



# ENVIROTEK LABORATORIES, INC.

7150 North Park Drive, Suite 410, Pennsauken, NJ 08109

PHONE 856-478-0010 www.enviroteklab.com

EPA ID # NJ01298 NJ DEP ID # 08012

## UV-VIS ABSORPTION TEST REPORT

Report # 13-24-Auro Liquid Gold Mineral Solution UV-Vis Absorption test)

Customer Name: Auro LLC

Report Date: February 5, 2013.

### SUMMARY

Auro Liquid Gold mineral solution was tested for Ultraviolet/Visible absorption compare to the absorption of tap and Ultrapure water. The mineral solution shows a high absorption in the range of 190 to 380 nm (Ultraviolet), and very low absorption in the range of 380 to 750 nm (visible range).

### INTRODUCTION

Auro Liquid Gold mineral solution was scanned for Ultraviolet/Visible absorption and compared to the absorption of Tap and Ultrapure water. The Auro mineral solution shows a high absorption in the range of 190 to 380 nm (Ultraviolet), and very low absorption in the range of 380 to 750 nm (visible range). The high absorbency of the Auro Liquid Gold Mineral solution could be related to the formation of crystalline water mentioned in the research work of Dr. Gerald Pollack of the University of Washington.

### REAGENTS AND LAB EQUIPMENT

Shimadzu UV/Vis Spectrometer model 1601 with Data system

Ten Centimeters Quartz cells

Ultrapure Water (ASTM Reagent Type IV water)

Tap water

Auro Liquid Gold Mineral Solution.

### PROCEDURE

The Auro Liquid Gold mineral solution was prepared diluting 2 mL of Auro Liquid Gold in 1L of Tap water. The solution was tested after 6 days of sitting undisturbed in the laboratory bench. A scan in the range of 190 to 810 nm was performed with the Ultrapure water (ASTM Reagent Type IV water) to establish the baseline, then the Tap water was scan in the same range, and finally the diluted Auro Liquid Gold Mineral Solution. The spectra are included in the Results section.

### RESULTS:

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Report # 13-24

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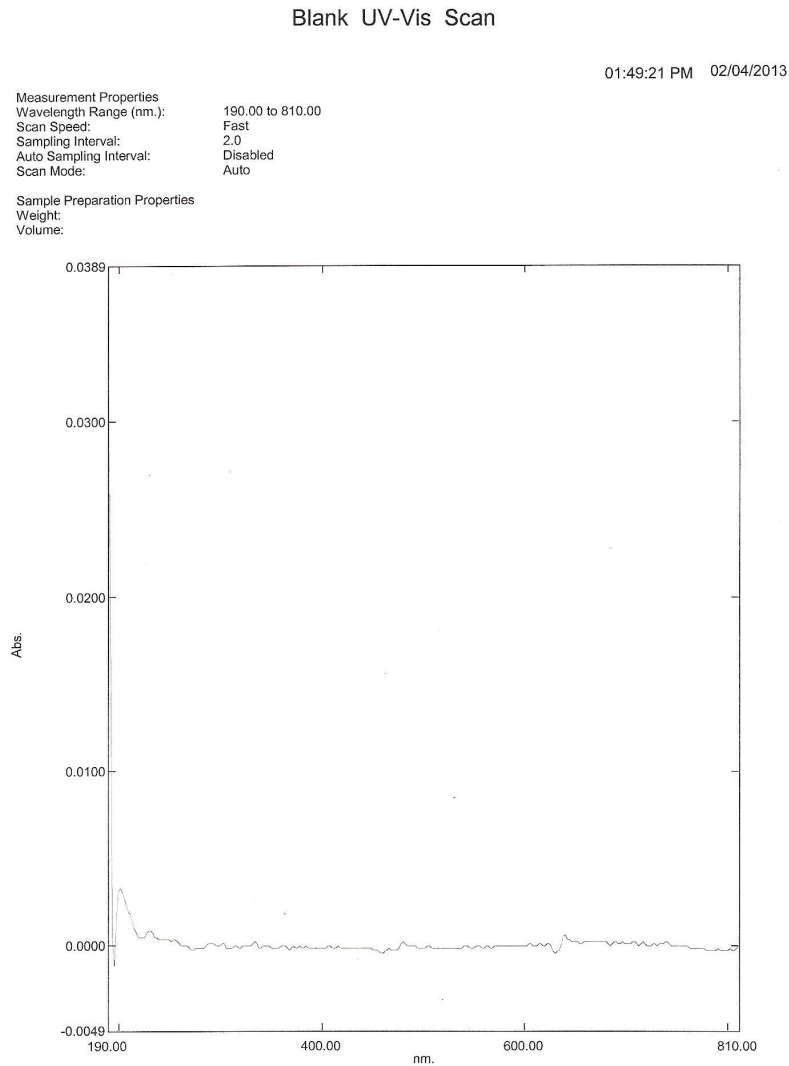
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**Figure 1. Ultrapure water (ASTM Reagent Type IV) UV-Vis scan range 190-810 nm.**





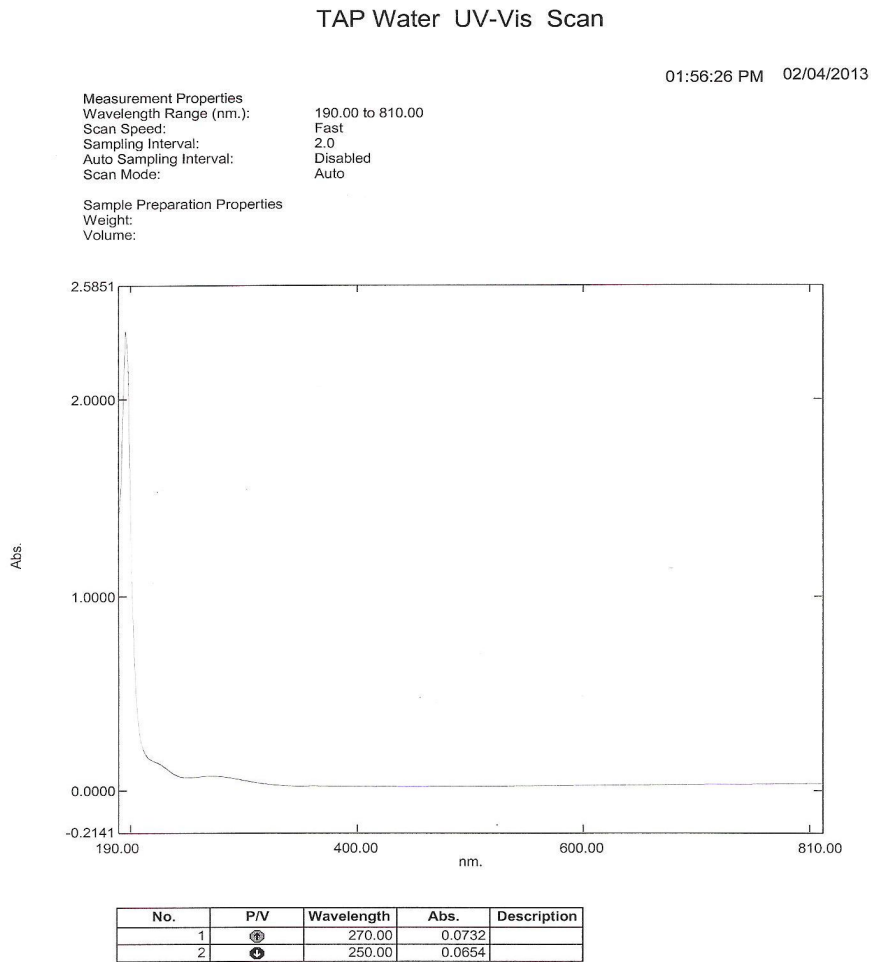
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Figure 2. Tap water UV-Vis scan range 190-810 nm.





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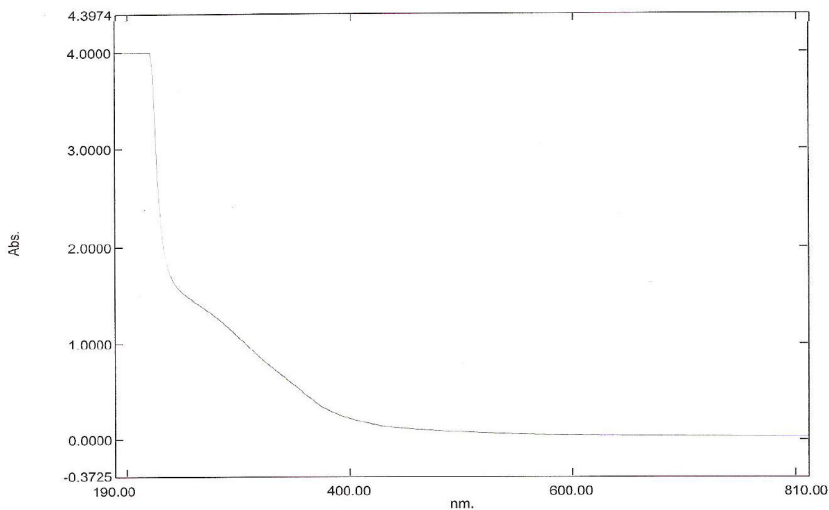
Figure 3. Auro Liquid Gold Mineral Solution UV-Vis scan range 190-810 nm.

## Auro Liquid Gold UV-Vis Scan

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Measurement Properties  
Wavelength Range (nm.): 190.00 to 810.00  
Scan Speed: Fast  
Sampling Interval: 2.0  
Auto Sampling Interval: Disabled  
Scan Mode: Auto

Sample Preparation Properties  
Weight:  
Volume:



No.	Wavelength	Absorbance	Description
1	200.00	3.9999	
2	230.00	2.3918	
3	250.00	1.5251	
4	270.00	1.3584	
5	290.00	1.1766	
6	310.00	0.9541	
7	320.00	0.8469	
8	350.00	0.5810	
9	390.00	0.2504	
10	400.00	0.2122	
11	800.00	0.0254	
12			



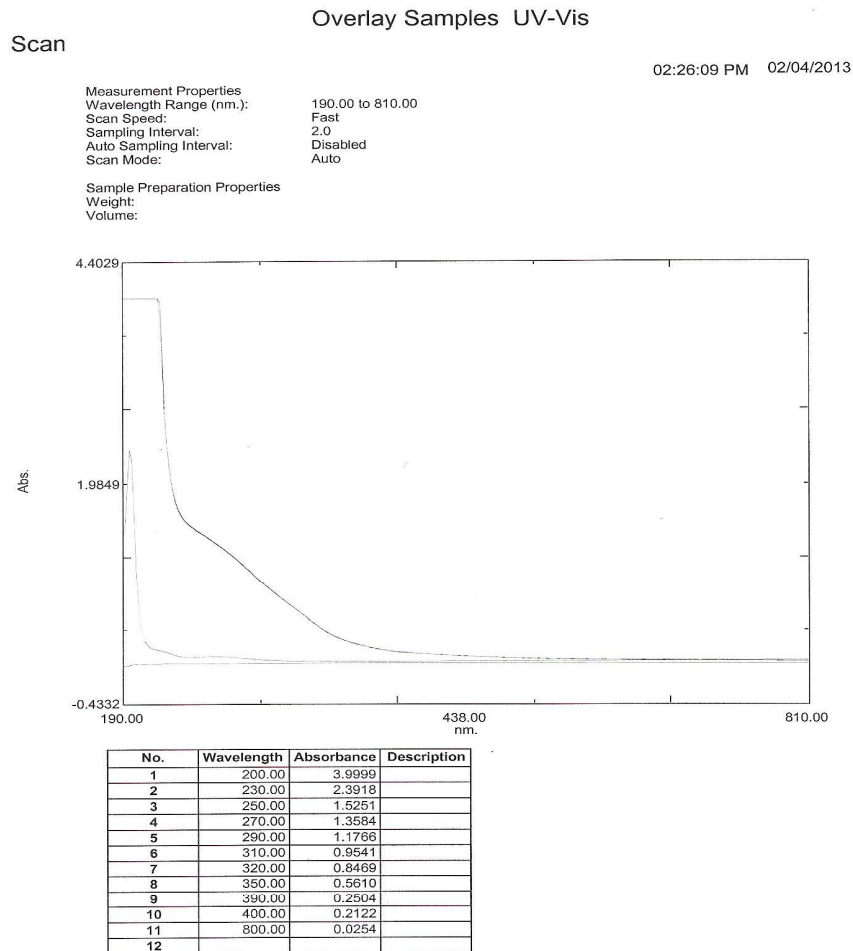
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**Figure 4. Overlay of the three spectra UV-Vis scan range 190-810 nm.**





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## CONCLUSION

Auro Liquid Gold Mineral Solution shows high absorption of UV light with a maximum in the range of 190 to 200 nm, the Tap water shows a maximum absorption at 270 nm of 0.0732 which is very small compare to the Auro Liquid Gold solution absorption, the Ultrapure water does not show any absorption in the range of 190 to 810 nm. The high absorbance of the Auro Liquid Gold Mineral solution could be related to the formation of crystalline water mentioned in the research work of Dr. Gerald Pollack of the University of Washington (G. H. Pollack and J. Clegg, Unexpected linkage between unstirred layers, exclusion zones, and water, *In Phase Transitions in Cell Biology*, G.H. Pollack and W.-C. Chin (eds.), (Springer Science+Business Media B.V., 2008) pp. 143-152).

**Jaime A. Young**

Jaime A. Young  
Lab Director