	264	W
Maximum Minute Ventilation	<i>Individual normal value, based on MVV or FEV1</i>	117.48	L/min
Maximum Breathing Frequency	<i>Pollock et al. equation</i>	41	/min

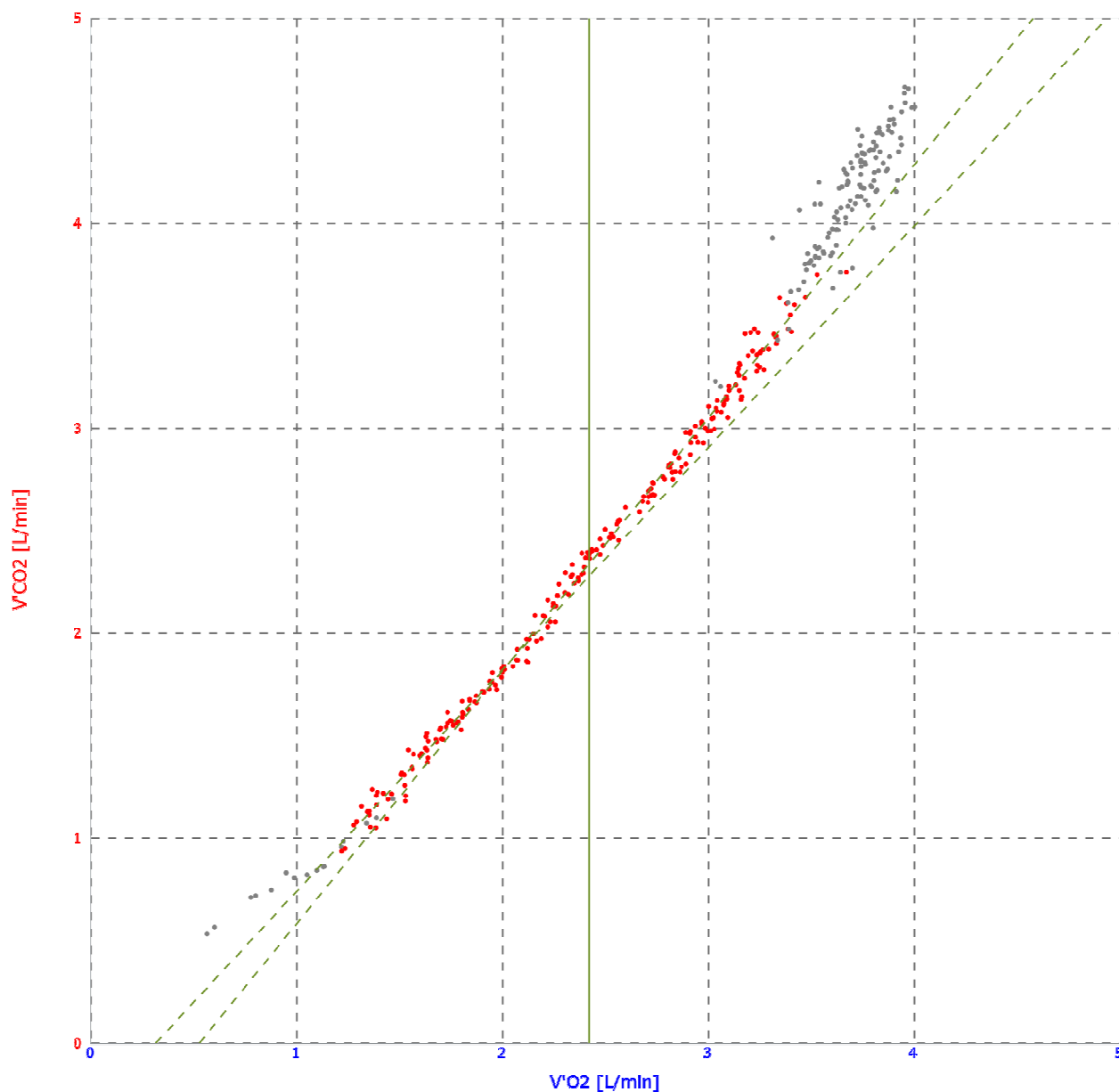
**Reasons for Test Abort**

Loss of performance

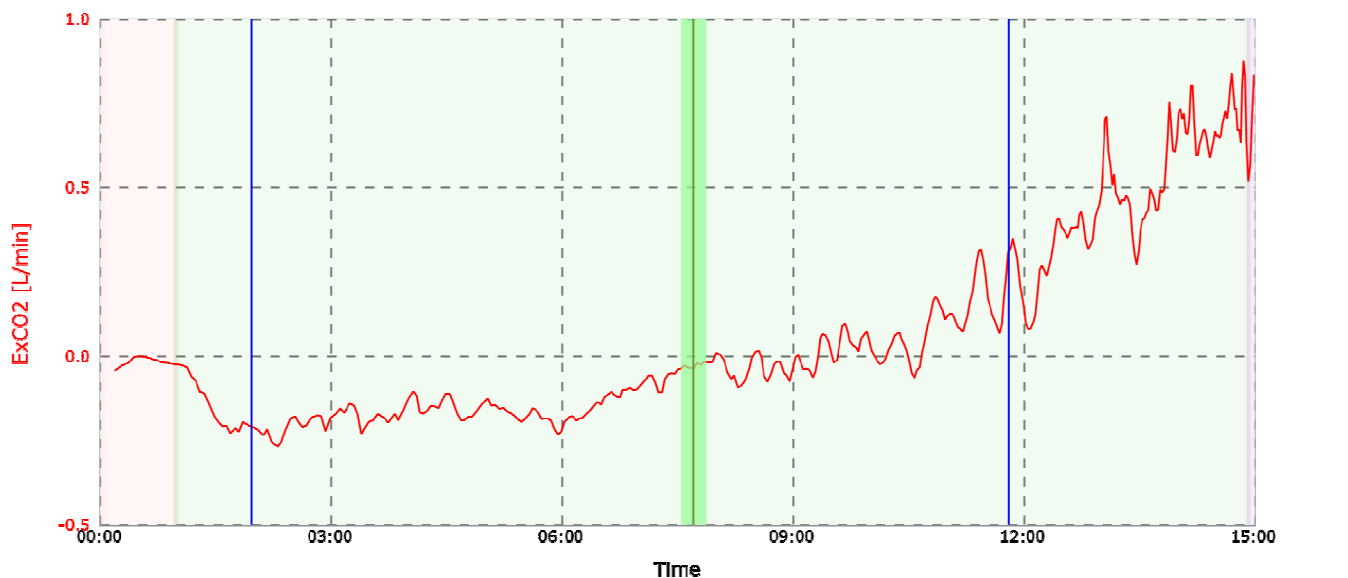
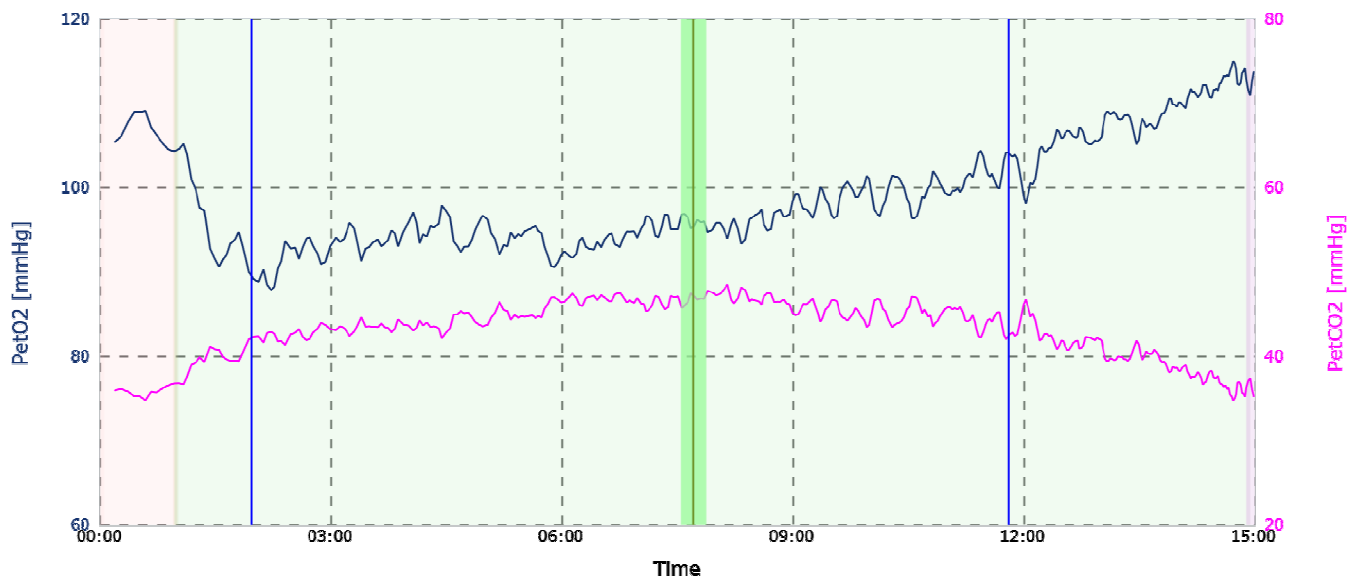
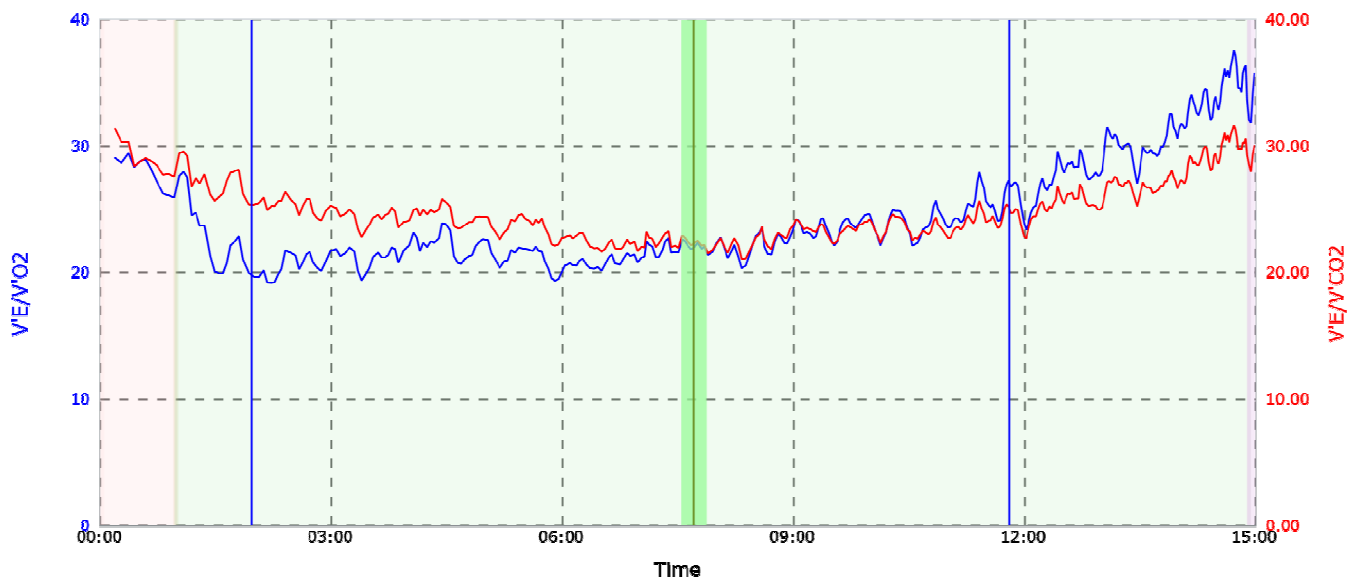
## Ventilatory Threshold 1

**VT1: 2.421L/min 82% of predicted V'O2max 63% of reached V'O2peak**

VT1 is determined based on smoothed data by Moving data points average method 3. The calculation range was 0:01:58-0:11:48.



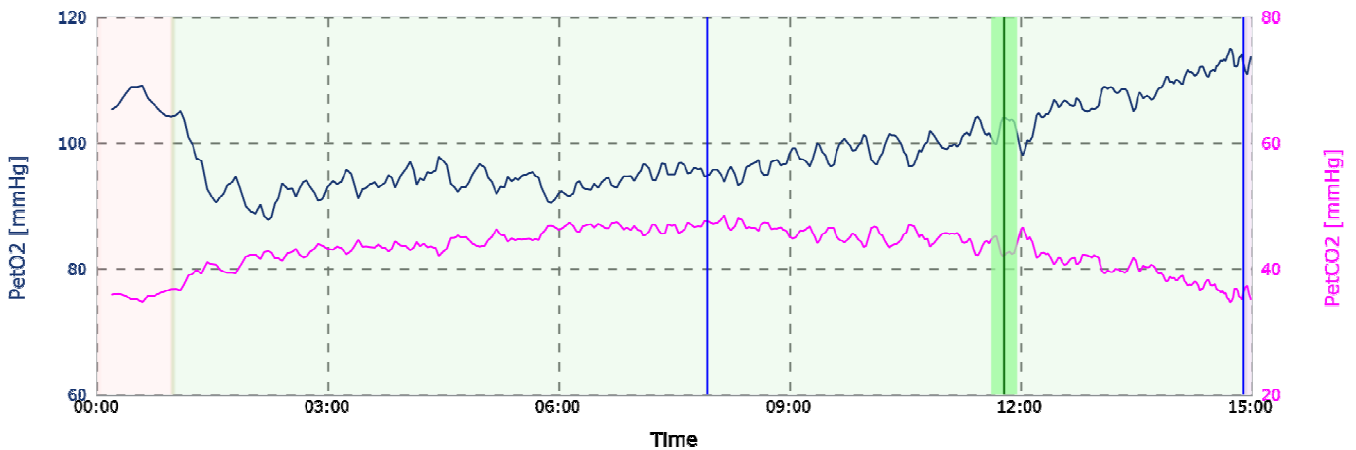
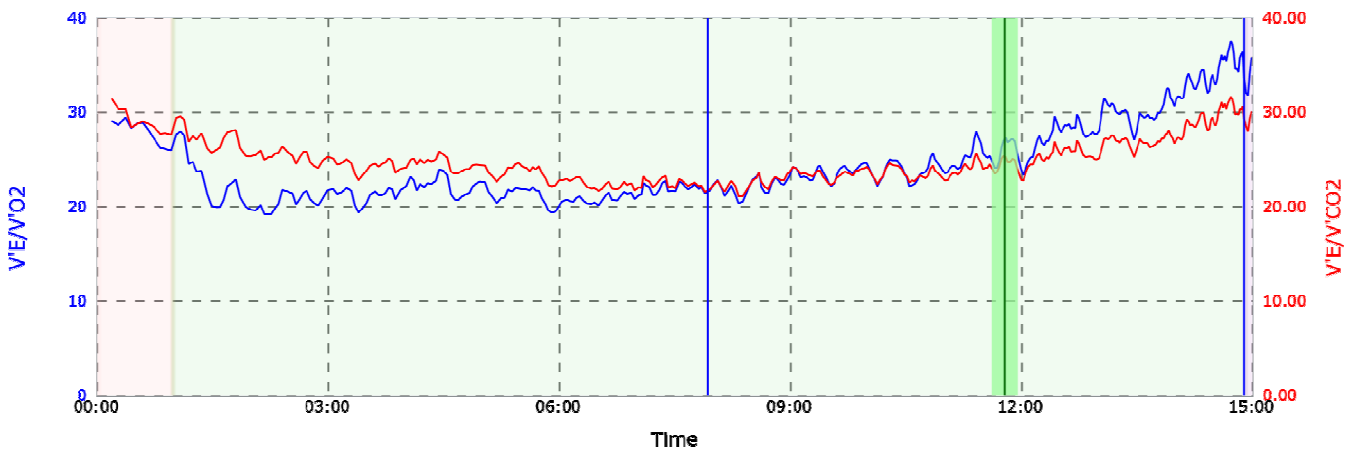
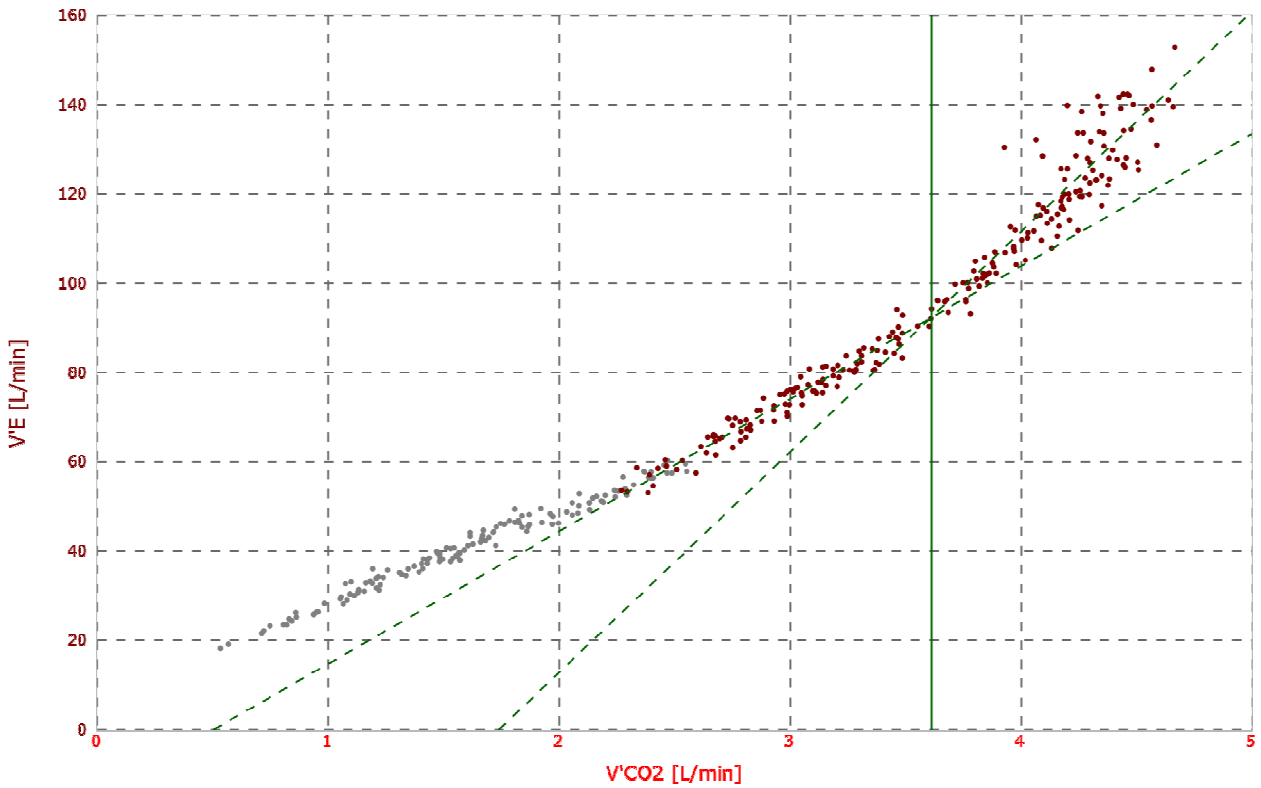
Ventilatory Threshold 1 (continuation)



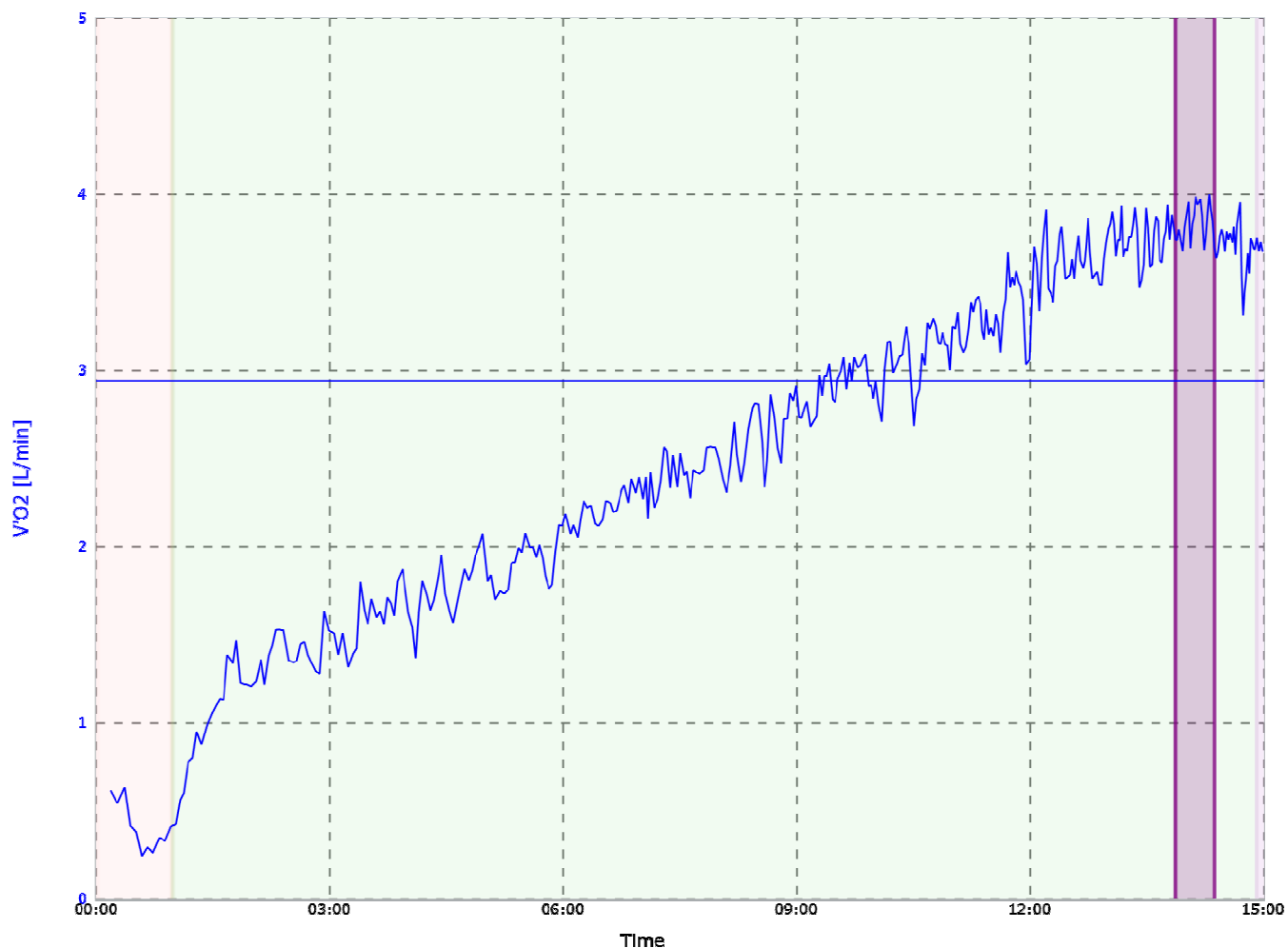
Ventilatory Threshold 2

**VT2: 3.413L/min 116% of predicted V'O2max 89% of reached V'O2peak**

VT2 is determined based on smoothed data by Moving data points average method 3. The calculation range was 0:07:55-0:14:53.



## Maximum Oxygen Uptake

**V'O<sub>2</sub>peak: 3.842L/min 131% of predicted V'O<sub>2</sub>max**V'O<sub>2</sub>peak is determined based on smoothed data by Moving data points average method 3.

Lipid Metabolism

Maximum lipid metabolism = 30-32g/h  
at Heart Rate Range = 109-110/min

Lipid Metabolism is determined based on smoothed data by Moving data points average method 3.

