Summary

Attempts were made in this study to develop a method for the extraction and purification of quebrachitol from Hevea latex serum. Using ion exchange chromatographic techniques, we had reached, at the time of writing of this report, the stage of getting quebrachitol together with two other inositols (ie myo-inositol & L-inositol) which require to be separated from quebrachitol. We were able to reach this stage with both crepe rubber serum and skim latex serum. Skim serum was found to have a higher quebrachitol content than in crepe serum.

Carbohydrate content of 10 different Hevea clones was determined and it varied from 0.158% w/v in RRIC 100 to 1.94% w/v in PB 28/59. Carbohydrate content of young and mature Hevea leaves of 10 popular clones was also determined. Young leaves had a relatively lower carbohydrate level (range 0.025g/g dry wt in RRIC 102 - 0.044g/g dry wt in RRIC 121) than mature Hevea leaves (range 0.148g g dry wt in RRIC 102 - 0.179g/g dry wt in RRIC 101). It appears that Hevea leaves can be used as an alternative source of quebrachitol.

Results of this study clearly indicate that solar evaporation can be used for the initial volume reduction process of serum without affecting the serum constituents. A 83% volume reduction was obtained in 2 days with solar evaporation using black-painted aluminium pans.

Further work is in progress with a view to purifying the quebrachitol fraction obtained.