

Enzyme Multiplied Immunoassay

EMIT

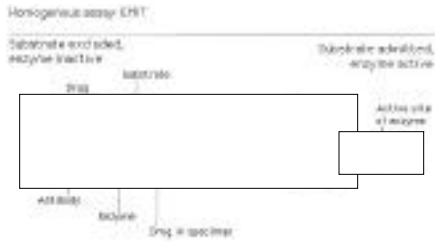
Enzyme Multiplied Immunoassay

- Separation using the specificity of antibody
- antigen binding
- Quantitation using enzyme reaction

EMIT - Components of the Assay

- Drug
- Antibody
- Substrate
- Enzyme bound to drug
- Quantitate by measuring enzyme-substrate reaction (by UV - visible spectroscopy)
- Determine standard curve

Principle of EMIT



Redrawn from: Pieper and Rutledge, Laboratory Techniques for Pharmacists, Upjohn 1989, page 40, figure 12

Procedure

- Mix sample containing drug with fixed quantity of enzyme bound drug, and antibody
- Add substrate
- Measure absorbance at 15 and 45 seconds after substrate addition
- Absorbance > Reaction rate > Drug concentration
- Non linear relationship between Absorbance and Concentration

Using Glucose-6-phosphate Dehydrogenase

