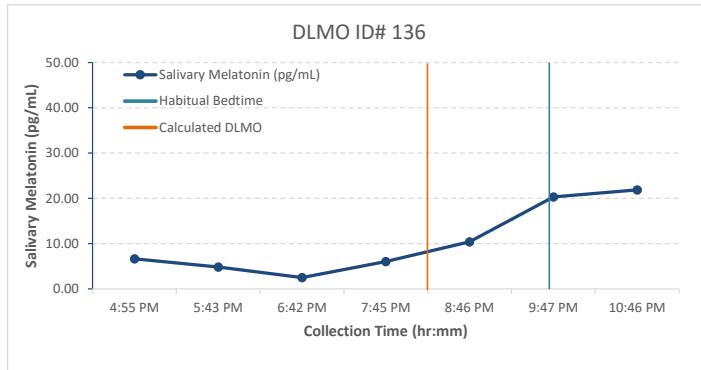


# Salivary DLMO Profile:

## Dim Light Melatonin Onset (DLMO) Rhythm



**DLMO ID#** 136

### Lab Summary

<b>Baseline Avg. (pg/mL)</b>	4.65
<b>Peak Level (pg/mL)</b>	21.88
<b>Reported Bedtime</b>	9:45 PM
<b>Date of Collection</b>	2/13/2022
<b>Date of Receipt</b>	2/24/2022
<b>Date Reported</b>	3/3/2022

### Assay Values

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

\*Average % CVs as noted in the kit insert.

### Estimated DLMO

DLMO Threshold (pg/mL):	Approximate Onset Between:
8.81	08:15 PM - 08:30 PM

**Note:** Light exposure during saliva collection can significantly lower melatonin levels. Compliance to test instructions is crucial for accurate results.

### DLMO Summary

Melatonin is a hormone that promotes sleep in healthy individuals and is a regulator of normal circadian rhythms. Melatonin production is suppressed during daylight hours and gradually rises in the evening as bedtime approaches, typically about 2 hours before a person's natural sleep onset; however, the actual timing of the melatonin rise can vary considerably among individuals. Dim Light Melatonin Onset (DLMO) refers to the time of day when melatonin levels have significantly risen above baseline daylight levels. DLMO profiles measured in saliva can be used to illustrate the biological response of melatonin production to dim light. The baseline levels, timing of melatonin onset and magnitude of peak melatonin at bedtime can all provide useful physiologic information to help assess issues with sleep and sleep dysfunction. DLMO is determined by identifying the time at which rising melatonin levels cross a threshold level that is either fixed (4 pg/mL), or calculated if non-zero baseline levels occur. When calculated, the threshold is the average of three individual baseline samples plus two standard deviations above the mean. The calculated threshold method accommodates for individuals whose baseline melatonin concentration may be above the fixed threshold level. Results from this test can be used to guide appropriate remedies and create specifically timed application of treatments, which are often based on the following phase interpretations:

<b>Advanced</b>	Advanced sleep phase is often seen in individuals who have difficulty staying awake until their desired bedtime in the evenings and have problems staying asleep in the early morning.
<b>Delayed</b>	A Delayed sleep phase is often seen in individuals who have problems falling asleep at their desired bedtime and difficulty waking up in the morning.
<b>Normal</b>	Some sleep disturbances are non-circadian sleep disorders and may not be directly tied to a sleep phase shift. Normal Sleep Phase results need to be considered in the context of the patient's overall presentation and available diagnostic data.
<b>No Onset</b>	In profiles where the threshold is never crossed, such as flat-line results or atypically elevated thresholds, the interpretation of sleep phase cannot be calculated. Atypically elevated thresholds can occur if one or more of the first 3 baseline values are abnormally elevated.
<b>Undetermined</b>	Retesting is recommended for accurate results, ensuring careful adherence to test instructions.

**Lab Director: EXAMPLE | CLIA ID: 123456789**

Incorrect sample handling may affect results. Results are not intended to diagnose, treat, cure, or prevent any disease or replace medical advice from a qualified healthcare provider.



## Salivary DLMO Final Report

**DLMO ID#** 136

<b>Sample #</b>	<b>Habitual Sleep Time (hrs)</b>	<b>Collection Time (hr:mm)</b>	<b>Salivary Melatonin (pg/mL)</b>
1	-5.0	4:55 PM	6.64
2	-4.0	5:43 PM	4.82
3	-3.0	6:42 PM	2.50
4	-2.0	7:45 PM	6.05
5	-1.0	8:46 PM	10.40
6	Sleep Onset	9:47 PM	20.30
7	1.0	10:46 PM	21.88

### DLMO Calculations

<b>Avg samples 1-3</b>	<b>SD</b>	<b>2*SD</b>	<b>DLMO threshold (pg/mL)</b>	<b>DLMO relative to onset</b>	<b>DLMO decimal clock time</b>
4.65	2.08	4.15	8.81	-1.37	20.38

(Avg +2 SDs)

### Sample Notes