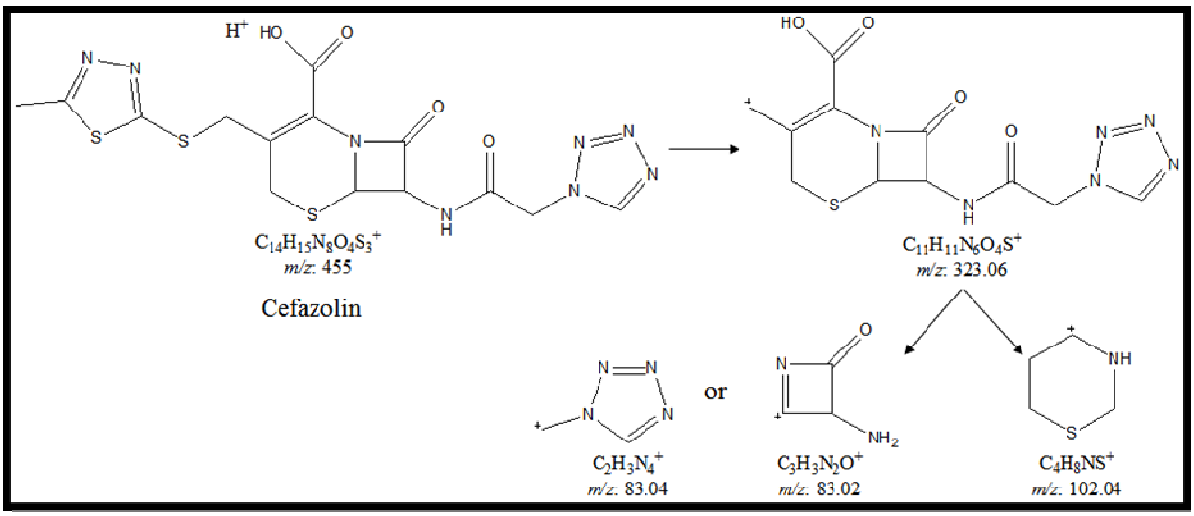


**Figure 3.** Proposed fragmentation pattern of cefazolin sodium.

The LC-MS spectra of both the samples showed the $[M+H]^+$ peak at *m/z* 455 with relative intensity of 100%. The theoretical calculation of $P_{M+1}$ for cefazolin was presented as below:

P ($^{13}C$) = [(14 x 1.1%) x 100% (the actual size of the $M^+$ peak)] / 100% = 15.4%

P ($^{2}H$) = [(15 x 0.015%) x 100%] / 100% = 0.225%

P ($^{15}N$) = [(8 x 0.4%) x 100%] / 100% = 3.2%

P ($^{17}O$) = [(4 x 0.04%) x 100%] / 100% = 0.16%

P ($^{33}S$) = [(4 x 0.08%) x 100%] / 100% = 0.32%

$P_{M+1,}$ i.e., $^{13}C$, $^{2}H$, $^{15}N$, $^{17}O$, and $^{33}S$ contributions from $(C_{14}H_{15}N_8O_4S_3)^+$ to *m/z* 456 = 19.31%

The calculated isotope abundance (19.31%) was closer to the experimental value 17.53% **(Table 1)**. Based on the above calculation, it has been observed that $^{13}C$ and $^{15}N$ have major contribution to *m/z* 456.

The isotopic abundance ratio of $P_{M+1}/P_M$ in the treated cefazolin was significantly increased by 67.66% compared with the untreated test sample **(Table 1)**. Hence, $^{13}C$, $^{2}H$, $^{15}N$, $^{17}O$, and $^{33}S$ contributions from $(C_{14}H_{15}N_8O_4S_3)^+$ to *m/z* 456 in the Biofield Energy Treated cefazolin were significantly increased with respect to the untreated test sample.

**Table 1**. LC-MS-based isotopic abundance ratio analysis of the Biofield Treated cefazolin in comparison to the untreated sample.

| **Parameter** | **Control Sample** | **Biofield Energy Treated Sample** |
|---|---|---|
| $P_M$ at *m/z* 455 (%) | 100 | 100 |
| $P_{M+1}$ at *m/z* 456 (%) | 17.53 | 29.39 |
| $P_{M+1}/P_M$ | 0.18 | 0.29 |
| **% Change of isotopic abundance ratio ($P_{M+1}/P_M$) as compared to control** | | 67.66 |

*$P_M$: 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*

## 2. Gas Chromatography-Mass Spectrometry (GC-MS) Analysis

Both the samples of cefazolin showed a sharp and intense chromatographic peak at the retention times of 14.24 min **(Figures 4 & 5)**. The mass spectra did not show the parent molecular ion peak of cefazolin, but the fragment ion peaks at *m/z* 132 and 56 were observed in both the case **(Figures 4 & 5)**. The mass peak intensities of the Biofield Energy Blessed cefazolin at *m/z* 56 and 132 were significantly increased by 130.15% and 188.4%, respectively than untreated cefazolin **(Table 2)**.

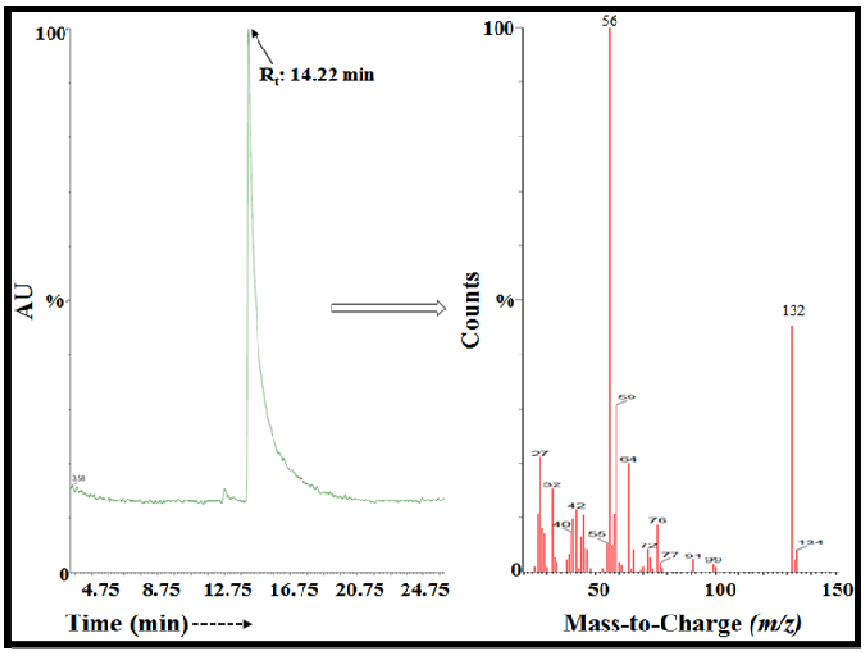


**Figure 4.** The GC-MS chromatogram and mass spectra of the control cefazolin sodium.

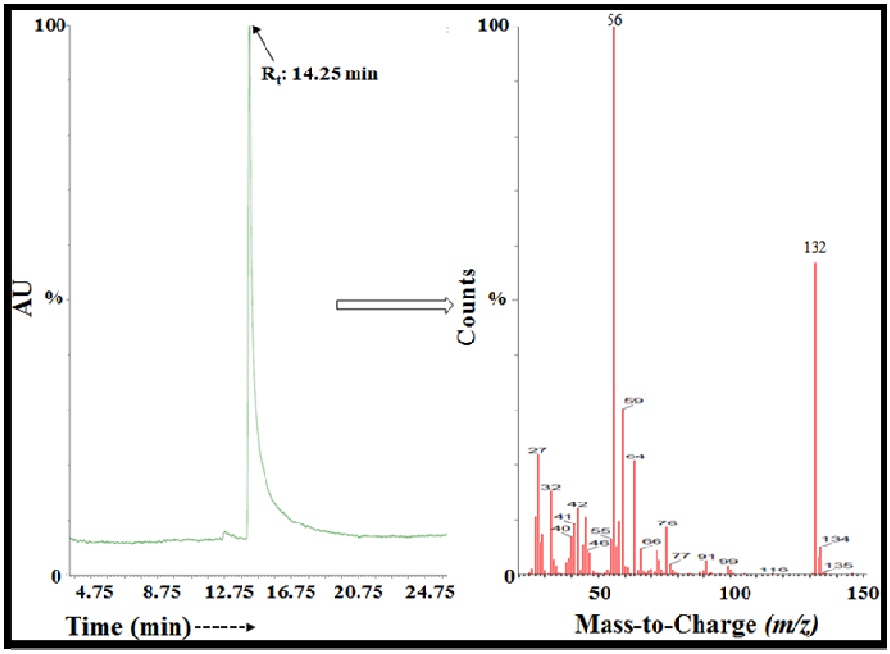


**Figure 5.** The GC-MS chromatogram and mass spectra of the Biofield Treated/Blessed cefazolin sodium.

**Table 2.** Mass peak intensities of the control and treated cefazolin sodium.

| *m/z* | Control | Biofield Energy Treated | % Change |
|---|---|---|---|
| **56** | $1.99e^8$ | $4.58e^8$ | 130.15 |
| **132** | $9.05e^7$ | $26.1e^7$ | 188.4 |

*m/z: mass to charge ratio*

The Biofield Energy Treated/Blessed cefazolin was significantly increased the isotopic abundance ratio of $P_{M+1}/P_M$ ($^2H/^1H$ or $^{13}C/^{12}C$ or $^{15}N/^{14}N$ or $^{17}O/^{16}O$ or $^{33}S/^{32}S$) than untreated test item. The increase in the isotopic abundance ratio in cefazolin might be attributed to the changes in nuclei, possibly through the interference of neutrino *via* the Trivedi Effect®-Consciousness Energy Healing Treatment [12]. Neutrino is the most abundant particle in the universe, which is a subatomic particle with no charge and small mass. These neutrinos have the ability to interact with protons and neutrons in the nucleus and isotopes formation [12,32,33]. The increased isotopic abundance ratios would influence the atomic bond vibration of treated cefazolin. The increased isotopic abundance ratio of the treated cefazolin may increase the intra-atomic bond strength, increase its physical stability [36]. Based on our previously published research article indicated that the Trivedi Effect®-Blessing form a new type of cefazolin sodium, which would offer better solubility, stability, and bioavailability compared to the control sample [37]. The new form of Biofield Energy Treated cefazolin sodium would be better to design more efficacious pharmaceutical formulations against urinary tract infections, respiratory tract infections, cellulitis, endocarditis, pneumonia, joint infection, biliary tract infections, blood infections, genital infections, and also prevent group B streptococcal disease at the time of delivery and before surgery, etc.

## CONCLUSIONS

Based on the study outcomes Biofield Energy Healing Treatment significantly affected the mass peak intensities and isotopic abundance ratios of cefazolin sodium. The LC-MS spectra of cefazolin at $R_t$ 4.7 min exposed the mass of the protonated molecular ion peak at *m/z* 455 $[M+H]^+$. The LC-MS-based isotopic abundance ratio of $P_{M+1}/P_M$ ($^2H/^1H$ or $^{13}C/^{12}C$ or $^{15}N/^{14}N$ or $^{17}O/^{16}O$ or $^{33}S/^{32}S$) in the Biofield Treated/Blessed cefazolin was significantly increased by 67.66% than untreated cefazolin. Thus, Biofield Treated or Blessed sample were significantly raised the $^{13}C$, $^2H$, $^{15}N$, $^{17}O$, and $^{33}S$ contributions from $(C_{14}H_{15}N_8O_4S_3)^+$ to *m/z* 456 with respect to untreated cefazolin. The GC-MS peak intensities of the Biofield Treated sample at *m/z* 56 and 132 were significantly increased by 130.15% and 188.4%, respectively than untreated cefazolin. The increased isotopic abundance ratio of the Trivedi Effect®-Blessed cefazolin may increase the intra-atomic bond strength and simultaneously improved its physical stability. The new form of Biofield Energy Treated cefazolin sodium would be better to design more efficacious pharmaceutical formulations against urinary tract infections, respiratory tract infections, cellulitis, endocarditis, pneumonia, joint infection, biliary tract infections, blood infections, genital infections, and also prevent group B streptococcal disease at the time of delivery and before surgery, etc.

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