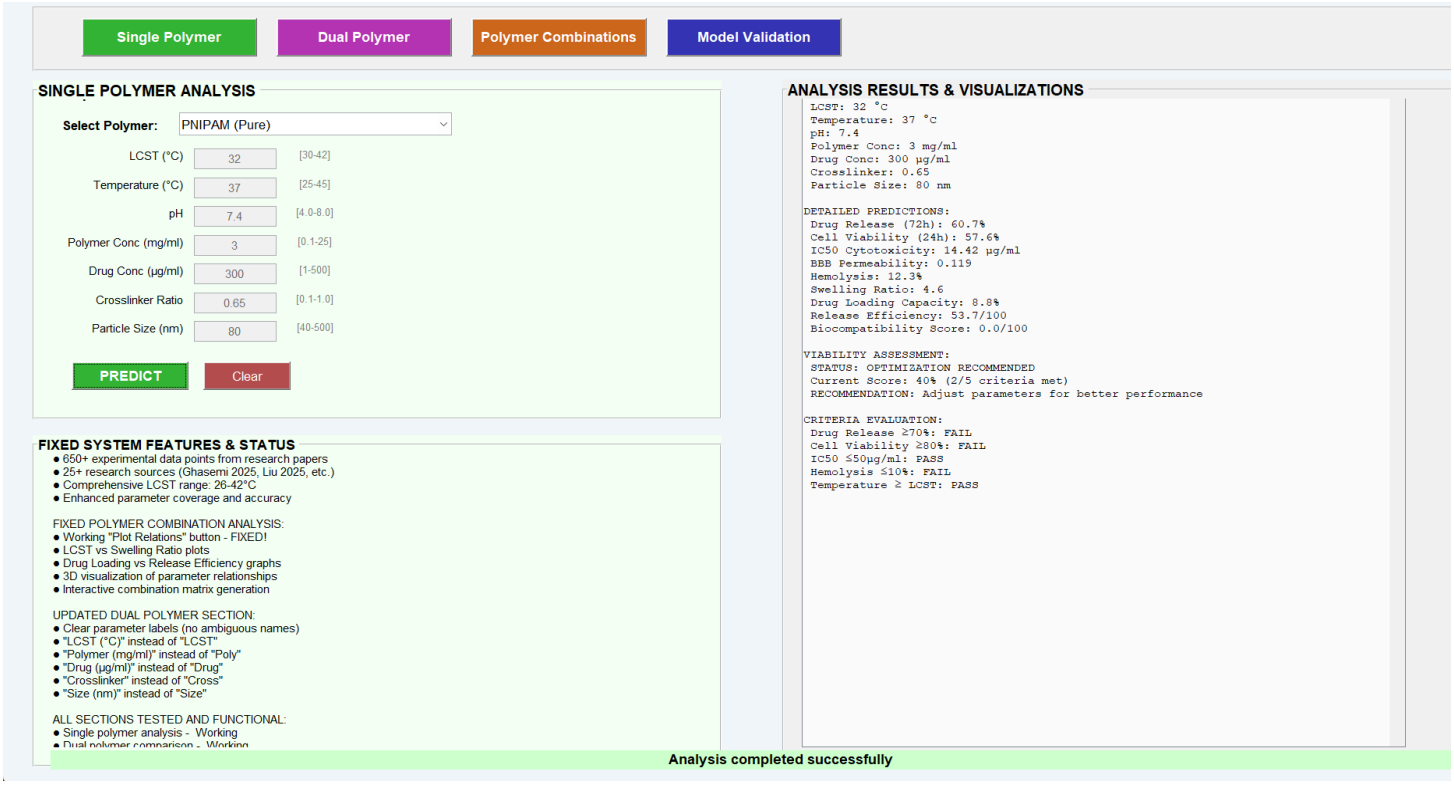
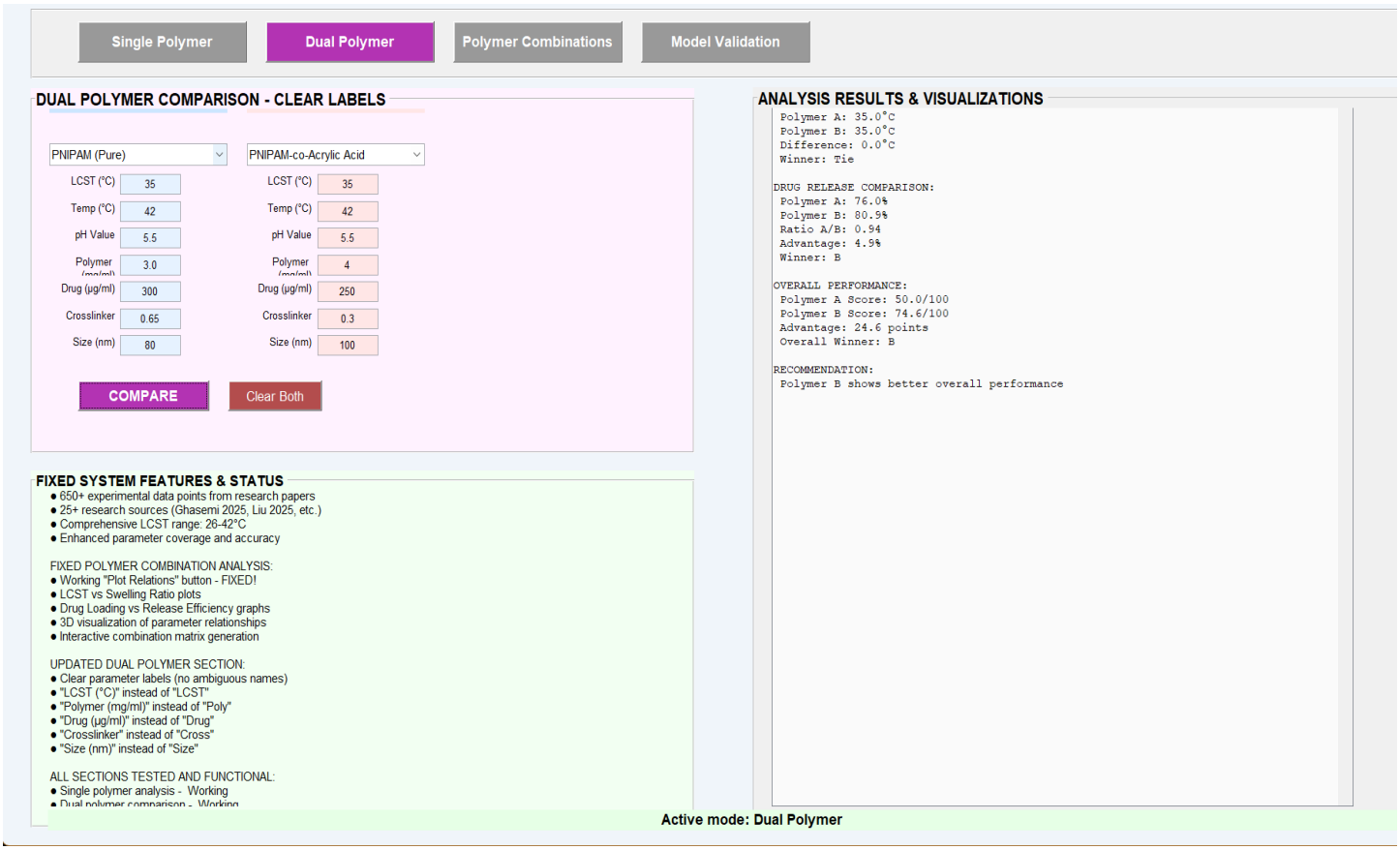
Results:


Single Polymer
Dual Polymer
Polymer Combinations
Model Validation
SINGLE POLYMER ANALYSIS
Select Polymer:
PNIPAM (Pure)
LCST (°C) 32 [30-42]
Temperature (°C) 37 [25-45]
pH 7.4 [4.0-8.0]
Polymer Conc (mg/ml) 3 [0.1-25]
Drug Conc (µg/ml) 300 [1-500]
Crosslinker Ratio 0.65 [0.1-1.0]
Particle Size (nm) 80 [40-500]
PREDICT
Clear
FIXED SYSTEM FEATURES & STATUS
• 650+ experimental data points from research papers
• 25+ research sources (Ghasemi 2025, Liu 2025, etc.)
• Comprehensive LCST range: 26-42°C
• Enhanced parameter coverage and accuracy
FIXED POLYMER COMBINATION ANALYSIS:
• Working "Plot Relations" button - FIXED!
• LCST vs Swelling Ratio plots
• Drug Loading vs Release Efficiency graphs
• 3D visualization of parameter relationships
• Interactive combination matrix generation
UPDATED DUAL POLYMER SECTION:
• Clear parameter labels (no ambiguous names)
• "LCST (°C)" instead of "LCST"
• "Polymer (mg/ml)" instead of "Poly"
• "Drug (µg/ml)" instead of "Drug"
• "Crosslinker" instead of "Cross"
• "Size (nm)" instead of "Size"
ALL SECTIONS TESTED AND FUNCTIONAL:
• Single polymer analysis - Working
ANALYSIS RESULTS & VISUALIZATIONS
LCST: 32 °C
Temperature: 37 °C
pH: 7.4
Polymer Conc: 3 mg/ml
Drug Conc: 300 µg/ml
Crosslinker: 0.65
Particle Size: 80 nm
DETAILED PREDICTIONS:
Drug Release (72h): 60.7%
Cell Viability (24h): 57.6%
IC50 Cytotoxicity: 14.42 µg/ml
BBB Permeability: 0.119
Hemolysis: 12.3%
Swelling Ratio: 4.6
Drug Loading Capacity: 8.8%
Release Efficiency: 53.7/100
Biocompatibility Score: 0.0/100
VIABILITY ASSESSMENT:
STATUS: OPTIMIZATION RECOMMENDED
Current Score: 40% (2/5 criteria met)
RECOMMENDATION: Adjust parameters for better performance
CRITERIA EVALUATION:
Drug Release ≥70%: FAIL
Cell Viability ≥80%: FAIL
IC50 ≤50µg/ml: PASS
Hemolysis ≤10%: FAIL
Temperature ≥ LCST: PASS
Analysis completed successfully


Single Polymer
Dual Polymer
Polymer Combinations
Model Validation
DUAL POLYMER COMPARISON - CLEAR LABELS
PNIPAM (Pure)
PNIPAM-co-Acrylic Acid
LCST (°C) 35 LCST (°C) 35
Temp (°C) 42 Temp (°C) 42
pH Value 5.5 pH Value 5.5
Polymer 3.0 Polymer 4
Drug (µg/ml) 300 Drug (µg/ml) 250
Crosslinker 0.65 Crosslinker 0.3
Size (nm) 80 Size (nm) 100
COMPARE
Clear Both
FIXED SYSTEM FEATURES & STATUS
• 650+ experimental data points from research papers
• 25+ research sources (Ghasemi 2025, Liu 2025, etc.)
• Comprehensive LCST range: 26-42°C
• Enhanced parameter coverage and accuracy
FIXED POLYMER COMBINATION ANALYSIS:
• Working "Plot Relations" button - FIXED!
• LCST vs Swelling Ratio plots
• Drug Loading vs Release Efficiency graphs
• 3D visualization of parameter relationships
• Interactive combination matrix generation
UPDATED DUAL POLYMER SECTION:
• Clear parameter labels (no ambiguous names)
• "LCST (°C)" instead of "LCST"
• "Polymer (mg/ml)" instead of "Poly"
• "Drug (µg/ml)" instead of "Drug"
• "Crosslinker" instead of "Cross"
• "Size (nm)" instead of "Size"
ALL SECTIONS TESTED AND FUNCTIONAL:
• Single polymer analysis - Working
ANALYSIS RESULTS & VISUALIZATIONS
Polymer A: 35.0°C
Polymer B: 35.0°C
Difference: 0.0°C
Winner: Tie
DRUG RELEASE COMPARISON:
Polymer A: 76.0%
Polymer B: 80.9%
Ratio A/B: 0.94
Advantage: 4.9%
Winner: B
OVERALL PERFORMANCE:
Polymer A Score: 50.0/100
Polymer B Score: 74.6/100
Advantage: 24.6 points
Overall Winner: B
RECOMMENDATION:
Polymer B shows better overall performance
Active mode: Dual Polymer

Single Polymer | Dual Polymer | Polymer Combinations | Model Validation

POLYMER COMBINATION ANALYSIS - FIXED PLOT RELATIONS

Chitosan | PNIPAM

COMBINATION PARAMETERS (Research-based

Combined LCST (°C)	34.0
Swelling Ratio	6.00
Drug Loading (%)	25.0%
Release Efficiency (%)	95.0%
Synergy Factor	1.23

ANALYZE COMBO | PLOT RELATIONS | Clear

GENERATE COMBINATION MAT...

FIXED SYSTEM FEATURES & STATUS

- 650+ experimental data points from research papers
- 25+ research sources (Ghasemi 2025, Liu 2025, etc.)
- Comprehensive LCST range: 26-42°C
- Enhanced parameter coverage and accuracy

FIXED POLYMER COMBINATION ANALYSIS:
- Working "Plot Relations" button - FIXED!
- LCST vs Swelling Ratio plots
- Drug Loading vs Release Efficiency graphs
- 3D visualization of parameter relationships
- Interactive combination matrix generation

UPDATED DUAL POLYMER SECTION:
- Clear parameter labels (no ambiguous names)
- "LCST (°C)" instead of "LCST"
- "Polymer (mg/ml)" instead of "Poly"
- "Drug (µg/ml)" instead of "Drug"
- "Crosslinker" instead of "Cross"
- "Size (nm)" instead of "Size"

ALL SECTIONS TESTED AND FUNCTIONAL:
- Single polymer analysis - Working
- Dual polymer comparison - Working

ANALYSIS RESULTS & VISUALIZATIONS

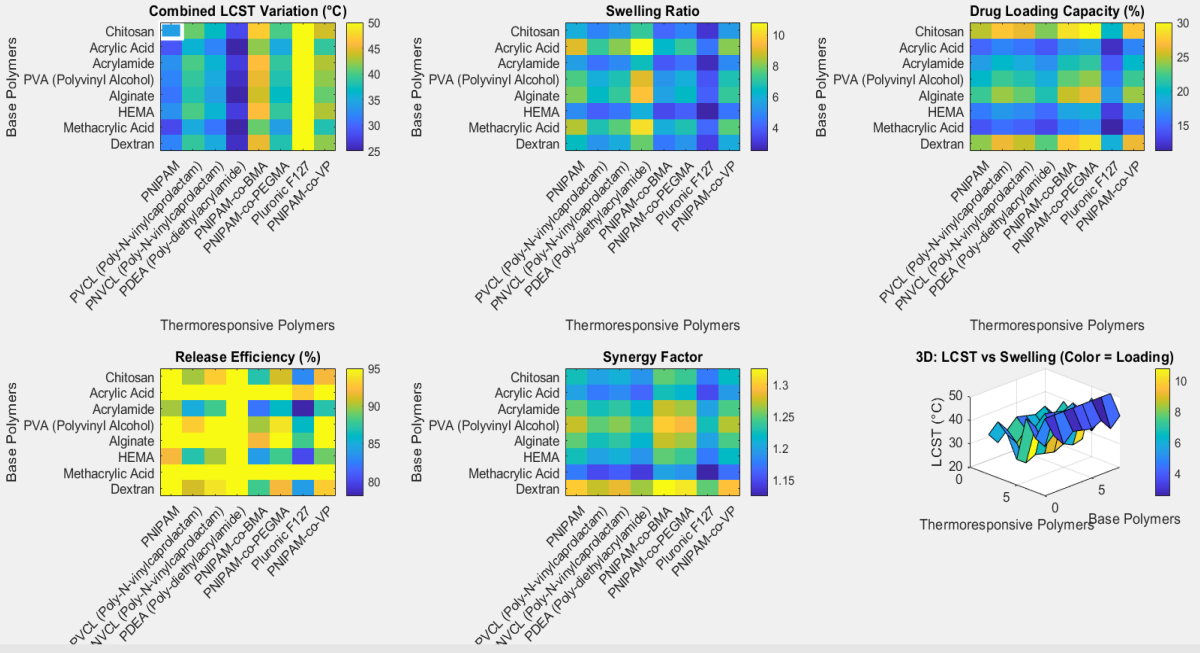
```
Thermoresponsive Polymer: PNIPAM

COMBINATION PROPERTIES:
 Combined LCST: 34.0°C
 Swelling Ratio: 6.00
 Drug Loading: 25.0%
 Release Efficiency: 95.0%
 Synergy Factor: 1.23

PERFORMANCE ANALYSIS:
 LCST Shift: 2.0°C
 Performance Index: 2.909
 Grade: A

RECOMMENDATION:
 EXCELLENT - Highly recommended combination
```

Active mode: Polymer Combinations

FIXED: Polymer Combination Relations Analysis

File Edit View Insert Tools Desktop Window Help

FIXED POLYMER COMBINATION RELATIONS - COMPREHENSIVE ANALYSIS



Selected: Chitosan + PNIPAM | Total Combinations: 8 × 8 = 64

ANALYSIS RESULTS & VISUALIZATIONS

```
TOP 10 PERFORMING COMBINATIONS:
 1. Dextran + PNIPAM-co-PEGMA (Score: 3.484)
 2. Chitosan + PNIPAM-co-PEGMA (Score: 3.385)
 3. Dextran + PNIPAM-co-BMA (Score: 3.218)
 4. Dextran + PNIPAM-co-VP (Score: 3.179)
 5. Alginate + PNIPAM-co-PEGMA (Score: 3.173)
 6. Chitosan + PNIPAM-co-BMA (Score: 3.127)
 7. Chitosan + PNIPAM-co-VP (Score: 3.087)
 8. Dextran + PVCL (Poly-N-vinylcaprolactam) (Score: 3.063)
 9. Dextran + PNVCL (Poly-N-vinylcaprolactam) (Score: 3.044)
 10. Chitosan + PVCL (Poly-N-vinylcaprolactam) (Score: 2.970)
```