

Medication Analysis Report

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Analysis System: MedicationAnalyzer (Comprehensive Drug Analysis)

Analysis Cost: \$0.0215

Duration: 14.1s

Medication Overview

Name:

Paracetamol (Acetaminophen)

Drug Class: Non-opioid analgesic and antipyretic

Analysis Confidence: 0.95/1.00

Mechanism of Action

Inhibits cyclooxygenase (COX) enzymes, primarily in the central nervous system, reducing prostaglandin synthesis responsible for pain and fever.

Pharmacokinetics Summary

- **Absorption:** Rapidly and completely absorbed from the gastrointestinal tract; peak plasma concentrations within 0...
 - **Metabolism:** Primarily hepatic via glucuronidation and sulfation (90%); minor CYP2E1, CYP1A2, CYP3A4 metabolism t...
 - **Elimination:** Renal excretion of metabolites (primarily glucuronide and sulfate conjugates); less than 5% excreted...
 - **Half-Life:** 1-4 hours (average 2-3 hours)
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Key Safety Information

BLACK BOX WARNINGS

1. Risk of severe liver damage and acute liver failure if maximum daily dose exceeded (4 g/day), with concomitant alcohol use, or chronic use

Contraindications (2 identified)

- **N/A** (N/A)
 - **N/A** (N/A)
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Interactions Summary

Moderate Drug Interactions (3)

- **Other paracetamol-containing products:** Increased risk of overdose and liver damage...
- **Warfarin:** Elevated INR...

- **Probenecid:** Prolonged paracetamol half-life...
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Evidence-Based Recommendations

1. N/A

- N/A...

2. N/A

- N/A...

For complete details including all interactions, dosing adjustments, and comprehensive recommendations, see the detailed report.

DISCLAIMER:

This analysis is for educational and research purposes only. Always consult qualified healthcare providers for medication decisions.