
Lab Dept: Chemistry

Test Name: ACETAMINOPHEN LEVEL

General Information

Lab Order Codes: ACET

Synonyms: Tylenol®, Datril®, Excedrin®, Liquiprin®, Tempra®

CPT Codes: 80329 – Analgesics, non-opioid; 1 or 2
OR
G0480 – Drug, test, definitive (if appropriate)

Test Includes: Acetaminophen concentration in mcg/mL.

Logistics

Test Indications: Useful for therapeutic drug monitoring and evaluation of acetaminophen toxicity. This commonly used analgesic drug may cause severe hepatic toxicity or death when consumed in overdose quantities.

Lab Testing Sections: Chemistry

Phone Numbers: MIN Lab: 612-813-6280
STP Lab: 651-220-6550

Test Availability: Daily, 24 hours

Turnaround Time: 4 hours, Stat: 1 hour

Special Instructions: N/A

Specimen

Specimen Type: Blood

Container: Green top (Li Heparin) tube **preferred**
Alternate tube: Red top, gold or marble tubes

Draw Volume: 0.6 mL blood

Processed Volume: 0.2 mL serum/plasma

Collection:	Routine blood collection. Mix tubes containing anticoagulant by gentle inversion.
	Ingestion: Specimen should be drawn 4 hours after ingestion for peak toxic level.
Special Processing:	Lab Staff: Centrifuge specimen, remove serum/plasma aliquot into plastic sample cup. Analyze immediately or store at refrigerated temperatures.
Patient Preparation:	None
Sample Rejection:	Mislabeled or unlabeled specimen; hemolyzed specimens

Interpretive

Reference Range: Therapeutic concentration: 10-25 mcg/mL

Critical Values: >25 mcg/mL

Limitations: Bilirubin (5 mg/dL), IgG (5 g/dL) and/or Total Protein (12 g/dL) decrease the acetaminophen result by 20-60%.

Do Not Use Hemolyzed Samples. Hemolysis causes significant bias with this method.

Samples containing elevated levels of Immunoglobulin M (IgM) or samples from patients with Waldenstrom's Macroglobulinemia may produce unreliable results.

Samples containing NAPQ1 (N-Acetyl-4-benzoquinoneimine) may cause elevated levels of measured acetaminophen. Samples containing >20 mg/L metamizole may cause elevated levels of measured acetaminophen.

Methodology: Enzymatic, colorimetric

References: Sekure Chemistry Acetaminophen L3K Assay Instructions for Use (August 30, 2019) Sekisui Diagnostics, Charlottetown, PE C1E, Canada

Sekisui Diagnostics Assay Configuration file for Alinity ci-series Application for Acetaminophen 507 (November 6, 2019) Sekisui Diagnostics

Bio-Rad Liquichek Immunoassay Plus Control Package Insert, Bio-Rad Laboratories, Irvine, CA 92618, USA

Jacobs & DeMott Laboratory Test Handbook (2001) Lexi-Comp, Inc, Hudson, OH, 5th Edition

Updates:

2/1/2012: Critical value update.

9/10/2014: Limitations added.

2/2/2016:CPT update, tube type update

12/8/2020: Updated for instrument Abbott Alinity