E2-23: Preliminary chemical investigation of polysaccharide fraction from the bark of *Aegle marmelos*(Rutaceae)

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The tree *Aegle marmelos, (Sinh. Beli),* (Rutaceae) grows in Burma and India, and is cultivated in Sri Lanka. The roots, leaves, flowers and fruits are used in native medicine.

The dried powdered stem bark was sequentially extracted with methanol, distilled water, 1% NaOH and 10% KOH. Each extract was freeze dried, dissolved in water and the pH was adjusted to 4.5 by the addition of acetic acid. Excess MeOH was added to the resulting solution and the precipitate obtained (P_1) was separated. The supernatant liquid was concentrated and precipitated again with MeOH to give the polysaccharide fraction P_2. The remaining liquid was dialysed and freeze dried to give S_1.

Analysis of the polysaccharide fractions was carried out by sugar analysis, methylation analysis and NMR spectroscopy of both native and partially degraded samples. P_1 isolated from the 1% NaOH extract was composed of glucose while P_2 contained both arabinose and glucose. S_1 from the same extract had a (1->4) linked α-glucopyranosyl backbone with short side chains of arabinosyl residues. P_1 from the 10% KOH extracts was composed of a backbone of (1->4) linked β-glucopyranosyl residues, while P_2 was a mixture of 2 polysaccharides. One of the polysaccharides had a fully substituted arabinofuranosyl backbone while the second polysaccharide showed the presence of (1->4) linked α-glucopyranosyl residues.

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