

### Key for marking the colour of fluorescent spots on chromatograms

The colours of fluorescent spots are of importance for many purposes for the identification of various compounds, especially the phenolics, on both paper and thin-layer chromatograms.

At the Balsgård institute, a special method of thin-layer chromatography has been developed, suitable for application to studies on plant breeding and genetics, and biochemical systematics<sup>1,2</sup>.

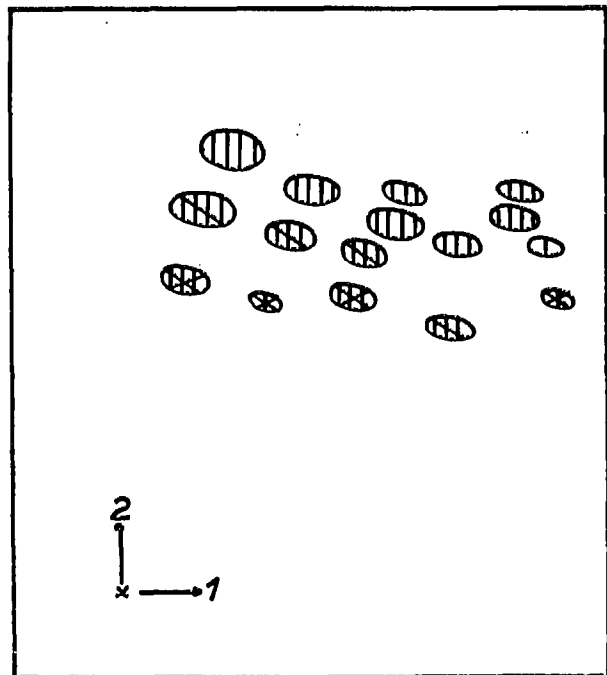


Fig. 1. Example showing a thin-layer plate with fluorescent yellow spots in tea leaves. The yellow Kaempferol glycosides may be distinguished from the orange-yellow spots corresponding to Quercetin and the brownish yellow ones of the Myricetin family. Solvents are: (1) 2% formic acid and (2) amyl alcohol-acetic acid-water (10:6:5). Sprayed with aluminum chloride. Cellulose powder MN 300.

For marking the fluorescent spots on the chromatograms under ultraviolet irradiation a special system has been adopted, which is summarized in the key presented here. This system is easy to remember and still permits a great variety of different colours to be represented. Weak differences in hues may also be indicated as shown in Fig. 1.

#### General rules

(1) Spots are outlined with solid or stippled lines according to their intensity and distinctness:

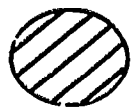


Intensive,  
clear spot



Weak spot with  
diffuse outlines

(2) Spots are hatched according to their colour with the main colours in the following way:



Blue



Yellow



Red

Intermediate colours are obtained by "mixing":



Green



Purple



Orange

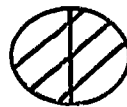
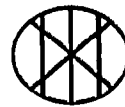


Brown

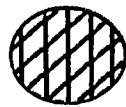
Further hues may also be indicated, *e.g.*:



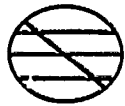
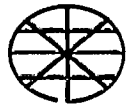
Violet

Greenish  
yellowReddish  
yellowGreenish  
blueBrownish  
yellow

Chroma may be indicated by means of various density of hatching, *e.g.*:

Low:  
Greenish  
whiteHigh:  
Saturated  
green

U.V.-absorbing spots are marked with horizontal lines:

General  
markingColoured dark  
spots, *e.g.*:  
Reddish darkBrownish  
dark

Simple rule for memory:



Blue



Yellow



Red

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1 H. JAWORSKA AND N. NYBOM, *Botaniska Notiser (Lund)*, in the press.  
2 N. NYBOM, *Proc. Balsgård Fruit Breeding Symp. 1964*, in the press.

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