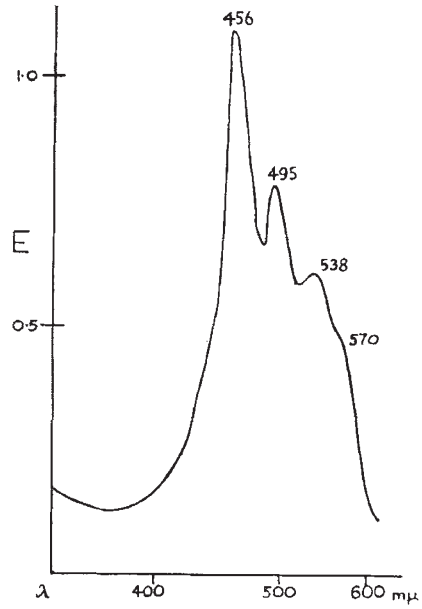

The absorption spectrum is not consonant with any of the commoner natural pyrroles. The behaviour of the zinc complex, however, is more suggestive of a pyrrolic material than of any other type of pigment, and in no way resembles an indigoid. Its occurrence in association with the blue pigment is therefore presumptive evidence in favour of the view expressed by Tixier and Lederer.

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Chromatographic Analysis of Eucalypt Kinos

KINOS are dark cellular accretions or astringent exudations containing phenolic substances. They are commonly seen as vitreous lumps on the bark, or as veins in the timber, of many eucalypts, and are locally known as 'gums'. The kinos of certain eucalypts have been examined by the Williams and Kirby's solvent ascent modification[1] of the paper partition chromatographic technique[2].

Butanol–acetic acid–water (40–10–50 per cent by volume) has been used successfully to resolve quebracho tannin[3], flavanoid pigments[4], etc., and also by me for the examination of the extracts of the timber of *Acacia decurrens*, Willd., *Sloanea woollsii* F. v. M., *Litsea reticulata* Benth. and *Alstonia scholaris* R.Br. This solvent gave poor resolution of the components of the eucalypt kinos, and phenol–water solvent, although more suitable, did not sharply resolve them.

Many new solvent mixtures were tried and their efficiency gauged by observing the relative positions and intensities of fluorescence of the components when the paper sheets were viewed under ultra-violet light. The most suitable solvents were found to be: (*a*) a mixture of equal volumes of phenol and 2*N* acetic acid to which 0·3 per cent sodium chloride was added; (*b*) a mixture of equal volumes of phenol and an aqueous solution 2*N* with respect to both acetic and hydrochloric acids; (*c*) ethanol–benzene–water (40–20–40 per cent by volume).

Solvents (*a*) and (*b*) gave comparable R_F values; but solvent (*b*) was more suitable for samples of kino which had been collected for some time, when some components were not so strongly fluorescent in the absence of hydrochloric acid. Solvent (*c*) resolved only those components which had a high R_F value in the phenol solvents.

The phenol was purified by a hitherto unreported method; it was agitated for a few minutes with 4 per cent of its weight of concentrated sulphuric acid–potassium dichromate mixture (90–10 per cent by weight), heated under reflux at about 150° C. for one hour, then poured off and distilled under vacuum using an efficient splash-head. After this treatment the phenol remained completely colourless for several months.

Relatively large amounts of kino (6–15 mgm.) were necessary to enable later detection of the components. The kino of *E. calophylla* R.Br. (marri) was resolved into at least twelve components (six fluorescent and six detected by Tollen's reagent), that of *E. corymbosa* Sm. into at least thirteen components (five fluorescent, seven by Tollen's reagent, one by both), that of *E. goniocalyx* F.v.M. into at least eleven components (four fluorescent, five by Tollen's reagent, one by both, and one carbohydrate by Partridge's reagent[5]).

Aromadrendrin[6] had an R_F value of 0·79 and a green fluorescence in ultra-violet light.

This work will be published more fully elsewhere

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Chemical Delignification of Flax Straw and Other Cellulosic Materials

THE retting of flax, which is a delignification and a degumming process brought about by micro-organisms, has been used in Europe for many years in the linen industry. Retting is usually applied to the straw of a variety of flax which has been developed and grown to give long stems. Moreover, the straw is harvested before lignification has proceeded too far.

In the United States of America, a large amount of flax is grown for its seed and not for its fibre, and consequently the straw forms a relatively large agricultural waste product. Investigations have been proceeding for several years in this University into the possible utilization of seed-flax straw. One object of these studies was to devise a chemical method of delignification or retting which could be applied to seed-flax straw in which lignification has proceeded to completion, so that waste straw could be used for