

# CAPSULES

preliminary notes and applications from Bioanalytical Systems, Inc.

## Olanzapine in Human Plasma

### Purpose

Determination of olanzapine [F1] in human plasma with a limit of detection below 1 ng/mL.

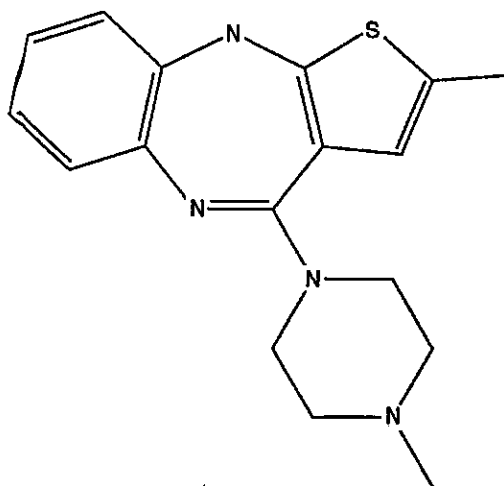


Figure 1. Structure of olanzapine.

Olanzapine is a new antipsychotic agent that may be useful for treatment of schizophrenia. Unlike traditional antipsychotics, olanzapine appears to be effective for both the positive (e.g., delusions) and negative (withdrawal) symptoms of this disease [1].

### Existing Methods

Gas chromatography with mass spectrometry detection, which is expensive and complex.

### Conditions

System: BAS-200B Liquid Chromatograph with dual electrochemical detection

Electrode: Dual-series glassy carbon

Potential: Upstream: 0 V vs. Ag/AgCl. Downstream: 400 mV. Only the downstream electrode is monitored.

Validation Range: 0.25 - 100 ng/mL [1]

### Sample Preparation

Sample preparation was performed using the procedure of [1], with some modification.

### Notes

A chromatogram of an extracted plasma standard is shown in F2. F3 shows a chromatogram of blank plasma, and F4 a standard curve.

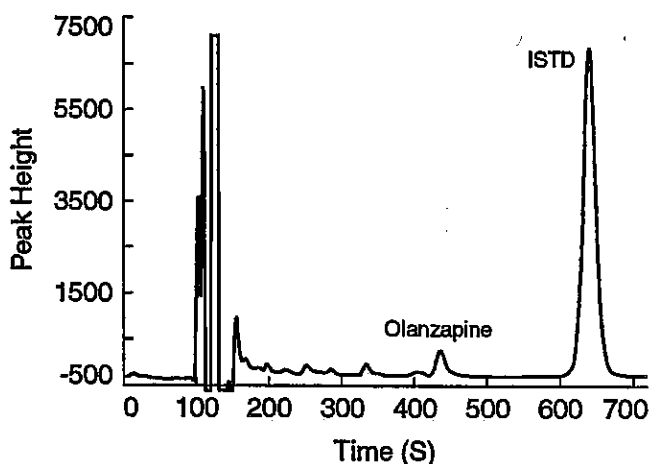


Figure 2. Chromatogram of extracted human plasma standard, 0.640 ng olanzapine/mL.

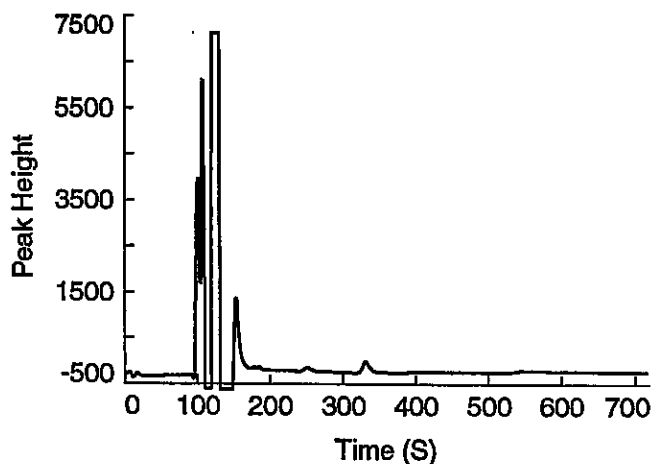
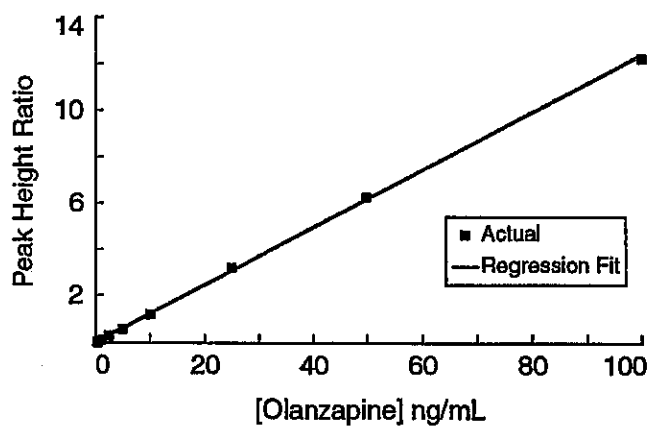


Figure 3. Chromatogram of blank human plasma extract.

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**Figure 4.** Standard curve for olanzapine from human plasma.

#### Reference

1. J.T. Catlow, R.D. Barton, M. Clemens, T.A. Gillespie, M. Goodwin and S.P. Swanson, *J. Chromatogr. B* 668 (1995): 85-90.

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