CHAPTER 4

CONCLUSION

The study reveals that reductive alkylation solubilizes Neyveli Lignite. Alkyl iodides are found to be the best alkylating agents than the other halides. The study also indicates that Lignite does not have significant amount of ether linkage but anthracene-type molecules. The study also helps to conclude that potassium is the best reducing agent and that demineralisation adversely affects alkylation. It is possible to gain an understanding about the cross-linking in reductively alkylated Lignites with the aid of their thermograms. The $\bar{M}_W$ values of reductively alkylated Lignites show that fragmentation occurs during this reaction.

The infrared spectra are useful in seeing the effectiveness of reductive alkylation in Neyveli Lignites. The $^1$H-NMR spectra are helpful in arriving at the extent of aromatic character of Neyveli Lignite.