Gram-positive bacteria: *Staphylococcus aureus* (MTCC3160) and *Bacillus cereus* (MTCC2155) and Gram-negative bacteria : *Escherichia coli* (MTCC443) and *Klebsiella pneumoniae* (MTCC3384) which were revived in nutrient broth media and incubated at 37°C for 24 hours. Each bacterial culture was maintained at 37°C on nutrient agar plates and nutrient broth after every 48 hours of sub-culturing.

2.5 Nitric Oxide Scavenging Activity [10]

largest groups of phytochemicals in plants have amazing effects on humans and this has led to the development of powerful pain killer medications [14, 15] revealed the inhibitory effect of saponins on inflamed cells. Steroidal compounds present in *A. paniculata* Nees extracts are of importance and interest due to their relationship with various anabolic hormones including sex hormones [16] .

Table 1: Screening tests for secondary metabolites in solvents extracts of *A. paniculata* Nees

Figure 1: Zone of inhibition observed for chloroform extract against bacterial species

Figure 2: Zone of inhibition observed for methanol extract against bacterial species

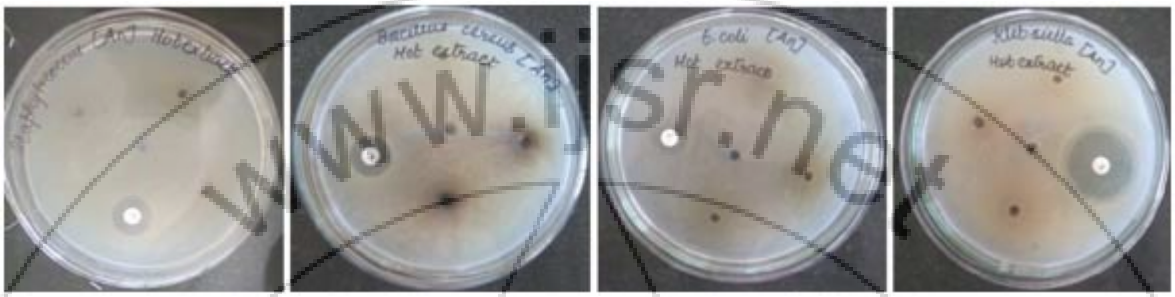

Figure 3: Zone of inhibition observed for distilled water extract against bacterial species

The results are also similar to the earlier workers [17] worked on *A. bracteolate* found that the highest antibacterial activity in chloroform and methanol extracts this is also supported by the earlier workers [18].

3.3 Antioxidant Activity Analysis: 1. Nitric oxide scavenging activity

The nitric oxide scavenging activity of *A. paniculata* Nees. was found to be dose independent. The methanol extract showed highest nitric oxide scavenging activity followed by distilled water extract and chloroform in both the plants.

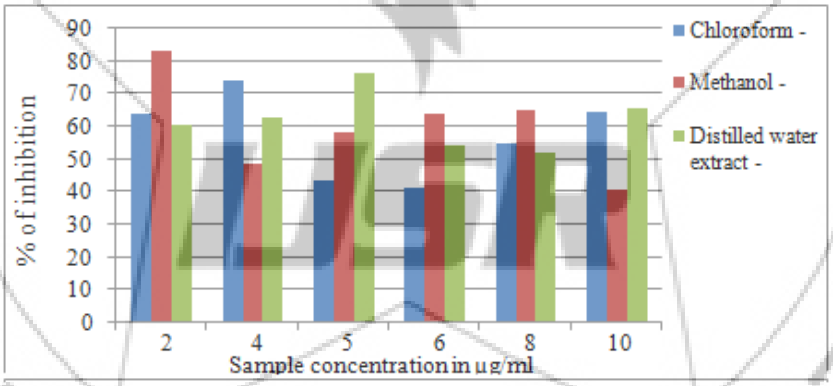

Figure 4: Graphical representation of % inhibition observed in nitric oxide scavenging activity

Fig 4 shows that in chloroform extract, the highest activity was found to be at 4µg/ml, in methanol extract at 2µg/ml and in distilled water extract at 5µg/ml. Also, the activity was found to be dose independent. Extracts of *A. paniculata* revealed the significant presence of antioxidative agents like flavonoids and tannins. Nitric Oxide (NO) scavenging assay is based on the scavenging ability of the extracts. The scavenging of NO was found to increase in dose dependent manner. Maximum inhibition of NO was observed in the extracts of highest concentration similar observations were found in *Ixora coccinea* [19].

3.4 Hydroxyl Radical Scavenging Activity

The results of hydroxyl radical scavenging activity exhibited activity in a dose independent manner. Percentage of inhibition was found in distilled water extract i.e. at 6µg/ml. Percentage of inhibition for *A. paniculata* was found to be highest at 2µg/ml level in methanol and distilled extract while no activity was found in chloroform extract (fig 5).

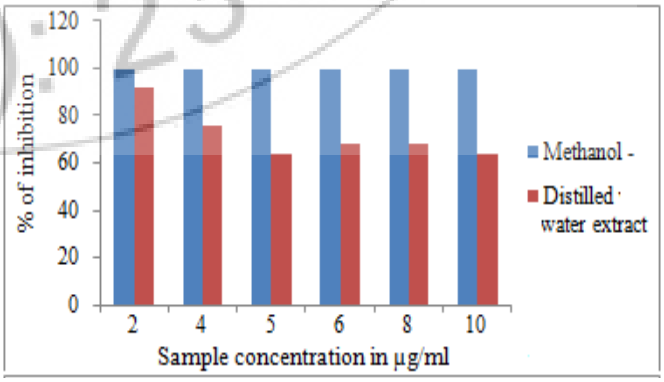

Figure 5: Graphical representation of % inhibition observed in hydroxyl radical scavenging activity

The hydroxyl radical scavenging activity in *Abelmoschus spp* L [20] and found the activity using different solvents . Similar observations were also observed in methanol extracts of *kyllinga nemoralis* which showed scavenging activity on hydroxyl radicals ranged from 22.48 to 57.24% (50-250 µg) [21] .

3.5 Reducing Power Assay

The highest reducing power assay was shown by chloroform extract at 6µg/ml and the least by methanol extract at 4µg/ml (fig 6). Similar observations of reducing power assay and free radical scavenging effectiveness was observed in *Rosmarinus officinalis* L., and found higher reducing power in water soluble formulations [22] whereas in our study we found that, the more reducing power activity in methanol extract.

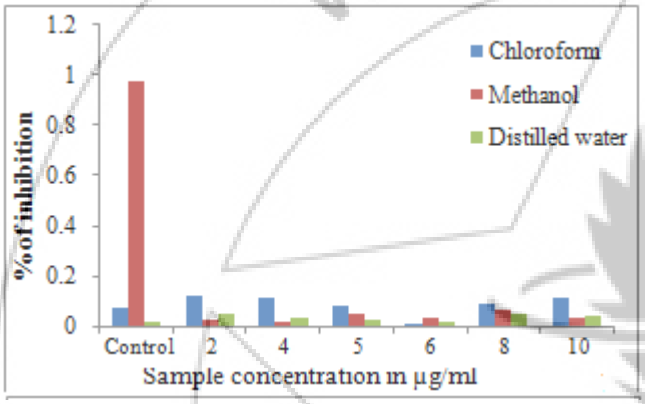

Figure 6: Graphical representation of % inhibition observed in reducing power assay

4. Conclusion and Scope for Future Work

The results show for the presence of phytochemicals which could be the responsible for the antioxidant property. The best results were obtained in Chloroform extract and showed noticeable effect in the reducing power capacity. Methanol extract showed highest effect in hydroxyl radical and nitric oxide scavenging assay. Further study is required to identity of the antibacterial compounds from the plant and also to determine their full spectrum of efficacy and it involves isolation and identification of chemical constituents.

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