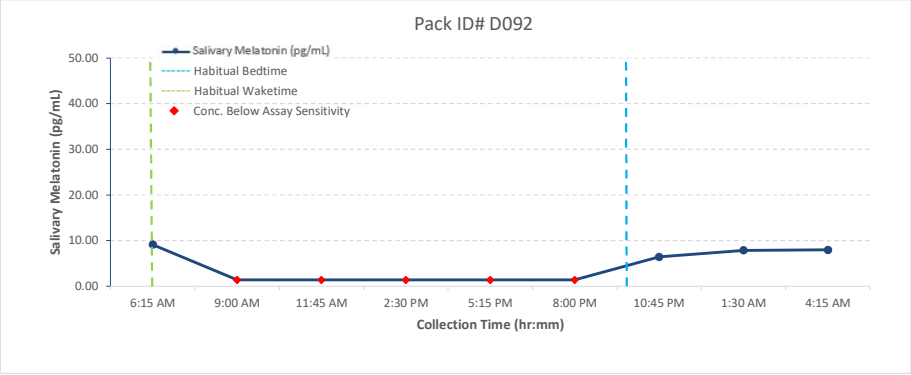
101 Innovation Boulevard, Suite 302
State College, PA 16803

24-Hour Circadian Phase Mapping:

Salivary Melatonin Sample Analysis

Patient Name: John Smith
Patient DOB: 1/23/1985

PACK ID# D092



Assay Values

Intra-Assay CV:	5.42%*
Inter-Assay CV:	8.90%*
Assay Range:	0.78 - 50 pg/mL
Sensitivity:	1.37 pg/mL

*Average % CVs as noted in the kit insert.

Lab Summary

Peak Level (pg/mL)	9.13
Reported Bedtime	9:30 PM
Reported Waketime	6:15 AM
Date of Collection	1/12/2023
Date of Receipt	1/18/2023
Date Reported	1/23/2023

24-Hour Circadian Phase Mapping

A 24-Hour Melatonin Circadian Phase Map, measured in saliva, maps the biological night, a state of entirely different physiology from the wake state. Sometime less than a 24-hour period may be sampled, based on the exact sleep pattern, but the minimum would be about 15 hours. Melatonin is only one of many changes but is readily measured in saliva. A full 24-hour Circadian Phase Map can provide useful physiologic information to help assess an individual's biological night in relation to circadian timing and sleep function for complex issues wherein an individual may be suffering from multiple sleep disruptions or non-24-hour sleep-wake rhythm disorders. A circadian rhythm disorder is generally present when the relationship between the timing and duration of sleep and the circadian rhythm is significantly altered. Thus, the "biological night" can be too long, too short, unstable (varying with time) or misaligned - all of which can cause clinical symptoms and are also targets for treatment.

In humans and other mammals, the suprachiasmatic nuclei (SCN) of the hypothalamus controls a "master clock" that aligns the internal circadian clock to a 24-hour light–dark cycle. This cycle controls the production of melatonin, a hormone that promotes sleep in healthy individuals. This hormone is a regulator of an individual's natural sleep-wake cycle, or circadian rhythm. A healthy individual is generally entrained to a sleep-wake cycle which repeats around every 24.2 hours but can vary between 23.8 to 27.1 hours. In a healthy 24-hour circadian cycle, Melatonin production drops significantly after awakening and stays low during daylight hours, while gradually rising after sunset when the body increases sleep propensity (typically about 2 hours before a person's natural sleep onset or bedtime).

Lab Director: Dr. Angela Purvis, Ph. D. | CLIA ID: 39D0986679

101 Innovation Boulevard Suite 302
State College, PA 16803
814.234.7748
www.salimetrics.com

Salivary 24-Hour Phase Map Final Report

Pack ID# **D092**

Sample #	*Habitual Wake Time*	*Habitual Sleep Time*	*Collection Date (MM/DD/YYYY)*	*Collection Time (hr:mm)*	*Salivary Melatonin (pg/mL)*	
1	0.00	-15.25	7/8/2022	6:15 AM	9.13	
2	2.75	-12.50	7/8/2022	9:00 AM	1.37	[1]
3	5.50	-9.75	7/8/2022	11:45 AM	1.37	[1]
4	8.25	-7.00	7/8/2022	2:30 PM	1.37	[1]
5	11.00	-4.25	7/8/2022	5:15 PM	1.37	[1]
6	13.75	-1.50	7/8/2022	8:00 PM	1.37	[1]
7	16.50	1.25	7/8/2022	10:45 PM	6.45	
8	19.25	4.00	7/9/2022	1:30 AM	7.85	
9	22.00	6.75	7/9/2022	4:15 AM	7.96	

Sample Notes

[1]Samples #2 - #6 are below assay sensitivity (1.37 pg/mL).