



## Psy-Tek Labs, LLC

### Non-Invasive Scanning and Subtle Energy Testing Lab

#### **GDV measurements of charged and noncharged Using LifeShield Laser: Preliminary study**

**Date:** June 1, 2017

**Principal Investigator:** Gaétan Chevalier, Ph.D., Research Director (Bio in Appendix A)

**Co-Investigator:** Jessica Luibrand, BS, CCT, CCTT, Subtle Energy Researcher (Bio in Appendix B)

#### **Abstract**

Spring water was exposed to LifeShield laser light for 30 seconds. The Electro-Photonic Imager/Gas Discharge Visualization (EPI/GDV) was used to determine difference between water samples. GDV analysis showed no significant difference in Area, Form coefficient, Entropy and Spatial fractality between the spring water sample exposed to LifeShield laser light vs. a control spring water sample not exposed to laser light. A very significant increase in Average intensity was observed after exposing the spring water sample to LifeShield laser light. A larger Average Intensity indicates a larger number of electrons emitted resulting in more electrons being available to be absorbed by the body and so more electrons can react with positively charged compounds or molecules inside the body (larger antioxidant effect). The presence of more electrons also means better absorption of the water by the body (through the skin or when orally taken) and more energy in the water sample (the water is more “alive”).

#### **Goal**

This pilot project was designed to find out energetic differences as seen by the Electro-Photonic Imager/Gas Discharge Visualization (EPI/GDV; details in Appendix C) between two samples of spring water: one exposed to the LifeShield Laser and the other not exposed to it, the latter serving as control. The same water (i.e. only one jar was used) was used as both samples. First simple spring water tested on the GDV by itself. Next, the laser was placed vertically (with the laser light shining in the water) 2 inches above the surface of the water for 30 seconds with clockwise rotational movements of the laser. GDV measurement were repeated. GDV measurements were done following the protocol described below. The two water samples were then compared for differences in parameters of the EPI/GDV.



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#### Statement of Work

The two samples used the exact same water (i.e. only one jar was used). First, simple spring water was tested on the GDV as is. Next, the laser was placed 2 inches above the surface of the water for 30 seconds with clockwise rotational movements of the laser and GDV measurements were repeated following the protocol described below. The two water samples were then compared for differences in 5 parameters of the EPI/GDV (see “What is the EPI/GDV measuring?” section below).

#### Protocol

Six 6 drops of water were measured twice, for a total of 24 measurements, 12 for each sample. Two new tuberculin syringes were used, one for each sample. After each use, the syringe was primed with the sample prior to a drop measurement. The GDV captured images at a rate of 5 images per second (or 5 frames per second) for 24 seconds giving 120 images per measurement. For each sample, the 2 measurements taken of the first drop were not use for data analysis, and the first 20 images were discarded from all drop measurements leaving 100 images per measurement  $\times$  2 measurements  $\times$  5 drops = 1,000 images to analyze per sample. Parameters analyzed included: Area, Average Intensity, Form Coefficient, Entropy and Spatial Fractality.

#### What is the EPI/GDV measuring?

The parameters analyzed are: Area, Average Intensity, Form Coefficient, Entropy and Spatial Fractality. Area gives an indication of the energy of the electrons emitted while Average Intensity is proportional to the number of these electrons emitted from the sample. A large Area indicates that electrons are easily leaving the sample (lightly bounded to the sample) while a larger Average Intensity indicates a larger number of electrons emitted and thus more electrons are available in the sample to react with positive charges of compounds or molecules in the body and thus more electrons can be transferred to the body resulting in a better absorption of the sample by the body. It also indicates a more powerful antioxidant effect. The 3 other parameters: Form Coefficient, Entropy and Spatial Fractality are related to different aspects of coherence but not in the same way. Form coefficient is a measure of how far the shape of the glow is from a perfect circle, while Spatial fractality is about similarity in form in the space of the glow. Entropy is a measure of decoherence in the glow of the sample through the jagged form at its edges. A lower value for these parameters would suggest a better coherence or flow of electrons within the molecules of the test sample (suggesting a more homogeneous distribution of the molecules inside the sample).



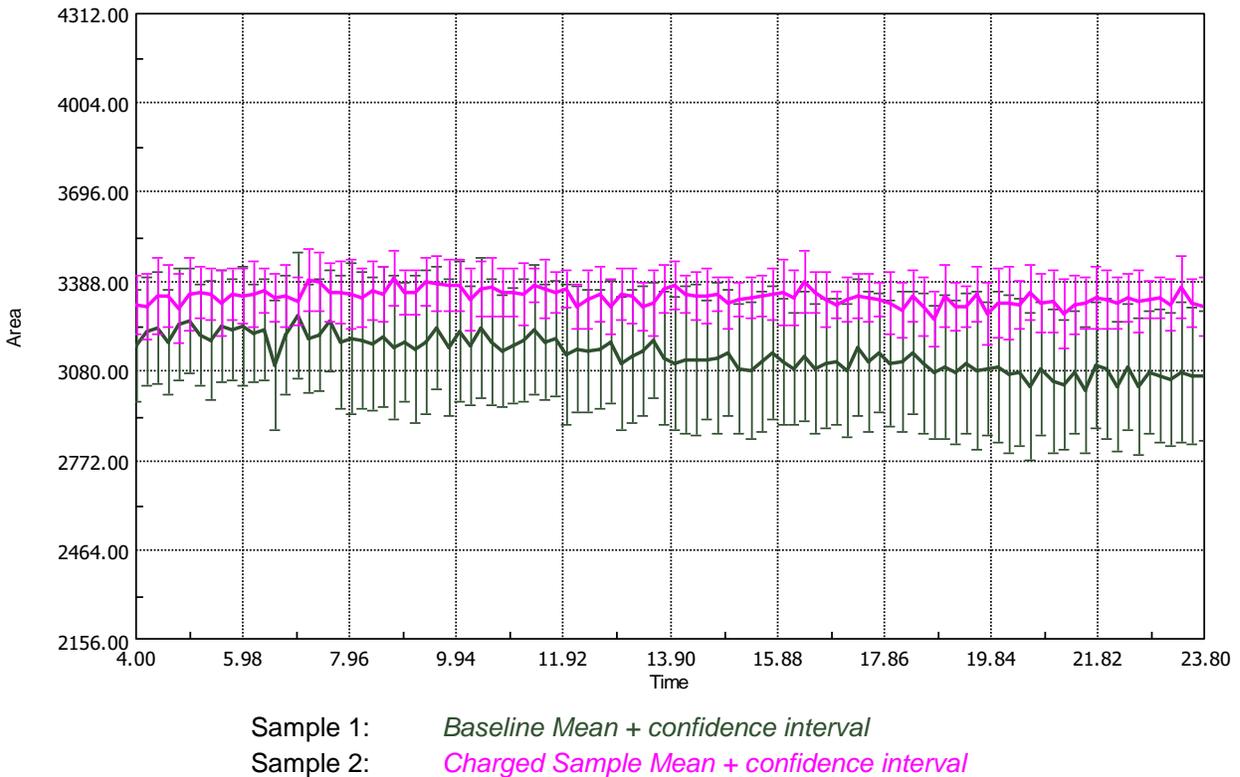
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#### Results

##### Area

Figure 1 shows the time series of the 100 images analyzed for each of the 2 water samples (Sample 1 = Spring water = Baseline; Sample 2 = Spring water exposed to the light of the LifeShield laser = Charged Sample) for the Area of the glow around drops. The first 20 images were removed as per the protocol. Since 10 recordings were used for the analysis of each sample (the first 2 recordings done with the first drop were not used), each point on the graph is the average of 10 data points and the vertical lines represent the confidence intervals for these 10 data points at each frame. If the confidence interval of 2 samples do not overlap, the 2 samples can be considered statistically different. In Figure 1, it is not clear if there will be a significant different between the Area of the 2 samples.

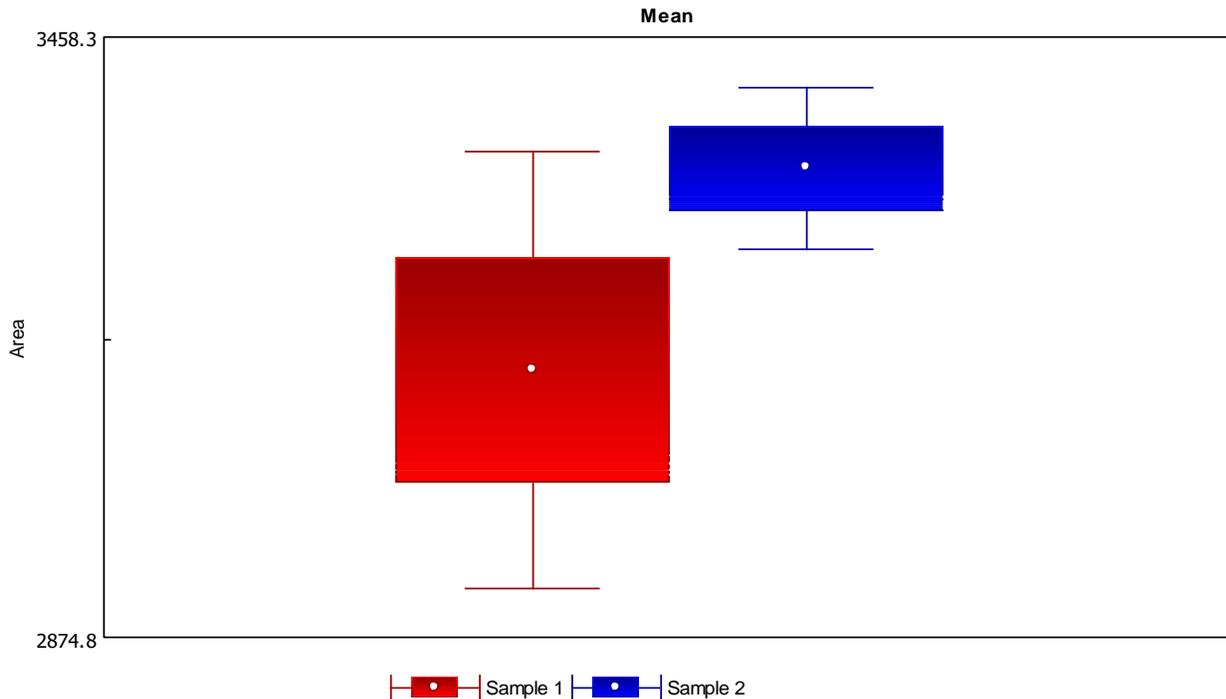


**Figure 1:** Area vs. Frames for the 2 water samples. The units of the Area are arbitrary. The vertical bars represent the confidence interval for 10 data points.

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Figure 2 presents the statistical analysis comparing mean Area of the glow of each sample. Figure 2 shows that there is no statistically significant difference between the mean Areas of the glow of the 2 samples with a probability  $p = 0.106$ .



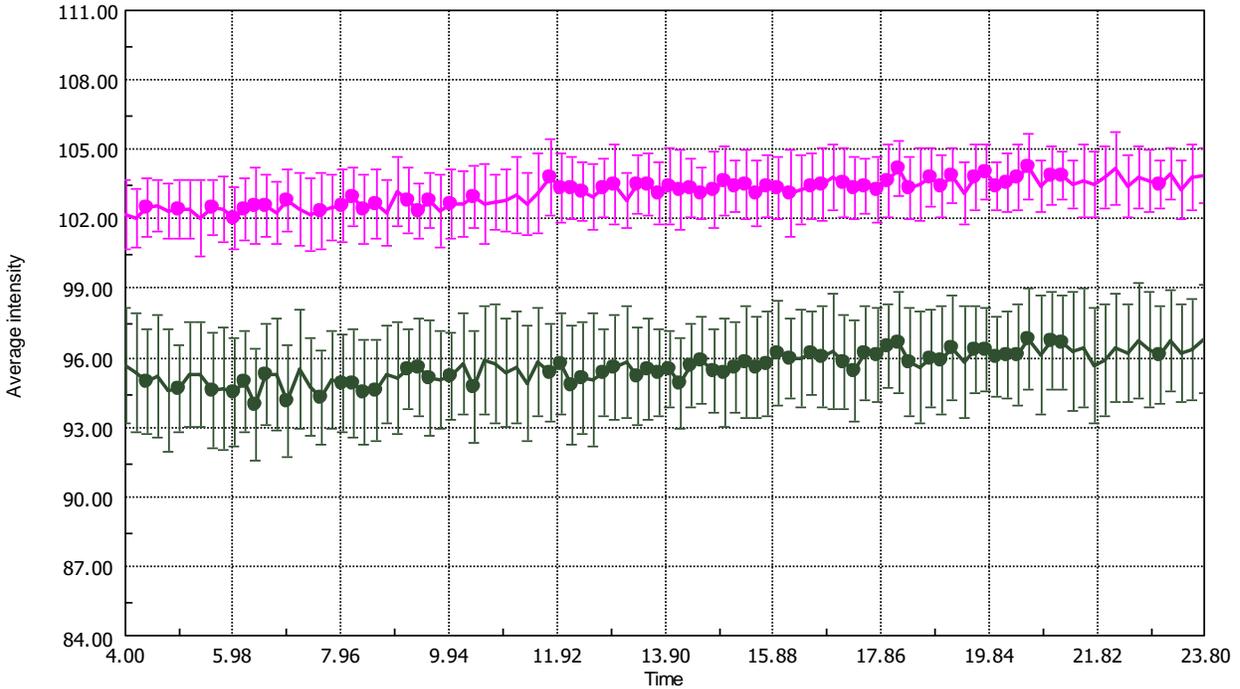
**Figure 2:** Statistical comparison between the mean Areas of the two samples. By Student test the samples are not statistically significant different in Area with a probability  $p = 0.106$ .

#### *Average intensity*

Figure 3 shows the time series of the 100 images analyzed for each of the 2 water samples (Sample 1 = Spring water = Baseline; Sample 2 = Spring water exposed to the light of the LifeShield laser = Charged Sample) for the Average intensity of the glow around drops. The first 20 images were removed as per the protocol. Since 10 recordings were used for the analysis of each sample (the first 2 recordings done with the first drop were not used), each point on the graph is the average of 10 data points and the vertical lines represent the confidence intervals for these 10 data points at each frame. If the confidence interval of 2 samples do not overlap, the 2 samples can be considered statistically significantly different. In Figure 3, they clearly do not overlap, the samples have clearly different Average Intensity.

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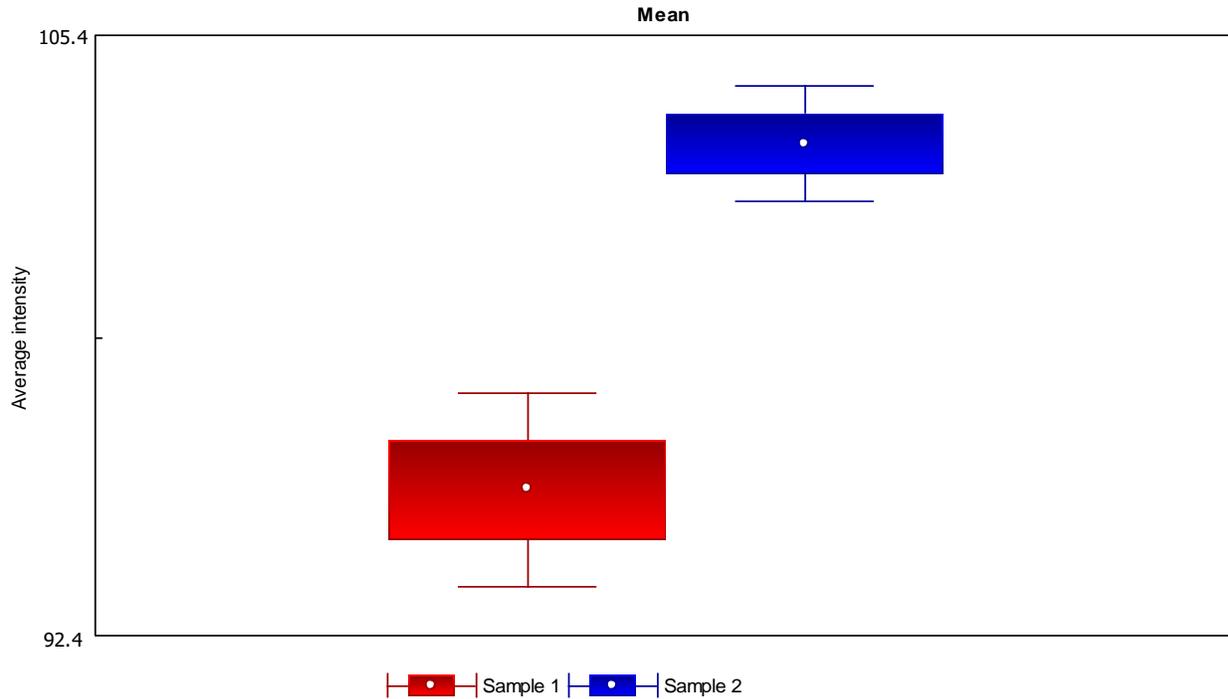


Sample 1: *Baseline Mean + confidence interval*  
 Sample 2: *Charged Sample Mean + confidence interval*

**Figure 3:** Average intensity vs. Frames for the 2 water samples. The units of the Average intensity are arbitrary. The vertical bars represent the confidence interval for 10 data points.

Figure 4 present the statistical analysis comparing Average Intensity of the glow of each sample. As anticipated, Figure 4 shows that the charged sample had a statistically higher Average Intensity compared to the control sample with a probability  $p = 0.0000110$ .

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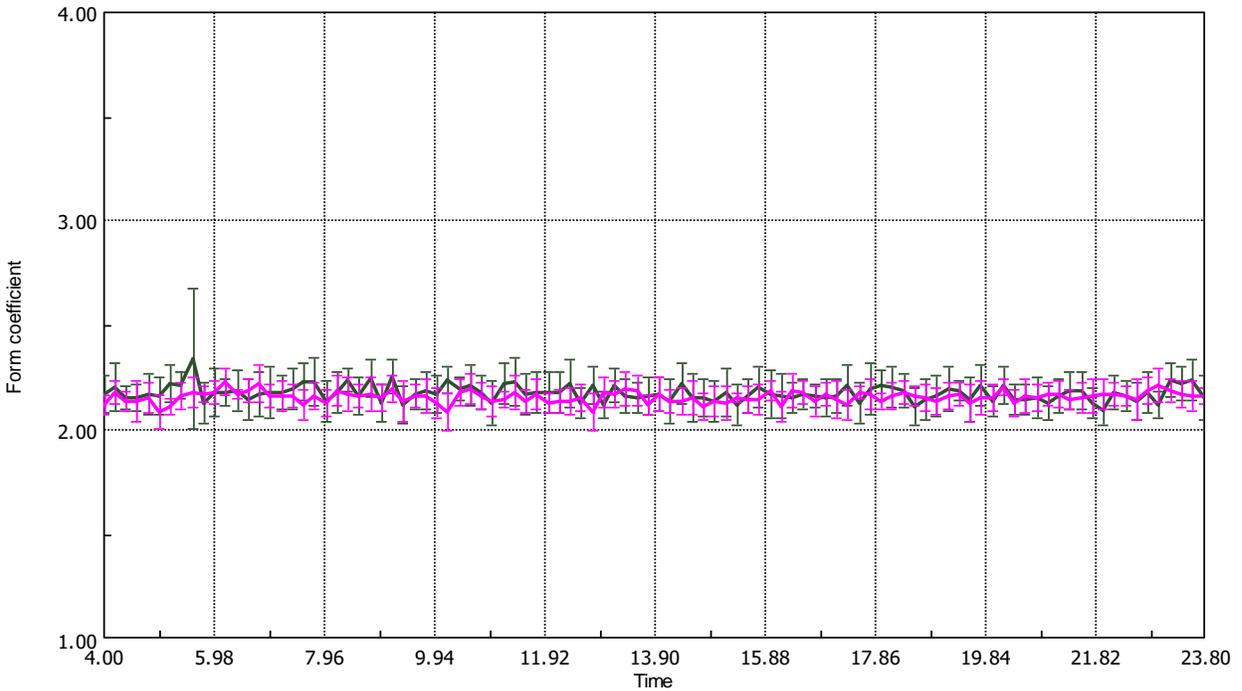
**Figure 4:** Statistical comparison between the mean Average intensity of the two samples. By Student test the samples are significantly different in Average Intensity with a probability  $p = 0.0000110$ .

***Form coefficient***

Figure 5 shows the time series of the 100 images analyzed for each of the 2 water samples (Sample 1 = Spring water = Baseline; Sample 2 = Spring water exposed to the light of the LifeShield laser = Charged Sample) for the Form coefficient of the glow around drops. The first 20 images were removed as per the protocol. Since 10 recordings were used for the analysis of each sample (the first 2 recordings done with the first drop were not used), each point on the graph is the average of 10 data points and the vertical lines represent the confidence intervals for these 10 data points at each frame. If the confidence interval of 2 samples do not overlap, the 2 samples can be considered statistically significantly different. In Figure 5, they clearly overlap.

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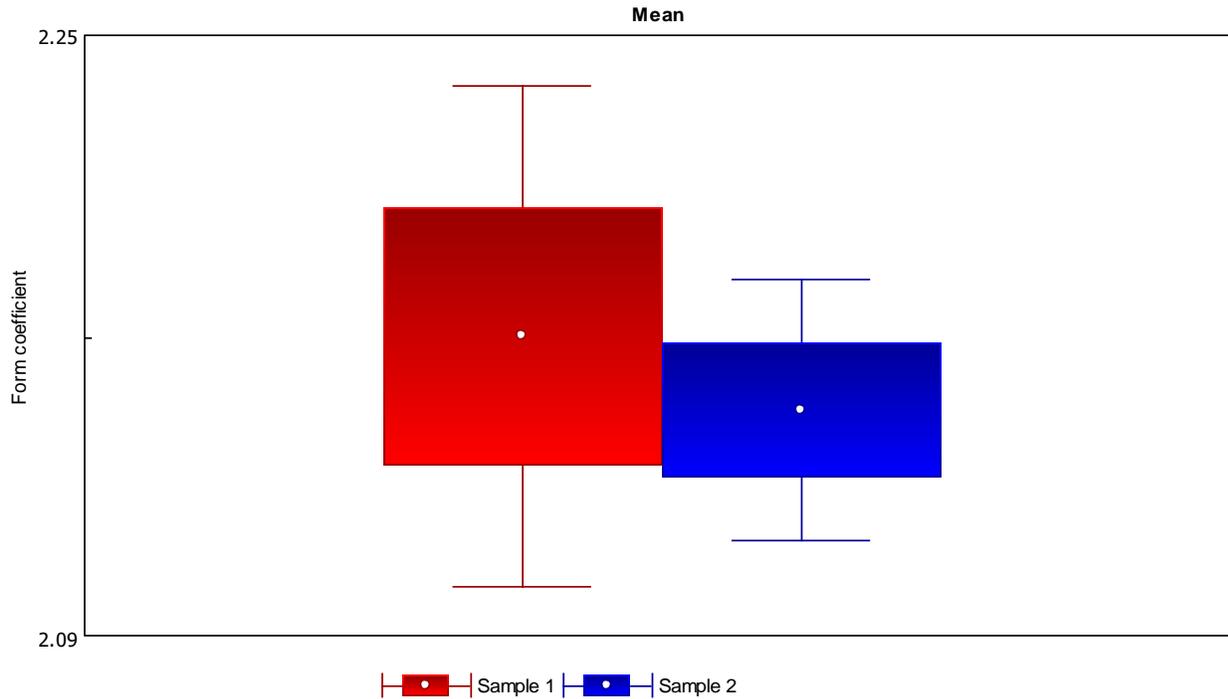
Sample 1:     *Baseline Mean + confidence interval*  
 Sample 2:     *Charged Sample Mean + confidence interval*

**Figure 5:** Form coefficient vs. Frames for the 2 water samples. The units of Form coefficient are arbitrary. The vertical bars represent the confidence interval for 10 data points.

Figure 6 present the statistical analysis comparing mean Form coefficient of the glow of each sample. Figure 6 shows that there is no significant difference between the mean Form coefficients of the glow of the 2 samples ( $p = 0.615$ ).

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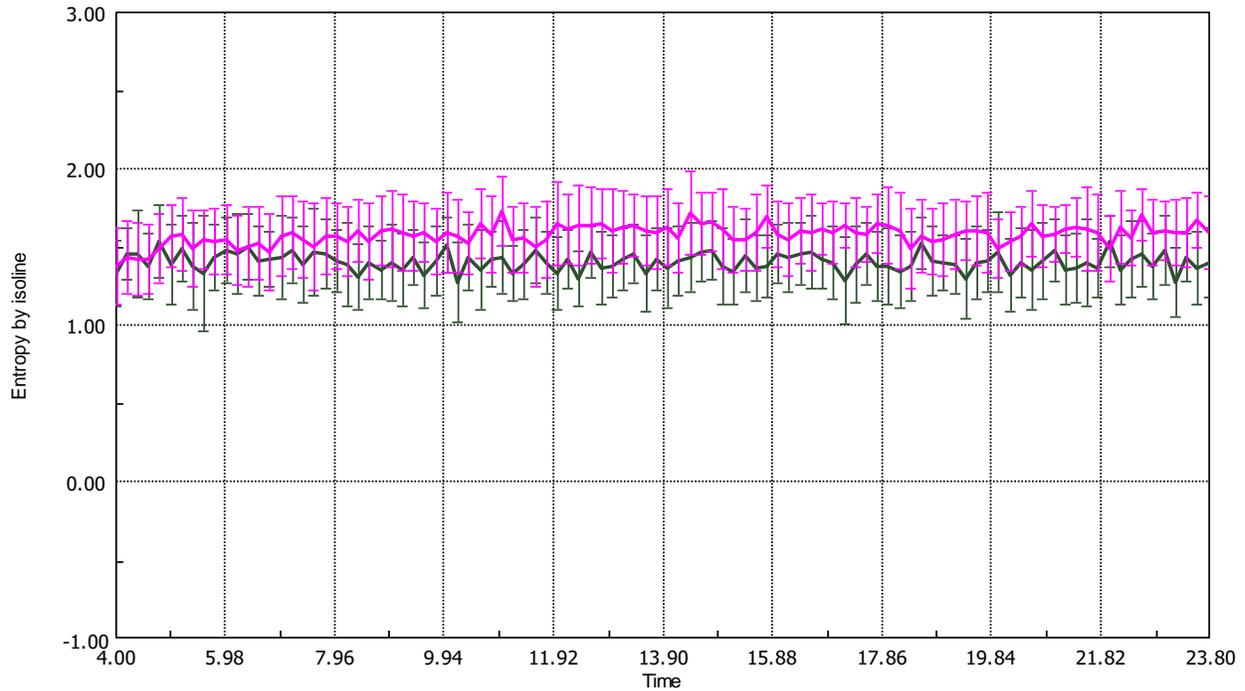
**Figure 6:** Statistical comparison between the mean Form coefficients of the two samples. By Student test the samples have statistically significant differences with a probability  $p = 0.615$ .

### *Entropy*

Figure 7 shows the time series of the 100 images analyzed for each of the 2 water samples (Sample 1 = Spring water = Baseline; Sample 2 = Spring water exposed to the light of the LifeShield laser = Charged Sample) for the Entropy of the glow around drops. The first 20 images were removed as per the protocol. Since 10 recordings were used for the analysis of each sample (the first 2 recordings done with the first drop were not used), each point on the graph is the average of 10 data points and the vertical lines represent the confidence intervals for these 10 data points at each frame. If the confidence interval of 2 samples do not overlap, the 2 samples can be considered statistically significantly different. In Figure 7, they clearly overlap.

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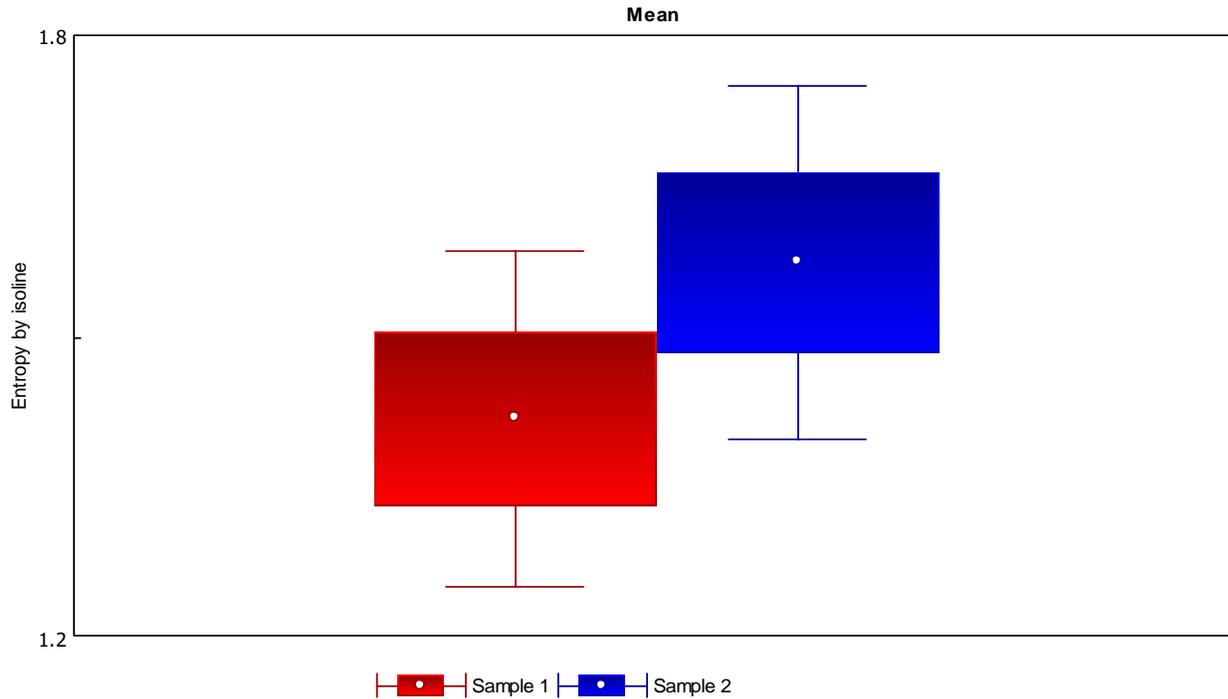
Sample 1: *Baseline Mean + confidence interval*  
 Sample 2: *Charged Sample Mean + confidence interval*

**Figure 7:** Entropy vs. Frames for the 2 water samples. The units of Entropy are arbitrary. The vertical bars represent the confidence interval for 10 data points.

Figure 8 present the statistical analysis comparing mean Entropy of the glow of each sample. As anticipated, Figure 8 shows that there is no statistically significant difference between the Entropy of the glow of the 2 samples ( $p = 0.224$ ).

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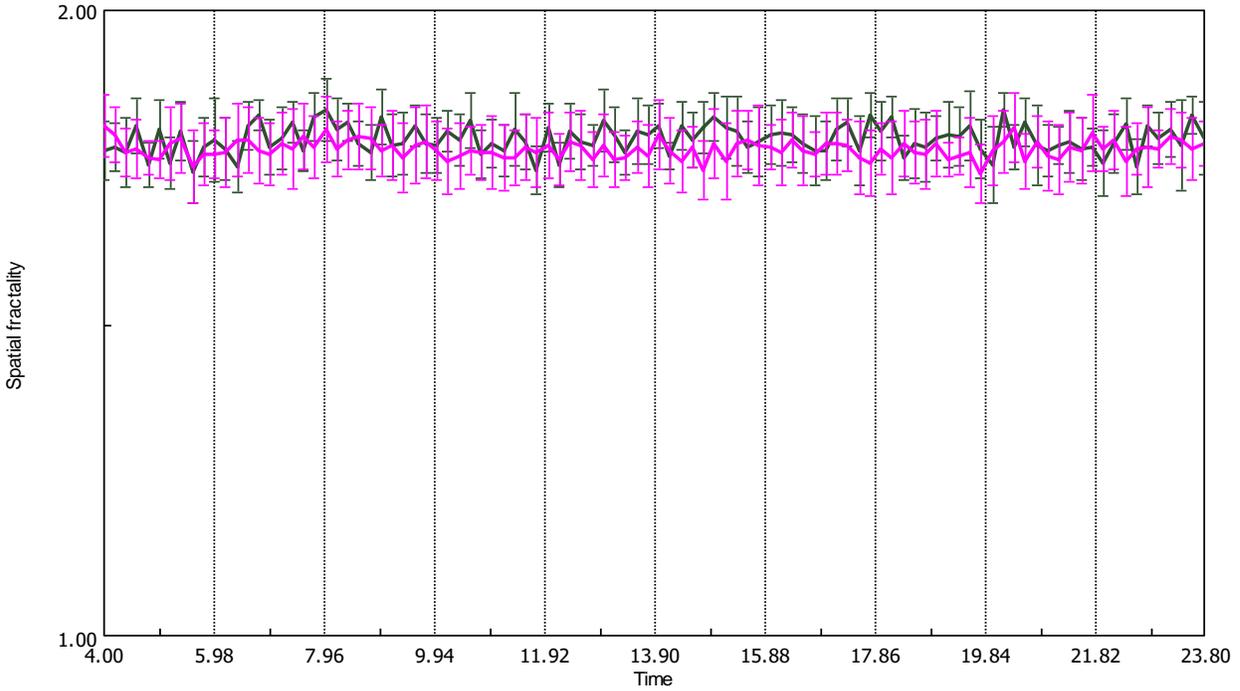
**Figure 8:** Statistical comparison between the mean Entropy of the two samples. By Student test the samples have no statistically significant differences with a probability  $p = 0.224$ .

#### *Spatial fractality*

Figure 9 shows the time series of the 100 images analyzed for each of the 2 water samples (Sample 1 = Spring water = Baseline; Sample 2 = Spring water exposed to the light of the LifeShield laser = Charged Sample) for the Spatial fractality of the glow around drops. The first 20 images were removed as per the protocol. Since 10 recordings were used for the analysis of each sample (the first 2 recordings done with the first drop were not used), each point on the graph is the average of 10 data points and the vertical lines represent the confidence intervals for these 10 data points at each frame. If the confidence interval of 2 samples do not overlap, the 2 samples can be considered statistically significantly different. In Figure 9, it is clear they overlap.

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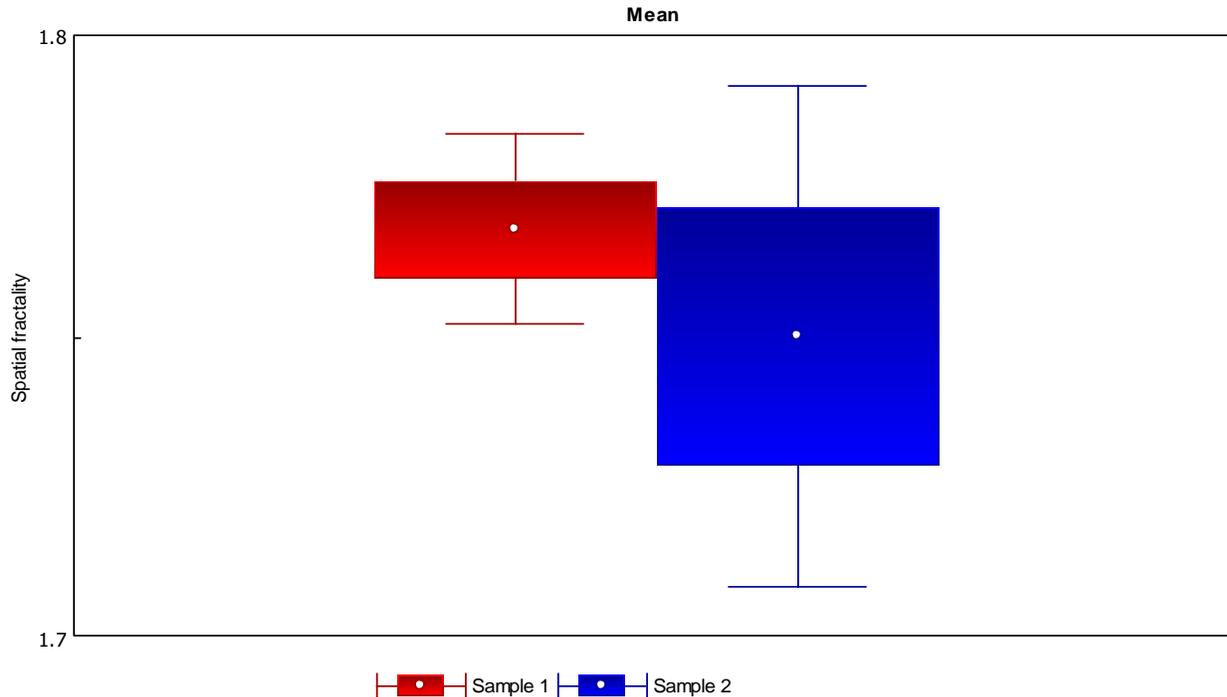
Sample 1:     *Baseline Mean + confidence interval*  
 Sample 2:     *Charged Sample Mean + confidence interval*

**Figure 9:** Spatial fractality vs. Frames for the 2 water samples. The units of Spatial Fractality are arbitrary. The vertical bars represent the confidence interval for 10 data points.

Figure 10 present the statistical analysis comparing mean Spatial fractality of the glow of each sample. As anticipated, Figure 10 shows that there is no statistically significant difference between the Spatial fractality of the glow of the 2 samples ( $p = 0.444$ ).

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**Figure 10:** Statistical comparison between the mean Spatial fractality of the two samples. By Student test the samples have no statistically significant differences with a probability  $p = 0.444$ .

### Discussion

GDV analysis showed no significant difference in Area, Form coefficient, Entropy and Spatial fractality between the charged and control spring water samples. We note a tendency for Area to be larger but not quite significant with  $p = 0.104$ . We note it as a parameter to keep in mind for future studies. A very significant increase in Average intensity was observed after exposing the spring water sample to LifeShield laser light. A larger Average Intensity indicates a larger number of electrons emitted by the sample and thus more electrons are available to be absorbed by the skin or any part of the body (if ingested) resulting in more electrons reacting with (neutralizing) positively charged compounds or molecules in the body (a more powerful antioxidant effect).



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#### Conclusion

GDV analysis showed no significant difference in Area, Form coefficient, Entropy and Spatial fractality between the spring water sample exposed to LifeShield laser light vs. a control spring water sample not exposed to laser light. A very significant increase in Average intensity was observed after exposing a spring water sample to LifeShield laser light. A larger Average Intensity indicates a larger number of electrons emitted resulting in more electrons being available to be absorbed by the body and so more electrons can react with positively charged compounds or molecules inside the body (larger antioxidant effect). The presence of more electrons also means better absorption of the water by the body (through the skin or when orally taken) and more energy in the water sample (the water is more “alive”).



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#### **APPENDIX A**

**Gaétan Chevalier, Ph.D.,**

#### **Biographical Sketch**

Dr. Gaétan Chevalier received his Ph.D. from the University of Montréal in Atomic Physics and Laser Spectroscopy. After 4 years of research at UCLA in the field of nuclear fusion, he became professor and Director of Research at the California Institute for Human Science (CIHS) for 10 years doing research on human physiology and electrophysiology. Dr. Chevalier is currently faculty member of CIHS, invited scientist in the Department of Developmental and Cellular Biology at UC Irvine and he has been Director of Research at Psy-Tek since June 2010.



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#### **APPENDIX B**

##### **Jessica Luibrand, BS, CCT, CCTT, Thermographer, Subtle Energy Researcher**

Jessica Luibrand received her Bachelor's degree from Grand Valley State University in Health Sciences while double minoring in Biology & Sociology. Being passionate about alternative and complementary medicine, she facilitated natural health & wellness seminars and discovered field of Thermography. Jessica moved to Florida to train under Dr. Carol Chandler, the 'Mother of thermography.' Jessica became a Certified Clinical Thermographer and Clinical Certified Thermography Trainer and trained doctors on how to use the camera, the software, and taught doctors how to incorporate Thermography into their practice. Jessica is the Chief Clinical Thermographer of Psy-Tek Subtle Energy Laboratory & subtle energy researcher.



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#### APPENDIX C

##### EPI/GDV

The Electro-Photonic Imaging (EPI) device, formerly known as Gas Discharge Visualization (GDV), is an advanced form of Kirlian photography developed by Dr. Konstantin Korotkov (Figure C-1). This technology produces an electric impulse, which generates a response of the object in the form of electron and photon emission. The glow of the photon radiation owing to the gas discharge generated from the electromagnetic field is captured by a digital camera and processed by sophisticated software that can perform sophisticated statistical analyses of the data looking and many different parameters such as brightness and size of the glow. Figure 2 shows an example of a gas discharge glow produce around a metal cylinder used to calibrate the EPI/GDV system.



**Figure C-1:** Photograph of GDV Camera pro version 3 designed for measuring drops of liquid. There is a special syringe holder that is placed on top of the black ring which can hold a drop from a syringe just above the glass plate where the measurement is performed.



**Figure C-2:** Example of EPI/GDV image captured from a drop of tap water.