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Study of the Consciousness Energy Healing Treatment and It's Effect on the Isotopic Abundance Ratio of Ascorbic Acid (Vitamin C)

Mahendra Kumar Trivedi¹, Alice Branton¹, Dahryn Trivedi¹, Snehasis Jana^{2,*}

¹Trivedi Global, Inc., Henderson, USA

²Trivedi Science Research Laboratory Pvt. Ltd., Thane (W), India

Abstract

Ascorbic acid is a water-soluble vitamin (Vitamin C) essential for both the plants and animals for the metabolic process. In this study, the liquid chromatography-mass spectrometry (LC-MS) analytical technique was used to characterize the structural properties and isotopic abundance ratio to evaluate the effect of the Trivedi Effect®-Consciousness Energy Healing Treatment on L-ascorbic acid compared to the control sample. The ascorbic acid sample was divided into control and treated parts. Only the treated part received the Trivedi Effect[®]-Consciousness Energy Healing Treatment remotely by a well-known Biofield Energy Healer, Mahendra Kumar Trivedi. The control and treated samples showed a chromatographic peak at retention time (R_t) 1.8 minutes exhibited the deprotonated molecular ion peak at m/z 175 [M-H]⁻ (calculated for C₆H₇O₆⁻, 175.02) in the mass spectra. The peak area of the treated sample (12817614.01) was significantly increased by 8.81% compared to the control sample (11779918.9). The LC-MS based isotopic abundance ratio of P_{M+1}/P_M (²H/¹H or $^{13}C/^{12}C$ or $^{17}O/^{16}O$) in the treated ascorbic acid was significantly increased by 23.22% compared with the control sample. Thus, ¹³C, ²H, and ¹⁷O contributions from $(C_6H_7O_6)^-$ to m/z 176 in the treated ascorbic acid were significantly increased compared with the control sample. The increased isotopic composition of the treated ascorbic acid might have altered the neutron to proton ratio in the nucleus. The changes in isotopic abundance could be due to changes in nuclei possibly through the interference of neutrino particles via the Trivedi Effect[®]-Consciousness Energy Healing Treatment. The increased isotopic abundance ratio and peak area of the treated ascorbic acid may increase the intra-atomic bond strength and its stability. This novel ascorbic acid after the Trivedi Effect[®]-Consciousness Energy Healing Treatment would be very useful to design more efficacious pharmaceutical formulations against scurvy, obesity, cardiovascular diseases, hypertension, rheumatoid arthritis, Alzheimer's disease, cancer, etc.

 Corresponding author:
 Snehasis Jana, Trivedi Science Research Laboratory Pvt. Ltd., Thane (W), India.

 Tel: +91- 022-25811234; Email:
 publication@trivedieffect.com

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Introduction

Ascorbic acid (Vitamin C) is required by both plants and animals for the essential metabolic process. Vitamin C is plenty available in citrus fruits and vegetables, red peppers, potatoes, milk, oysters, animal liver, etc. [1, 2]. Ascorbic acid converts to ascorbate at neutral pH or above pH 5 inside the cells and acts as a potent antioxidant [3-5]. Vitamin C act as a cofactor in many enzymatic and non-enzymatic reactions. It helps in the synthesis of carnitine, collagen, and neurotransmitters, wound-healing and prevents bleeding capillaries, metabolism of microsome, from and synthesis and catabolism of tyrosine in the body [2]. It is useful in the prevention and treatment of scurvy, hypertension, obesity, cancer, Alzheimer's disease, cardiovascular diseases, rheumatoid arthritis, etc. [3, 6-11]. Deficiency of ascorbic acid leads to scurvy, gingivitis, autoimmune disease, nose bleeding, weak immune system, slow wound healing, dry and splitting hair, leaky gut, swollen and painful joints, cancer, high blood pressure, stroke, gallbladder disease, atherosclerosis, etc. [7-9]. Low plasma concentrations of ascorbic acid are observed in the case of diabetes, infections, and smoking [12]. Vitamin C supplements are available for the prevention and treatment of vitamin deficiency diseases. The tolerable upper intake level of ascorbic acid is 2,000 mg/day, and excess of ascorbic acid in the body may cause indigestion, diarrhoea, headache, fatique, disturbed sleep, haemochromatosis, skin rashes, suppress the production of progesterone from the corpus luteum in healthy subjects [2, 13].

The limitation associated with ascorbic acid is that it degrades while cooking, processing, and cooking blended packaging, storage, of foods [13-15]. Exposure to air and temperature significantly affects the stability of ascorbic acid [14, 15]. Dissolution, absorption, bioavailability, and stability of ascorbic acid depend upon the physicochemical properties of any pharmaceutical compounds [17]. Improvement of the physicochemical properties of pharmaceutical and nutraceutical products is a challenging task [18]. But, it was observed that the Trivedi Effect[®]-Biofield Energy Healing Treatment has a significant impact on the physicochemical properties and



bioavailability of pharmaceutical / nutraceutical compounds [19-22]. The Trivedi Effect[®] is a natural and only scientifically established phenomenon in which an individual can harness this inherently intelligent energy and transmit it anywhere on the globe through the possible mediation of neutrinos [23]. "Biofield Energy" energy the electromagnetic field which exists surrounding the living beings, which transmit electromagnetic energy in the form of bio-photons generated by the continuous movement of the electrically charged particles like ions, cells, blood flow, etc. inside the body. Biofield Energy Healing specialists have the ability to harness the energy from the Universe and can transmit into any living and non-living object(s). This process is called Biofield Energy Treatment [24, 25]. Biofield based Energy Therapies have been reported with significant outcomes against various diseases, human health, and wellness [26]. The National Center of Complementary and Integrative Health (NCCIH) has been recognized and accepted Biofield Energy Healing treatment as a Complementary and Alternative Medicine (CAM) health care approach other therapies, medicines, along with and practices [27]. Most of the U.S.A. people have adopted these therapy [28]. The Trivedi Effect[®]-Consciousness Energy Healing Treatment has also reported with altering the physical and thermal properties of organic compounds, polymers, ceramics, and metals [29-34], improved productivity of crops [35], and healing cancer [36].

Trivedi Effect[®]-Consciousness The Energy Healing Treatment has a significant impact on the isotopic abundance of organic compounded [33, 34]. The study of stable isotope ratio analysis has various applications in different fields of science [37, 38]. The change in the isotopic abundance affects the physicochemical properties of the substance. The conventional liquid chromatography-mass spectrometry (LC-MS) can be useful for the study of isotopic abundance in low micromolar concentration with sufficient precision [38, 39]. The Trivedi Effect[®]-Biofield Energy Healing Treatment could be an economical approach for designing more efficacious pharmaceuticals formulations. Thus, the LC-MS was used to evaluate the impact of the Trivedi Effect[®]-Consciousness Energy Healing Treatment on the structural properties and



isotopic abundance ratio of L-ascorbic acid compared to the control sample.

Materials and Methods

Chemicals and Reagents

The L-ascorbic acid (vitamin C) powder sample was purchased from Alfa Aesar, India. Similarly, other chemicals like acetonitrile and ammonium acetate were purchased from Merck India.

Consciousness Energy Healing Treatment Strategies

The vitamin C test sample powder was divided into control, and Biofield Energy Treated parts. The control sample did not receive the Biofield Energy Treatment but was treated with a "sham" healer who did not have any knowledge about the Biofield Energy Treatment. However, the treated ascorbic acid was received the Trivedi Effect[®]-Consciousness Energy Healing Treatment remotely under standard laboratory conditions for 3 minutes by the renowned Biofield Energy Healer, Mahendra Kumar Trivedi, USA. After that, both the ascorbic acid samples were kept in sealed conditions and characterized using LC-MS analytical technique.

Characterization

Liquid Chromatography-Mass Spectrometry (LC-MS) Analysis

The LC-MS analysis of ascorbic acid was carried out with the help of LC-MS ThermoFisher Scientific, the USA equipped with an ion trap detector connected with a triple-stage quadrupole mass spectrometer. A reversed-phase Thermo Scientific Synchronis C18 (Length-250 mm X ID 4.6 mm X 5 micron), maintained at 25°C was used. The diluent used for the sample preparation was methanol and water. 10 μ L of the ascorbic acid solution was injected, and the analyte was eluted using 80% acetonitrile + 20% 5 mM ammonium acetate pumped at a constant flow rate of 1 mL/min (total run time 10 min). Peaks were monitored at 220 nm using the PDA detector. The mass spectrometric analysis was performed under -ve ESI mode.

The values of the natural isotopic abundance of the common elements are obtained from the literature [38, 40, 41]. The LC-MS based isotopic abundance ratio (P_{M+1}/P_M) for both the ascorbic acid samples were calculated using equation (1).



% Change in isotopic abundance ratio = $[(IAR_{Treated} - IAR_{Control})/ IAR_{Control})] \times 100$ (1)

Where $IAR_{Treated}$ = isotopic abundance ratio in the treated sample and $IAR_{Control}$ = isotopic abundance ratio in the control sample.

Results and Discussion

Liquid Chromatography-mass Spectrometry (LC-MS)

The chromatograms and mass spectra of both the control and Biofield Energy Treated samples of ascorbic acid are shown in Figures 1 and 2, respectively. The chromatographic peak was observed at the retention time (R_t) of 1.8 minutes in the case of both the samples (Figure 1). But the peak area of the Biofield Energy Treated sample (12817614.01) was significantly increased by 8.81% compared to the control sample (11779918.9). One of the previous studies of the Biofield Energy Healer Mahendra Kumar Trivedi on ascorbic acid supported the results, in which the particle size of the treated ascorbic acid was reduced by 8.23% (d_{10}) , 22.07% (d_{50}) , 11.64% (d_{90}) , and 15.81% $\{D(4,3)\}$ and the surface area was significantly increased by 15.38% as compared to the untreated sample [42]. This indicated that the solubility of the Biofield Energy Treated ascorbic acid was significantly increased.

The mass spectra of both the samples of ascorbic acid exhibited the mass of the deprotonated molecular ion $[M-H]^-$ peak at m/z 175 (calculated for C₆H₇O₆⁻, 175.02) along with other low molecular fragmentation peaks at 143, 115, 99, 87, and 70 for C₆H₇O₄⁻, C₅H₇O₃⁻, C₅H₇O₂⁻, C₄H₇O₂⁻, and C₄H₆O^{•-} (Figures 2 and 3). The data also supported by the published literature [43].

The LC-MS spectra of both the ascorbic acid showed the mass of the molecular ion peak at m/z 175 [M-H]⁻ (calculated for C₆H₇O₆⁻, 175.02) with 100% relative intensity. The theoretical calculation of P_{M+1} for ascorbic acid was presented as below:

P (13 C) = [(6 x 1.1%) x 100% (the actual size of the M⁺ peak)] / 100% = 6.6%

P (²H) = [(7 x 0.015%) x 100%] / 100%= 0.105%

 $P(^{17}O) = [(6 \times 0.04\%) \times 100\%] / 100\% = 0.24\%$

 $P_{M+1,}$ *i.e.* ¹³C, ²H, and ¹⁷O contributions from (C₆H₇O₆)⁻ to m/z 176 = 6.95%





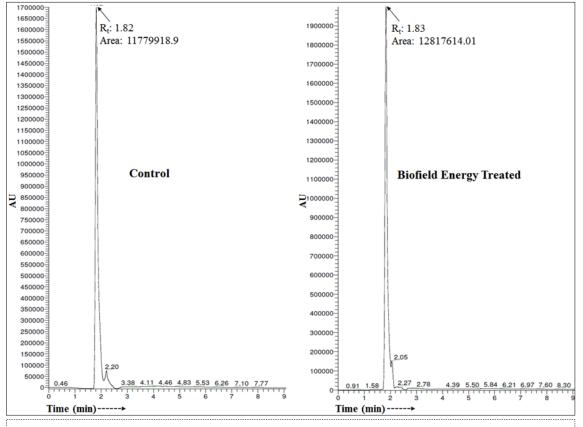


Figure 1. Liquid chromatograms of the control and Biofield Energy Treated ascorbic acid.

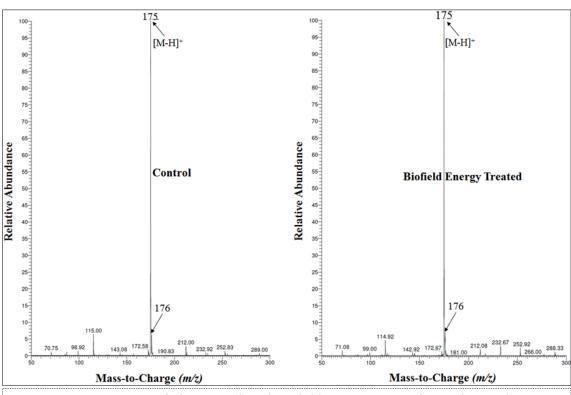
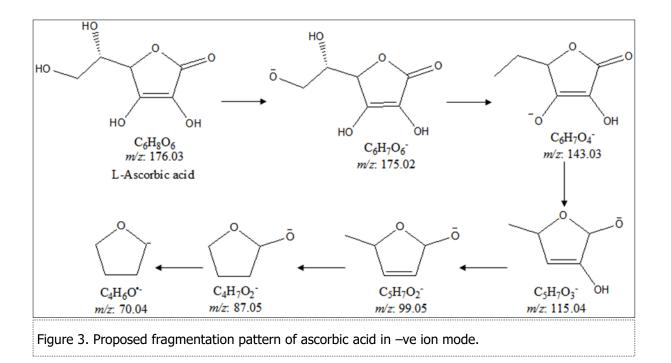


Figure 2. Mass spectra of the control and Biofield Energy Treated ascorbic acid at $\mathsf{R}_t 1.8$ minutes.







From the above calculation, it has been found that ¹³C and ¹⁷O have a major contribution to m/z 176.

The LC-MS based isotopic abundance ratio analysis P_M (m/z 175) and P_{M+1} (m/z 176) of both the samples were obtained from the observed relative peak intensities of [M⁺] and [(M+1)⁺] peaks, respectively in the mass spectra (Table 1). The percentage change of the isotopic abundance ratio (P_{M+1}/P_M) in the Biofield Energy Treated ascorbic acid was significantly increased by 23.22% compared to the control sample (Table 1). Therefore, the ¹³C, ²H, and ¹⁷O contributions from (C₆H₇O₆)⁻ to m/z 176 in the Biofield Energy Treated sample were significantly increased compared to the control sample.

The study confirmed the structure of the sample as ascorbic acid. The isotopic abundance ratio of P_{M+1}/P_M (²H/¹H or ¹³C/¹²C or ¹⁷O/¹⁶O) in the Consciousness Energy Healing Treated ascorbic acid was significantly increased compared to the control sample. The increased isotopic composition of the Consciousness Energy Healing Treated ascorbic acid might have altered the neutron to proton ratio in the nucleus possibly through the interference of neutrino particles *via* the Trivedi Effect[®]-Consciousness Energy Healing Treatment. The neutrinos have the ability to interact with protons and neutrons in the nucleus, which indicated a close relationship between neutrino

and the isotope formation [23, 38, 39]. The isotopic abundance ratios ²H/¹H or ¹³C/¹²C or ¹⁷O/¹⁶O would influence the atomic bond vibration of treated ascorbic acid [44]. The increased isotopic abundance ratio of the treated ascorbic acid may increase the intra-atomic bond strength, its physical stability. This novel ascorbic acid after the Trivedi Effect[®]-Consciousness Energy Healing Treatment would be very useful to design more efficacious pharmaceutical formulations against scurvy, obesity, cardiovascular diseases, hypertension, rheumatoid arthritis, Alzheimer's disease, cancer, etc.

Conclusions

The impact of the Trivedi Effect[®]-Consciousness Energy Healing Treatment on ascorbic acid was identified as significant in the isotopic abundance ratio and chromatographic peak area. The control and Consciousness Energy Healing Treated samples showed a major chromatographic peak at retention time (R_t) 1.8 minutes exhibited the deprotonated molecular ion peak at m/z 175 [M-H]⁻ in the mass spectra. The peak area of the Consciousness Energy Healing Treated ascorbic acid was significantly increased by 8.81% compared to the control sample. The LC-MS based isotopic abundance ratio of P_{M+1}/P_M (²H/¹H or ¹³C/¹²C or ¹⁷O/¹⁶O) in the Consciousness Energy Healing Treated ascorbic acid was significantly increased by 23.22% compared with the control sample. Thus, ¹³C, ²H, and ¹⁷O contributions from





Table 1. LC-MS based isotopic abundance analysis results in Biofield Energy Treated ascorbic acid compared to the control sample.		
Parameter	Control sample	Biofield Energy Treated sample
P _M at <i>m/z</i> 175 (%)	100	100
P _{M+1} at <i>m/z</i> 176 (%)	5.21	6.42
P _{M+1} /P _M	0.05	0.06
% Change of isotopic abundance ratio (P_{M+1}/P_M) with respect to the control sample		23.22
\mathbf{P} : the relative peak intensity of the parent melocular ion $[\mathbf{M}^+]$: $\mathbf{P}_{\mathbf{M}}$: the relative peak intensity of the		

 P_M : the relative peak intensity of the parent molecular ion [M⁺]; P_{M+1} : the relative peak intensity of the isotopic molecular ion [(M+1)⁺], M: mass of the parent molecule.

 $(C_6H_7O_6)^-$ to m/z 176 in the Consciousness Energy Healing Treated ascorbic acid were significantly increased compared with the control sample. The increased isotopic composition of the Consciousness Energy Healing Treated ascorbic acid might have altered the neutron to proton ratio in the nucleus. The changes in isotopic abundance could be due to changes in nuclei possibly through the interference of neutrino particles via the Trivedi Effect[®]-Consciousness Energy Healing Treatment. The increased isotopic abundance ratio and peak area of the Consciousness Energy Healing Treated ascorbic acid may increase the intra-atomic bond strength and its stability. This novel ascorbic acid after the Trivedi Effect®-Consciousness Energy Healing Treatment would be very useful to design more efficacious pharmaceutical formulations against scurvy, obesity, cardiovascular diseases, hypertension, rheumatoid arthritis, Alzheimer's disease, cancer, etc.

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