



ENVIROTEK LABORATORIES, INC.

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

PHONE 856-478-0010 www.enviroteklab.com

EPA ID # NJ01298

UV-VIS ABSORPTION TEST REPORT

Report # 22-106 - LifeFX UV-Vis Absorption test)

Customer Name: LifeFX

Report Date: February 5, 2013.

SUMMARY

LifeFX 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

LifeFX was scanned for Ultraviolet/Visible absorption and compared to the absorption of Tap and Ultrapure water. The LifeFX 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 absorbance of the LifeFX 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

LifeFX.

PROCEDURE

The LifeFX was prepared diluting 2 mL of LifeFX 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 LifeFX. The spectra are included in the Results section.

RESULTS:

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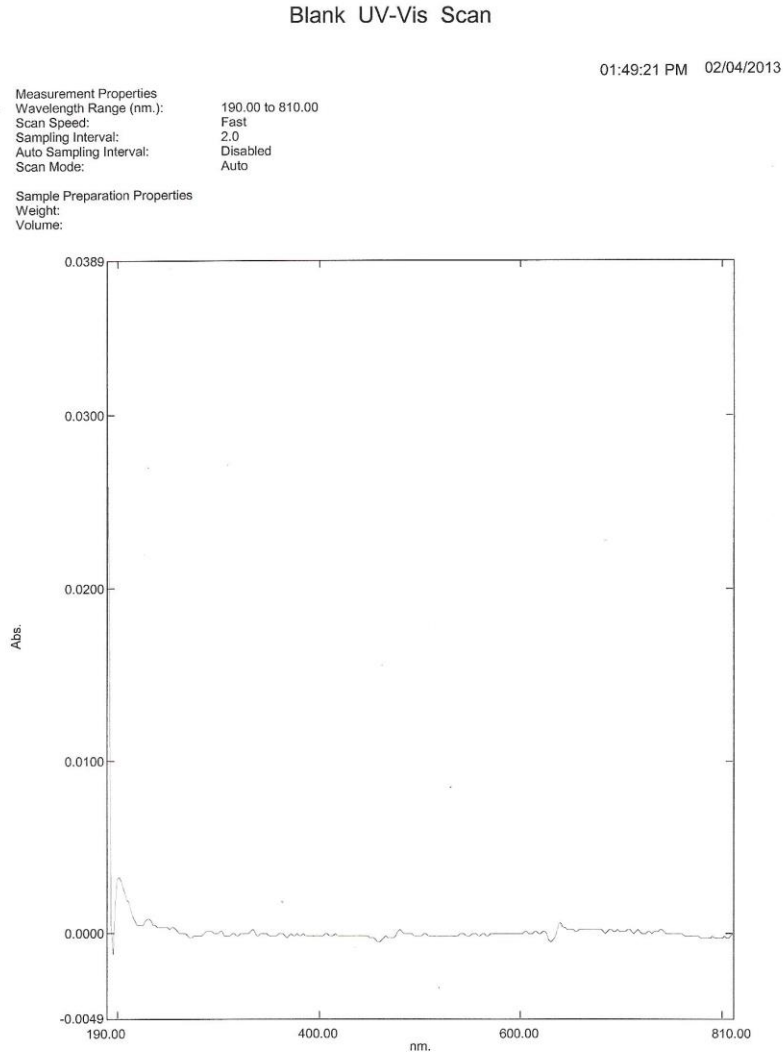
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Figure 1. Ultrapure water (ASTM Reagent Type IV) UV-Vis scan range 190-810 nm.



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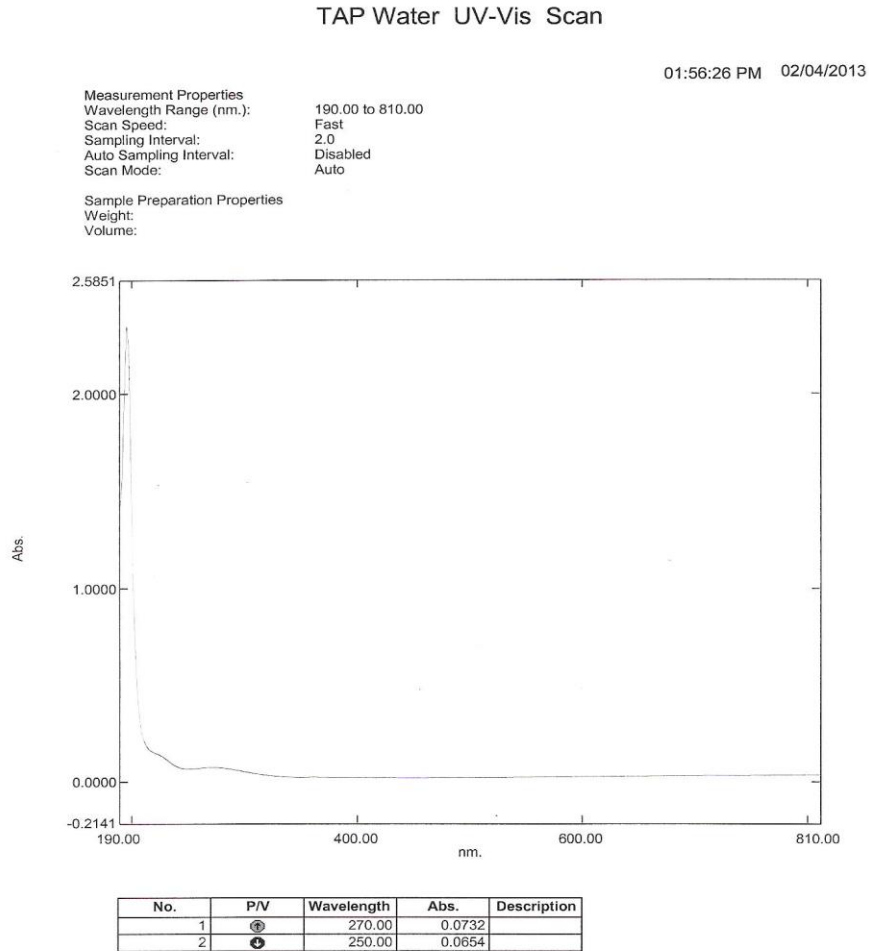
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Figure 2. Tap water UV-Vis scan range 190-810 nm.





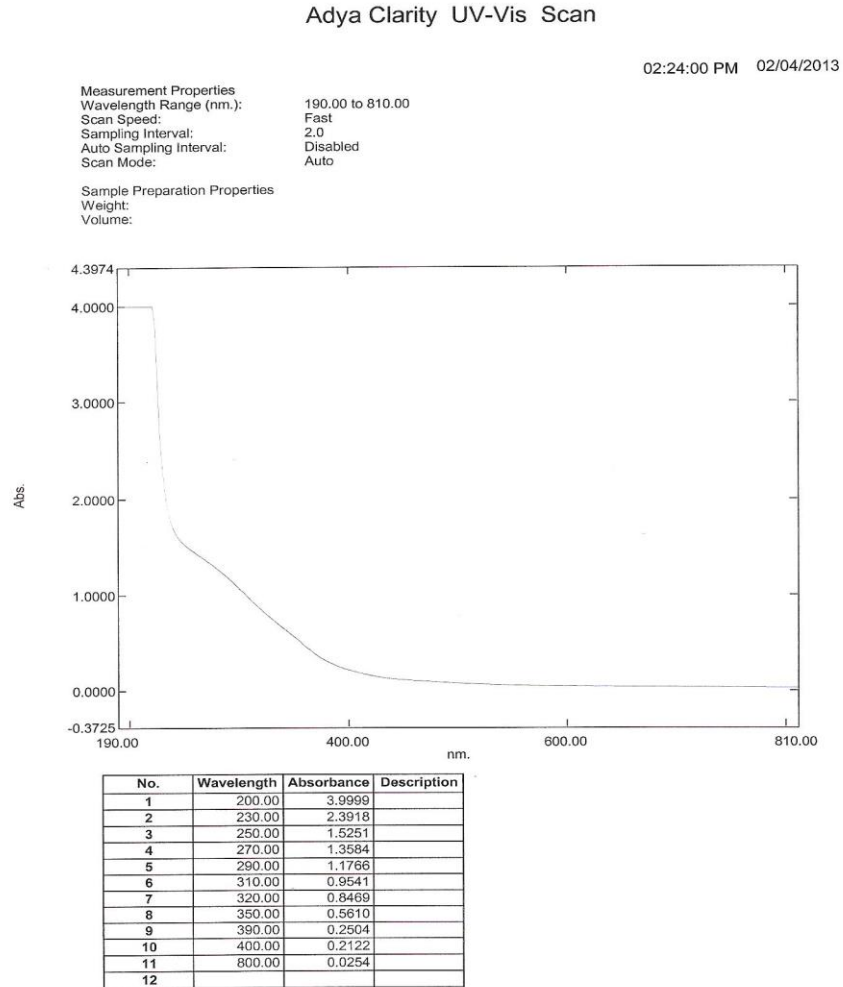
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Figure 3. LifeFX UV-Vis scan range 190-810 nm.





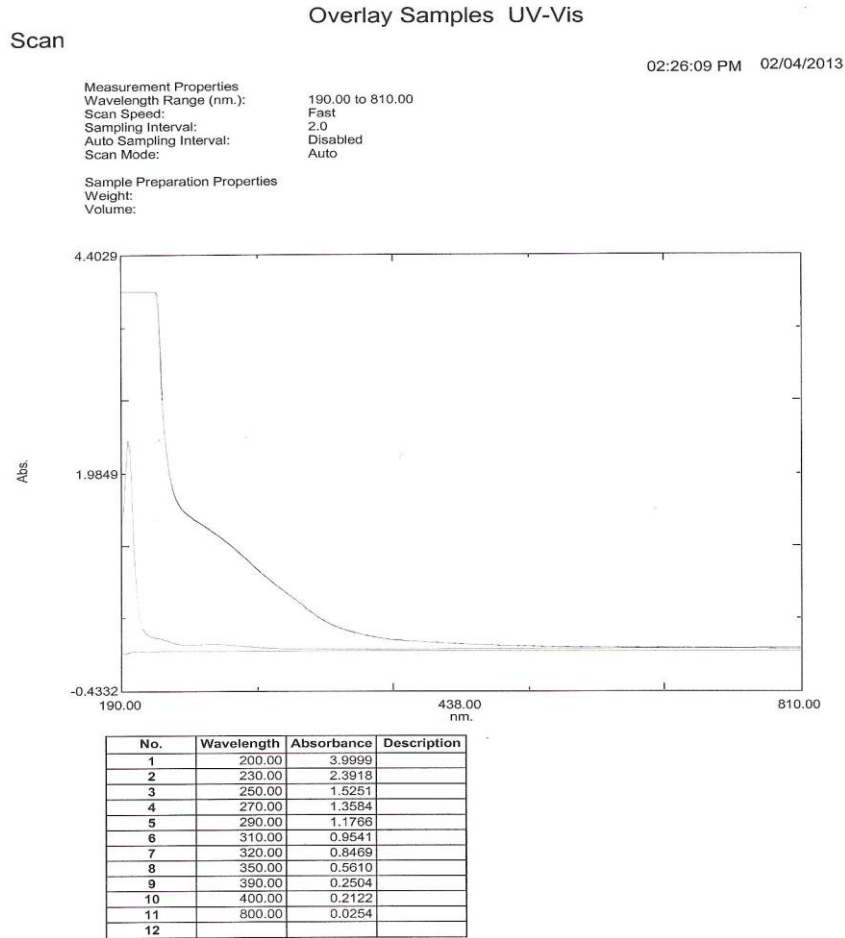
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Figure 4. Overlay of the three spectra UV-Vis scan range 190-810 nm.





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CONCLUSION

LifeFX 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 LifeFX solution absorption, the Ultrapure water does not show any absorption in the range of 190 to 810 nm. The high absorbance of the LifeFX 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