

Figure 8: (b) SEM image of uric acid crystal

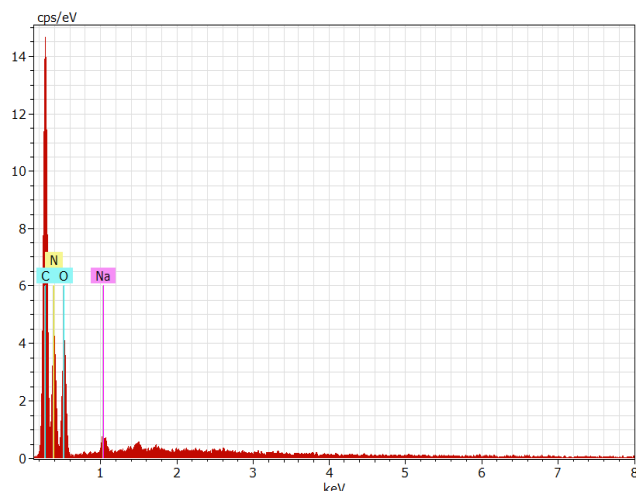


Figure 9: EDX Spectrum of Uric acid crystal

4. Conclusion

Uric acid crystals were grown using gel methods and were characterized by FT-IR, FT-Raman, Powder XRD and SEM with EDX. FT-IR, FT-Raman and powder XRD techniques confirmed the functional groups and crystalline phases of the uric acid crystals. SEM with EDX confirmed the surface morphology and their composition. This study to trial the growth of uric acid crystals using *Tribulus terrestris* and citrus limon. The aqueous extracts of *Tribulus terrestris* and citrus limon inhibit the growth of uric acid crystals.

5. Future Scope

The crystal deposition diseases such as kidney stone, urinary stone, gallbladder stone occur in human beings. In take herbal extracts to prevent the formation of urinary stones, kidney stone, gallbladder stone in future.

References

- [1] W.G.Robertson, M.Peacock and A.Hodgkinson. *J.ChronicDiseases* 32 (1979) 469.
- [2] W.G.Robertson, D.S.Scurr and C.M.Bridge. *J.Crystal Growth* 53(1981) 182
- [3] P.Dieppe and P.calvert, *Crystals and Joint Disease* (Chapman and Hall, London, 1983)

- [4] S.N.Kalkura and S.Devanarayanan, *J.Crystal Growth* 83 (1987) 446.
- [5] S.N.Kalkura and S.Devanarayanan, *J.Crystal Growth* 94 (1989) 810.
- [6] S.N.Kalkura and S.Devanarayanan, *J.Crystal Growth* 110 (1991) 265.
- [7] J.S.Shah, in: *Proc.2nd National Seminar on Crystal Growth*, Anna University, Madras, August 1984.
- [8] Y.M.F.Marickar and P. Koshy, *Scanning Microscopy* 1 (1987) 571.
- [9] Kalkura, S.N., E.K. Girija, M. Kanakavel and P.Ramasamy, 1995. *In vitro* crystallization of Spherulites of monosodium urate monohydrate. *J.Mater.Sci.Med.*, 6: 577-580. DOI:10.1007/BF00121281
- [10] Prasobh GR, Rev issue3, 2011. ikumar KG *Asian Journal of Pharmaceutical and Clinical Research* Vol.4, issue3, 2011.
- [11] V.S. Joshi, B.B Parekh, M.J.Joshi, A.B.Vaidya *Journal of Crystal Growth* 275(2005)e 1403-e1408.
- [12] Vimal S Joshi & Mihir J Joshi *Indian Journal of pure & Applied Physics* Vol.41, March 2003. pp.183-192.
- [13] K.Manjula, K.Pazanichamy, S.Kumaran, T.Eevera, C.DaleKeefe, and K. Rajendran *International Journal of Pharmacy and Pharmaceutical Sciences* Vol14, Suppl, 2012.

Author Profile

G. Vasuki doing Phd in department of Physics Annamalai University, Chidambaram, Tamilnadu, India

Dr. R. Selvaraju working as a Associate Professor Annamalai University, Chidambaram, Tamilnadu, India.