Notes

A method for the preparation of a permanent record of thin-layer chromatoplates

An accurate and permanent record may be obtained from the powdery surface of the STAHL thin-layer chromatoplate by the use of some of the common letter copying machines in current use today. This addition to the thin-layer chromatography technique has proved quite satisfactory and eliminates free hand sketches or other time-consuming or destructive methods of recording the locations of the spots on the chromatoplates. We place the developed chromatoplate on the negative paper and expose it in the photocopier (diffuse transfer process*). A negative and a positive print are obtained which show all the detail visible on the developed chromatoplate. In some cases where the developing agent would have an adverse effect on the silver halide negative, a sheet of cellophane placed between the chromatoplate and the negative will give good results. Short exposure times give the most contrast. Care must be used in placing the chromatoplate so that the thin layer is undisturbed. With care more than one print can easily be obtained from the same chromatoplate. In some cases the negative will be of better quality than the positive, and can be used, but it is the negative-image of the chromatoplate. Details such as solvent front and ultraviolet fluorescing spots can more accurately be placed on the photocopy. The calculation of the R_F values for each component may be recorded directly on the print.

The Hastings Foundation,
The Charles Cook Hastings Home,
Altadena, Calif. (U.S.A.)

HORACE R. GETZ
D. DAVID LAWSON

Received June 5th, 1961

* Photorapid, manufactured by Bürogeräte AG, Zürich, Switzerland, Pronto model with Gevacopy paper GS, $8^1/_2 \times 11$ inches.

Recording thin-layer chromatographic data

With the advent of the useful technique of thin-layer chromatography (TLC), this laboratory became faced with the problem of recording the results of TL chromatograms. Clearly this can be done in terms of R_F value, but for technique development

work it is often much more desirable to possess a visual record of past chromatographic runs. Photography was tried, but the results were not very satisfactory, even when great (time consuming) care was taken. We then successfully used one of the copying systems in use in the duplicating section of this Department.

The particular machine is a Xerox 914 office copier made by Rank Xerox Ltd., which works by exposing a charged plate to the material to be copied; the plate after exposure holds a charged mirror image of the subject matter. Developer powder passed over the plate adheres to the image and transfer of that image can then take place to a paper. The process is fully automatic and takes about 30 seconds in all.

Chromatoplates are normally developed in an iodine vapour bath in this laboratory, and the spots obtained are unfortunately not sufficiently intense for the machine to record. However, if every spot is marked either with a stylus, or by scraping away the silica at the spot, the machine will copy the "hole" as a black ring/spot on a white background. Normally it takes a minute or so to prepare the plate and as indicated above only 30 seconds to copy it. If necessary the machine will, of course, produce several copies.

An example is shown in Fig. 1 of a typical copied chromatogram suitable for filing or insertion in a report.

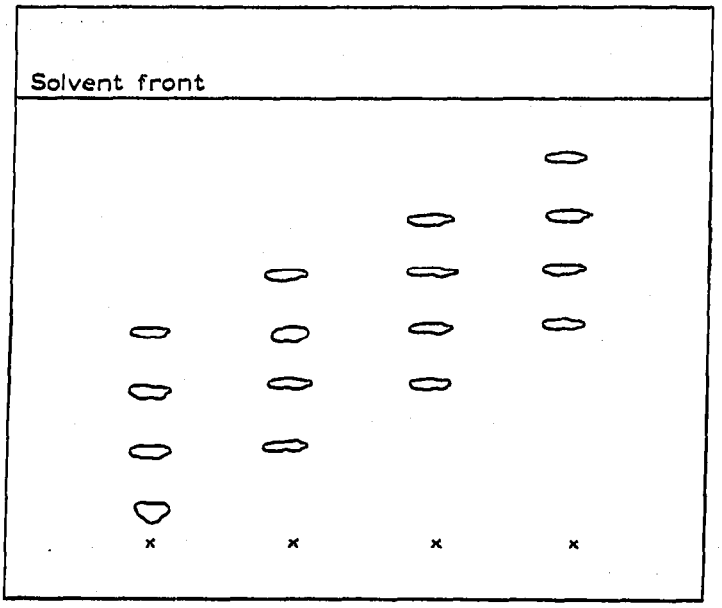

Fig. 1. Documentation of a typical chromatoplate.

We wish to thank Miss M. TURNER for advice and assistance in duplicating and the Directors of Unilever for permission to publish this note.

Unilever Research Laboratory,
Port Sunlight, Ches.
(Great Britain)

J. HILTON
W. B. HALL

Received October 1st, 1961