Figure 2 shows experimental setup. At the very first moment subject was asked to relax just laying down and with eyes closed. During which EEG of the respective subject for more than two minutes was recorded. This recorded new data is an EEG signal before OM chanting. After recording first date, subject was asked to sit down in relax state with erect posture and closed eyes and were asked to chant OM mantra for as much time as they want. While chanting OM mantra, first we have to inhale smoothly and hold the breath; soon we have to release the air (exhale) by chanting OM. During chanting by respective subject, there were no light in room.Enviorment was made silent in order to maintain calm and peace which helped subject to concentrate fully on OM chanting. Again respective subject were asked to relax by laying down and eyes were closed. EEG was recorded for more than two minutes. This recorded data is an EEG signal after OM chanting. The recording was started after 12:00 PM at noon without lunch. The complete process of EEG recording of all subjects last for five to six hours on the same day.

**2.3 Higuchi Fractal Dimension**

In this approach, the author applied one-fractal dimension algorithms for feature extraction, namely Higuchi (Higuchi, 1988) as follows [9]. Author used this method as it is widespread in the EEG scientific literature and that will facilitate the comparison of our results.

We now consider a finite set of time series observations taken at regular intervals.

$$X(1), X(2), X(3), \ldots\ldots, X(N)$$

For given time series, we first construct a new time series, $X_k^m$ , defined as follows:

$$X_k^m ; X(m), X(m+k), X(m+2k), \ldots.., X(m+[\frac{N-m}{k}].k)$$

$$(m = 1, 2, \ldots.k)$$

Where [ ] denotes the Gauss' notation and both k and m are integers and k indicate the initial time and interval time, respectively. For a time interval equal to k, we get k sets of new time series. In the case of k=3 and N=100, three time series obtained by above process are described as follows:

$$X_3^1; X(1), X(4), X(7), \ldots\ldots.., X(100)$$

$$X_3^2; X(2), X(5), X(8), \ldots\ldots.., X(98)$$

$$X_3^3; X(3), X(6), X(9), \ldots\ldots.., X(99)$$

We define the length of the curve, $X_k^m$ as follows

$$L_m(k) = \{ ( \sum_{i=1}^{[\frac{N-m}{k}]} | X(m+ik) - X(m+(i-1).k) | ) \frac{N-1}{[\frac{N-m}{k}].k} \} / k$$

The term, $\frac{N-1}{[\frac{N-m}{k}].k}$ represent the normalization factor for the curve length of subset time series. We define length of curve for the interval k, <L (k) >, as the average value over k sets of $L_m(k)$

$$L(k) = \sum_{m=1}^{k} L_m(k)$$

If $< L(k) > \alpha k^{-D}$ , then the curve is fractal with the dimension D.

The reliability of the Higuchi algorithm was tested with synthetic signal ranged from 1.001 to 1.099 using Weierstrass functions with known FD. Synthetic data was produced using determistic Weierstrass cosine function given as follows:

$$W_H(t) = \sum_{i=0}^{M} \gamma^{-iH} \cos(2\pi\gamma^{i} t)$$

$$0 < H < 1$$

$$\gamma > 1$$

$$\gamma = 5$$