

SUGGESTIONS FOR FURTHER WORK

- 1) The foam promoting and stabilising efficiencies of surface active substances are sensitive to pH. Further work could be carried out to find out the pH at which the foaming efficiency of each surface active agent is at the maximum.

- 2) The preparation of castor oil surface active derivatives in laboratory scale has been accomplished in the above study and the suitability of the derivatives as surfactants in some applications in latex technology has also been identified. Further work must be carried out for their success of applications in local latex industry, focussing on the economy of their production in industrial scale.


CONCLUSIONS


The following conclusions may be drawn from the above study of surface activity of certain castor oil derivatives:

- 1) Both derivatives - castor soap (potassium ricinoleate) and sulphated castor oil function effectively like potassium oleate in stabilising NR latex.
- 2) Out of all these surfactants (potassium oleate, castor soap- potassium ricinoleate and sulphated castor oil), castor soap promotes foaming of NR latex most effectively.
- 3) Sulphated castor oil is not a suitable surfactant in the preparation of dispersions and emulsions.
- 4) Only the castor soap derivative aids emulsification of the liquid softener, similar to potassium oleate.



REFERENCES

1. Litzenberger, S.C. Guide for field crops in the tropics and the subtropics, Technical Assistant Bureau, Agency for International Development, Washington, D.C. 20523, 1974, p.212.
2. Salunke, D.K., Desai, B.B., Postharvest biotechnology of oil seeds, CRC Press Inc., Florida, 1986, p.165.
3. Swern, D., Baileys Industrial oil and fat products, Volume 2, John Wiley and Sons, New York, 1982, p.453.
4. Grayson, M.,  Kirk-Othmer Encyclopedia of Chemical Technology, Volume 5, John Wiley and Sons, New York, 1979, p.2-4,6-10.
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5. Weiss, E.A., Castor, Sesame and Safflower, Leonard Hill, London, 1971, p.286-288.
6. Binder, R.G., Applewhite, T.H., Kohler, G.O., Goldblatt, L.A., Chromatographic analysis of seed oil: fatty acid composition of castor oil, Western Regional Research Laboratory, Albany, California.
7. BS 650, Specification for castor oil (first quality), British Standards Institution, London, 1967 (1977).

8. Bikerman J., Foams: theory and industrial applications, Reinhold Publishing Co., New York, 1953, p.98-112.
9. De Vries, A.J., Rubber Chem. and Tech., 1958, 31, 1142.
10. Madge, E.W., Latex foam rubber, Maclaren, London, 1962, p.39.
11. Blackley, D.C., High polymer latices, Volume 1, Maclaren, London, 1966, p.19- 25, 35.
12. Parfitt, G.D., Dispersion of powders in liquids, Elsevier Applied Science Publishers, London, 1981, p.2-3.


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www.lib.mrt.ac.lk
13. Burton, D., Robertshaw, G.F., Sulfated oils and allied products, Chemical Publishing Co., New York, 1940, p.17-18.
14. Goel R.K., Small scale rubber industries, Small Business Publishers, Delhi, 1972, p.7.
15. Natural Rubber Technical Information Sheet, Latex Series L 33. The Malaysian Rubber Producers' Research Association, London, 1979.
16. ISO 35, Natural rubber latex concentrate : Determination of mechanical stability, International Organization for Standardization, Switzerland, 1989.

17. ISO 124, Rubber latices : Determination of total solids content, International Organization for Standardization, Switzerland, 1985.
18. ISO 125, Natural rubber latex concentrate : Determination of alkalinity, International Organization for Standardization, Switzerland, 1990.
19. Glicher. S., Paint Manuf., 1944, 14, 248.
20. Silverstein, R.M., Bassler, G.C., Morrill T.C., Spectrometric identification of organic compounds, John Wiley and Sons, New York, 1981, p.95-170.
21. Dawson, H.G., Rubber World, 1956, 135, 239.
22. Bechier P., Emulsion : theory and practice, Reinhold Publishing Co., New York, 1977, p.232.

