

# LETTER TO THE EDITOR

## The Chromatographic Behaviour of Aloin

SIR,—In a study involving the ability of bacteria to utilise sugars from several glucosides it became necessary to test for the presence of free sugars. Because of the low solubility of aloin in water and the highly coloured solutions produced it was necessary to use paper chromatographic procedures for this test. The liquid phase consisted of equal parts of pyridine, butanol, ethyl acetate and water. Under these conditions a deposit of aloin became reddish-violet in colour on contact with the liquid phase. Continuous irrigation of the deposit with this liquid system for 3 to 4 hours at 25° resolved the original spot into two, one yellow, the other red-violet. The yellow component had the greater mobility and advanced in a fairly solid front while the red-violet tailed. Hydrolysis of the glycoside had no effect on the chromatogram. It is assumed, therefore, that the colour is due to the anthraquinone nucleus.

Svensden and Jensen<sup>1</sup> showed that a red-violet material is produced when aloin is warmed in the air; the test for sugar was positive but that for anthranol or anthraquinone was negative. Jaminet<sup>2</sup> uses paper chromatographic procedures to classify aloe resins according to botanical and geographical origin. All the details are not available to us but the investigator indicates that after exposure of aloin to ammonia, spots are formed at  $R_f$  0.69 (bright yellow) and 0.56 (intense sky blue). Paris and Durand<sup>3</sup> use a photometric determination for aloin which is based on an electrophoretic separation. It is known that aloin will form colours under certain conditions but the conditions and colours reported are not those which we have found.

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### REFERENCES

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2. Jaminet, *J. Pharm. Belg.*, 1957, **12**, 87; through *Chem. Abstr.*, 1957, **51**, 12431C.
3. Paris and Durand, *Z. anal. Chem.*, 1958, **161**, 228.