Solvent system	Drug, alkaloids
Ethyl acetate–ethylmethyl ketone–formic acid–water (50:30:10:10)	Fumariae herba, Corydalidis rhizoma
Cyclohexane–chloroform–glacial acetic acid (45:45:10)	Berberine- and protoberberine-type alkaloids
Chloroform–methanol–glacial acetic acid (47.5:47.5:5)	Genistae herba, Sarothamni herba, Spartii scop. flos
n-Butanol–glacial acetic acid–water (40:40:10)	Catharanthus alkaloids

1.3 Detection

- UV-254 nm Pronounced quenching of some alkaloid types such as indoles, quinolines, isoquinolines, purines; weak quenching of e.g. tropine alkaloids
- UV-365 nm Blue, blue-green or violet fluorescence of alkaloids, e.g. Rauvolfiae radix, Chinae cortex, Ipecacuanhae radix, Boldo folium. Yellow fluorescence, e.g. colchicine, sanguinarine, berberine
- Spray reagents (see Appendix A)

– Dragendorff reagent (DRG No.13)
The alkaloids appear as brown or orange-brown (vis.) zones immediately on spraying. The colour is fairly stable. Some types such as purines or ephedrine need special detection. The colour of alkaloid zones can be intensified or stabilized by spraying first with Dragendorff reagent and then with 10% sodium nitrite solution or 10% ethanolic sulphuric acid.

– Iodoplatinate reagent (IP No.21)
Directly after spraying, alkaloids appear as brown, blue or whitish zones (vis.) on the blue-grey background of the TLC plate.

– Special detection

Iodine–potassium iodide–HCl reagent (No.20)	→ purines
Iodine $CHCl_3$ reagent (No.19)	→ emetine, cephaeline
Marquis reagent (No.26)	→ opium alkaloids
van Urk reagent (No.43)	→ secale alkaloids
Ninhydrine reagent (No.29)	→ ephedrine
10% ethanolic H_2SO_4 (No.37)	→ china alkaloids

1.4 Drug List

The chromatograms of the specific alkaloid drugs are reproduced according to their alkaloid types (Fig. 1–30).