

**Characteristics of Rubber in Latex of Untapped  
Trees and in Branches of Trees in  
Regular Tapping \***

GEORGE F. BLOOMFIELD †

(Rubber Research Institute of Malaya)

The discovery that the latex in some untapped or long-rested trees, and in the branches of some trees in regular tapping, contains a high proportion of microgel enables important conclusions to be drawn as to the area of bark affected by tapping since when an untapped tree is brought into production the microgel latex contained in a considerable area of the tree is replaced by normal latex. Certain clonal species, however, notably P.B.186, do not contain very much microgel latex even when old untapped trees are examined. There is a tendency for the tapping of high yielding trees to affect the latex of a greater area of the tree than in low yielders.

Microgel latex has certain novel characteristics which facilitate its identification. Its rubber content can be brought into solution in benzene to give solutions of very low inherent viscosity. It can be shown that the rubber is not of low molecular weight, and the osmotic pressure of its solutions is extremely low. Rubbers obtained from microgel latex are very hard.

When a tree containing microgel latex is brought into tapping the inherent viscosity of solutions of its latex increases steadily while the rubber obtained from it becomes progressively softer. After about ten tappings the latex becomes normal.

When two tapping cuts are opened on the same tree the latex drawn from the upper cut gives much harder rubber than that from the lower cut although the inherent viscosities of rubber from the two cuts are not initially different. Differences in the proportion of mineral constituents are found in the latices from the two cuts, the bottom-cut latex containing more phosphorus and potassium but less magnesium than the top-cut latex.

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