

Influence of Organic Solvents on the Simultaneous Serum Determination of Bromperidol and Haloperidol

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INTRODUCTION AND AIM

Mixtures of organic solvent in the method development may be desired to improve the separation of the different substances. Acetonitrile and Methanol differ in characters. However, finding the correct mixable ratio will positively influence the separation of the substances and will thus improve the optimisation of the individual therapy.

METHODE AND MEASUREMENT

The chromatographic separation was performed with a C18 reversed-phased column and with the help of an UV detector. The standard stock solutions were prepared by dissolving the substances in methanol. The solutions were spiked in serum and then injected in the HPLC-System for their chromatographic measurements.

RESULT

The separation of Bromperidol and Haloperidol were successfully done in the ration 3:1 (fig. 4) of the two organic solvents and they yielded an encouraging result.

a. = Haloperidol b. = Bromperidol

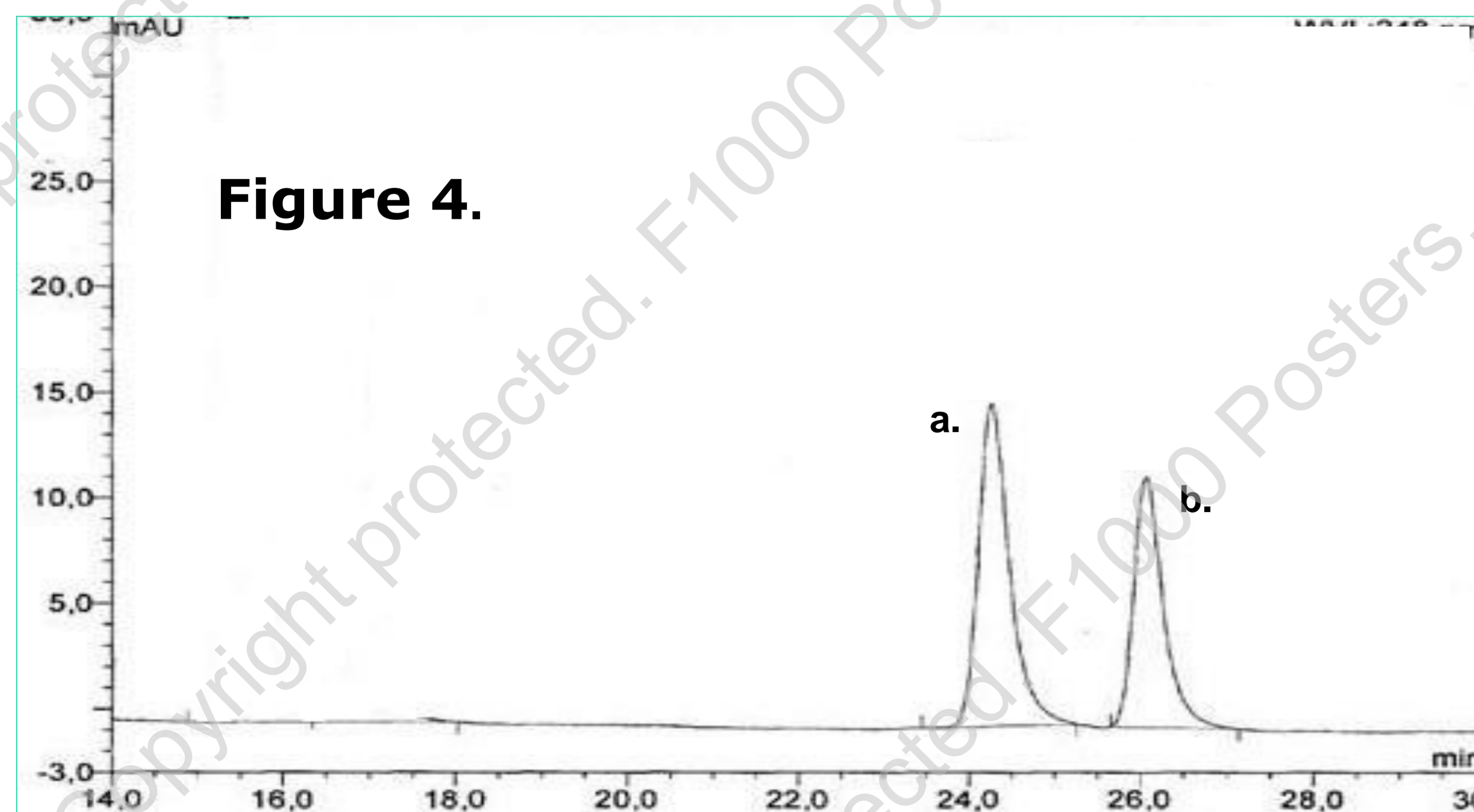


Figure 1.

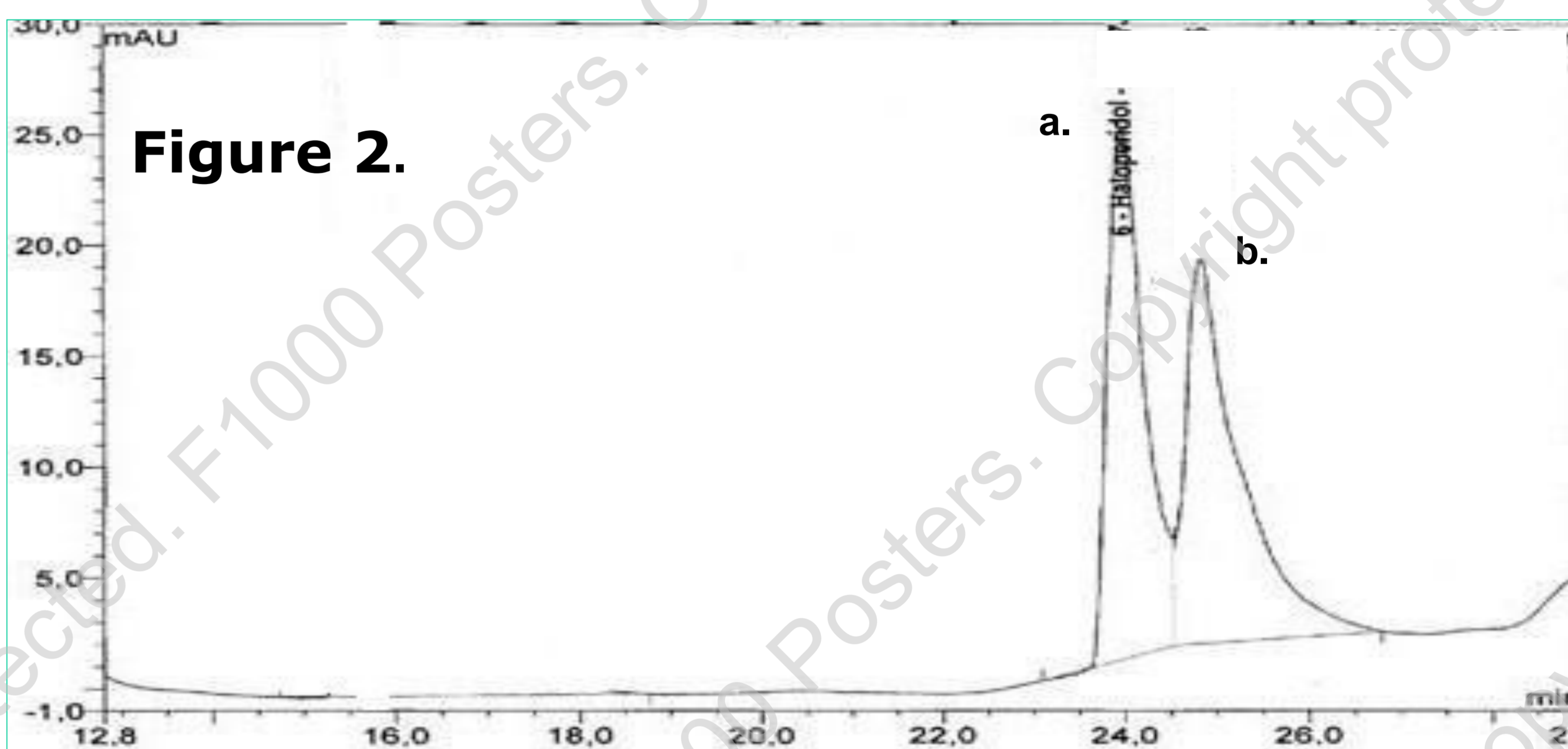


Figure 2.

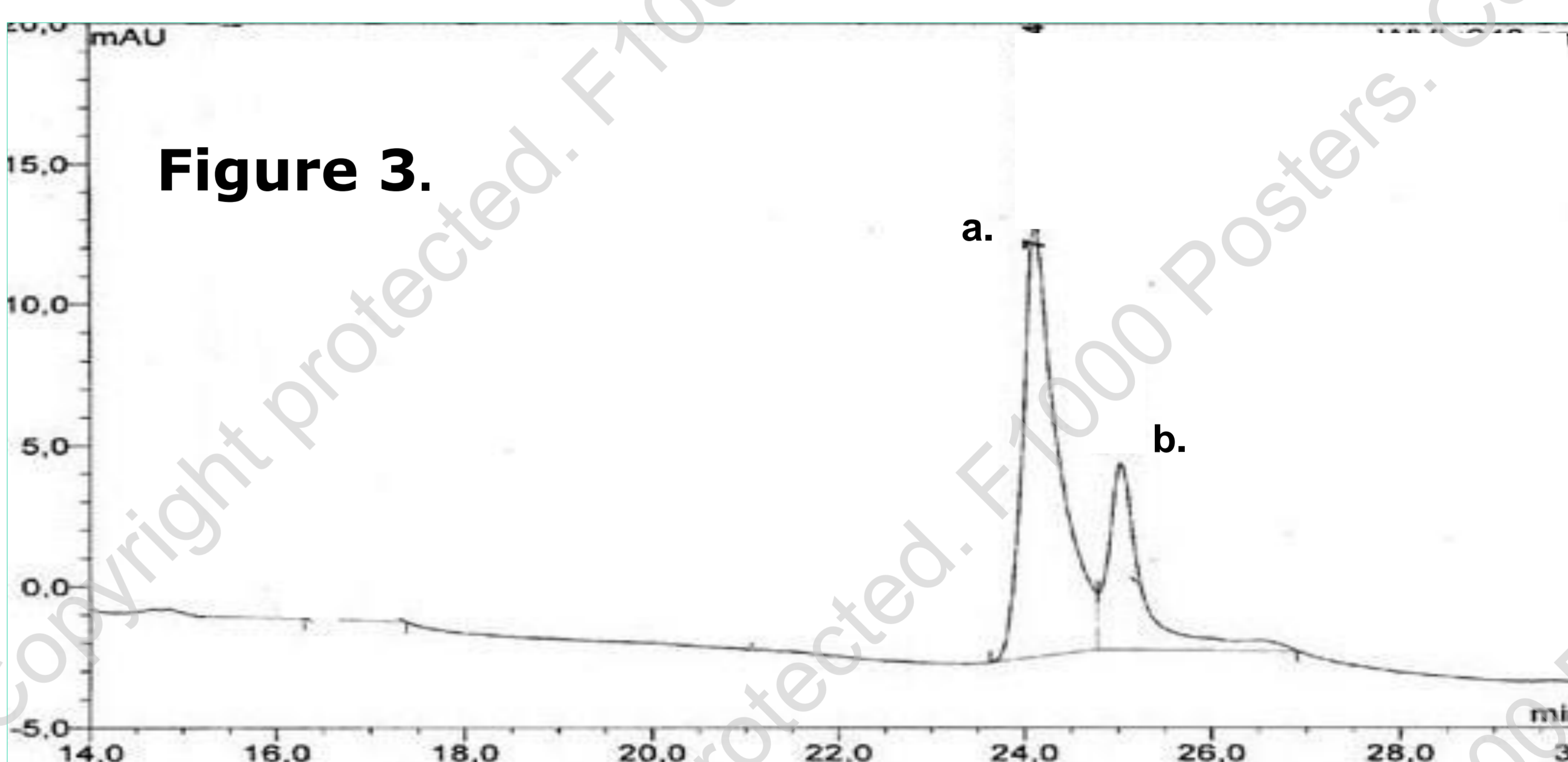


Figure 3.

Figure 4. Contains the appropriate ratio for a reliable quantitative analysis of these drugs in serum. Figure 2. and 3. shows the difficulty in separating both drugs by using inaccurate ratios.

CONCLUSION

This method allows differing solvent selectivity, because the appropriate ratio of the organic solvent mixtures were obtained. This will help to ensure a precise evaluation of the therapeutic drug monitoring of Bromperidol and haloperidol in future and thereby improve the individual therapy as well as the patients' compliance.