die mindestens 3 Stunden vor der Chromatographie in das Gefäss eingebracht wurde. Bei aufsteigender Chromatographie trennte sich B_{12} bereits innerhalb von 1–1 1/2 Stunden vollkommen vom Faktor III und den anderen Begleitstoffen.

Die experimentell gefundenen R_F-Werte einiger Vitamin B_{12} Derivate sind folgende:

Vitamin B_{12}	0.57
Faktor III	0.10
Faktor E	0.84
Faktor B	0.14

Analytisches Laboratorium der Firma Gedeon Richter A. G.,
Budapest (Ungarn) J. BAYER

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A simple inexpensive set-up for the detection of ultraviolet absorbing substances*

Several kinds of equipment for the detection of substances absorbing in the short wave ultraviolet range have been described[1–8]. Low pressure mercury discharge lamps combined with a suitable filter are commercially available (Mineralight, Chromatolite, etc.). The advantage of the set-up to be described here lies in the simplicity of its construction, low cost and some geometric properties facilitating its use.

The set-up contains a fluorescent screen and short wave U.V. source. The screen is made of a thin layer of a fluorescent substance. Among the various materials tried, the best results were achieved with magnesium tungstate (bluish fluorescence) and a halophosphate luminophor containing Ca, Mn, and Sb chloro- and fluorophosphates and exhibiting pink fluorescence. While the former has the advantage of a brighter fluorescence, the latter has a more specific excitation spectrum which does not respond to long-wave U.V. radiation.

In order to obtain a uniform thin layer it has been found advantageous to spray the fluorescent substances by means of a chromatographic atomizer upon a wet

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fixed but undeveloped X-ray film. The film is then stuck to a glass plate and covered with a thin polyethylene foil in order to protect it against scratching. The glass plate is fixed in a frame which may be screwed to the desk. The slope of the screen and its position above the table were chosen so as to permit an easy observation of the chromatogram and delineation of the contours of the spots from below by a pencil (Fig. 1).

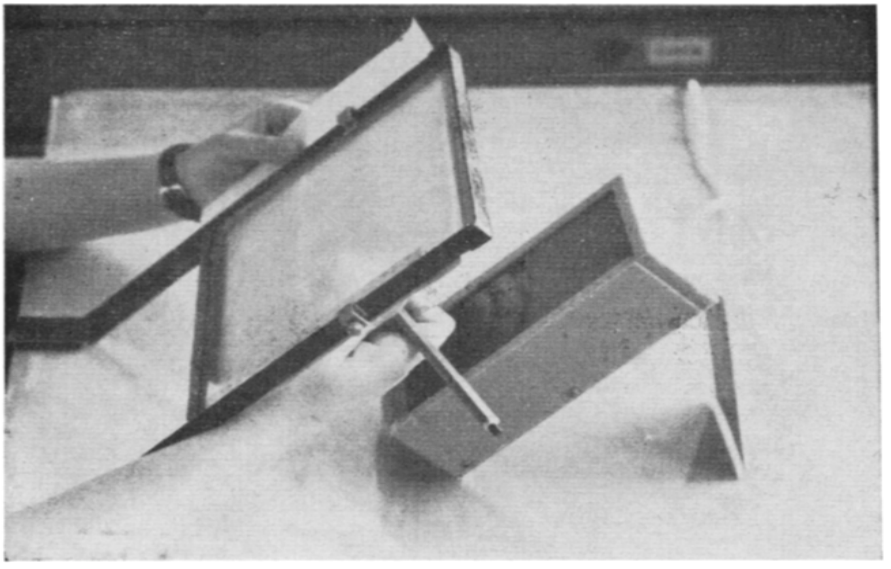

Fig. 1. A simple inexpensive set-up for the detection of U.V. absorbing substances.

The source consists of a low pressure discharge tube TUV Philips 6 W and a filter UG 5 (Dia Glaskeramik, Jena, GDR).

This tube needs no choke and may be attached directly to the main power supply of 220 V. In combination with the UG 5 filter it emits a practically monochromatic radiation of the wavelength 2537 Å. The source is situated on an inclined base (*e.g.* an N-shaped metal sheet) parallel with the plane of the screen.

With this apparatus adenine nucleotides may be detected on paper chromatograms or electrophoregrams in amounts down to tenths of a μg.

Institute of Medical Chemistry,
Medical Faculty, Charles University,
Hradec Králové (Czechoslovakia)

Z. STRÁNSKÝ

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