

Chemistry and Toxicology Guide for Specimen Acceptability and Add-on Requests

Listed below are the maximum times allowed for blood specimen acceptability based on sample collection time and acceptable tube types. The preferred tube types are “**Bolded**” (method manufacturer recommended), other tube types listed are also acceptable.

All tests not listed or exceeding these guidelines must be approved by a laboratory supervisor, manager, director, or pathology resident prior to performing the assay.

A description of tube types and corresponding anticoagulants is also provided.

Alphabetical Test List

Test Name	Acceptable Tube Types	Specimen Received UNSEPARATED (UNSPUN)	Specimen Received SEPARATED (Aliquoted plasma/serum or Spun SST/PST) Kept cool during transportation. Specimen tightly capped	ADD-ON (Aliquoted plasma/serum or spun SST/PST). Specimen uncapped at RT for up to 8hr then stored at 4°C.
AAT	Red, SST, Gold, Dk.Green, Lt Green, Purple	6 hours	7 days	7 days
Acetaminophen	Red, SST, Gold, Dk.Green, Lt Green, Purple	24 hours	7 days	7 days
AFP	Red, SST, Gold	24 hours	3 days	3 days
Albumin	Red, SST, Gold, Dk.Green, Lt Green	6 hours	7 days	7 days
Alcohol/Ethylene Glycol	Gray, Red, SST, Gold, Dk.Green, Lt Green, Purple	7 days	7 days	8 hours

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Alk Phos	Red, SST, Gold, Dk.Green, Lt Green	24 hours	7 days	7 days
ALT	Red, SST, Gold, Dk.Green, Lt Green	24 hours	7 days	7 days
Ammonia	Dk.Green, Lt Green, Purple	1 hour on ice 15 min if not on ice	Frozen for 24 hours	Not available as An ADD-ON
Amikacin	Red, SST, Gold, Purple	24 hours	7 days	7 days
Amylase	Red, SST, Gold, Dk.Green, Lt Green	24 hours	7 days	7 days
AST	Red, SST, Gold, Dk.Green, Lt Green	24 hours	7 days	7 days
Barbiturate	Red, SST, Gold,	24 hours	7 days	7 days
Benzodiazepine	Red, SST, Gold,	24 hours	7 days	7 days
Bilirubin, Total	Red, SST, Gold, Dk Green, Lt Green	24 hours	12 hours (*24 hours for Outreach specimens)	12 hours
Bilirubin, Conj (Direct Bili)	Red, SST, Gold Dk Green, Lt Green	24 hours	12 hours (*24 hours for Outreach specimens)	12 hours
BNP	Purple	4 hours	If >4 hours, should be spun, separated and frozen.	4 hours

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C3	Red, SST, Gold	6 hours	7 days	7 days
C4	Red, SST, Gold	6 hours	3 days	3 days
CA 125	Red, SST, Gold	6 hours	3 days	3 days
Caffeine	Red, SST, Gold Dk.Green, Lt Green, Purple	24 hours	7 days	7 days
Calcium	Red, SST, Gold Dk.Green, Lt Green	24 hours	7 days	7 days
Carbamazepine	Red, SST, Gold Dk.Green, Lt Green, Purple	24 hours	7 days	7 days
Carbon Dioxide (ECO ₂)	Red, SST, Gold, Dk.Green, Lt Green	6 hours	6 hours (*24 hours for Outreach specimens)	1 hour
CEA	Red, SST, Gold Purple	6 hours	7 days	7 days
Ceruloplasmin	Red, SST, Gold Dk.Green, Lt Green, Purple	24 hours	3 days	3 days
Chloride	Red, SST, Gold Dk.Green, Lt Green	24 hours	7 days	7 days
Cholesterol	Red, SST, Gold Dk.Green, Lt Green	24 hours	7 days	7 days
CK	Red, SST, Gold Dk.Green, Lt Green	24 hours	7 days	7 days

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Cholinesterase	Red, SST, Gold Dk.Green, Lt Green	6 hours	7 days	7 days
CK-MB	Red, SST, Gold Dk.Green, Lt Green	24 hours	24 hours	24 hours
Cocaine	Red, SST, Gold	24 hours	7 days	7 days
Cortisol	Red, SST, Gold Dk Green, Lt Green	24 hours	7 days	7 days
Creatinine	Red, SST, Gold Dk.Green, Lt Green	24 hours	7 days	7 days
CRP	Red, SST, Gold Dk.Green, Lt Green	6 hours	3 days	3 days
Digoxin	Red, SST, Gold Dk.Green, Lt Green, Purple	4 hours	5 days (PST/SST run within 4 hours)	4 hours
Estradiol	Red, SST, Gold	24 hours	2 days	2 days
Ferritin	Red, SST, Gold Dk.Green, Lt Green, Purple	24 hours	7 days	7 days
Folate	Red, SST, Gold	24 hours	3 days	3 days

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FSH	Red, SST, Gold	2hours	7 days	7 days
GGT	Red, SST, Gold Dk.Green, Lt Green	24 hours	7 days	7 days
Gentamicin	Red, SST, Gold Dk.Green, Lt Green, Purple	24 hours	7 days	7 days
Glucose	Gray, Red, SST, Gold, Dk.Green, Lt Green	3 hour (Gray fluoride tube: 3 days)	3 days	3 days
Haptoglobin	Red, SST, Gold	24 hours	3 days	3 days
HCG (Quant/Qual)	Red, SST, Gold	24 hours	7 days	7 days
HDL	Red, SST, Gold Dk.Green, Lt Green	6 hours	7 days	7 days
Homocysteine	Red, SST, Gold Dk.Green, Lt Green No EDTA	Separate within 1 hour of collection. Specimen should arrive on ice if >1 hour post collection.	7 days	7 days
IgA	Red, SST, Gold Dk.Green, Lt Green	24 hours	7 days	7 days
IgE	Red, SST, Gold	24 hours	7 days	7 days
IgG	Red, SST, Gold Dk.Green, Lt Green	24 hours	7 days	7 days
IgM	Red, SST, Gold Dk.Green, Lt Green	24 hours	7 days	7 days

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Iron	Red, SST, Gold Dk.Green, Lt Green	6 hours	7 days	7 days
Ketone	Red, SST, Gold Dk.Green, Lt Green, Purple	6 hours	6 hours (*24 hours for Outreach specimens)	6 hours
Lactate	Gray	24 hours	7 days	7 days
LD	Red, SST, Gold Dk.Green, Lt Green	24 hours	24 hours	24 hours
LDL	Red, SST, Gold Dk.Green, Lt Green	6 hours	7 days	7 days
LH	Red, SST, Gold	24 hours	7 days	7 days
Lipase	Red, SST, Gold Dk.Green, Lt Green	24 hours	7 days	7 days
Lithium	Red, SST, Gold, Dk.Green, Purple	24 hours	7 days	7 days
Magnesium	Red, SST, Gold Dk.Green, Lt Green	24 hours	7 days	7 days
Myoglobin	Red, SST, Gold Dk.Green, Lt Green	12 hours	2 days	2 days
Opiate	Red, SST, Gold	24 hours	7 days	7 days
Osmolality	Red, SST, Gold Dk.Green, Lt Green	6 hours	6 hours (*24 hours for Outreach specimens)	1 hour

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Phenobarbitol	Red, SST, Gold Dk.Green, Lt Green, Purple	24 hours	7 days	7 days
Phenytoin and Free Phenytoin	Red, SST, Gold Dk.Green, Lt Green, Purple	24 hours	7 days	7 days
Phosphorus	Red, SST, Gold Dk.Green, Lt Green	3 hours	7 days	7 days
Plasma Hgb	EDTA	6 hours	7 days	7 days
Potassium	Red, SST, Gold Dk.Green, Lt Green	3 hours	7 days	7 days
Prealbumin	Red, SST, Gold	24 hours	3 days	3 days
Primidone	Red, SST, Gold Dk.Green, Lt Green, Purple	24 hours	7 days	7 days
Progesterone	Red, SST, Gold	24 hours	7 days	7 days
Prolactin	Red, SST, Gold	24 hours	7 days	7 days
Protein, Total	Red, SST, Gold Dk.Green, Lt Green	6 hours	7 days	7 days
PSA	Red, SST, Gold	24 hours	3 days	3 days
PTH-Intact	Gold, Red, SST, EDTA	8 hours RT, spun or unspun	If >8 hours, should be frozen	8 hours

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RF	Red, SST, Gold	6 hours	3 days	3 days
Salicylate	Red, SST, Gold, Purple Dk.Green, Lt Green	24 hours	7 days	7 days
Sodium	Red, SST, Gold Dk.Green, Lt Green	24 hours	7 days	7 days
T3	Red, SST, Gold, Lt Green	24 hours	7 days	7 days
T4, Free	Red, SST, Gold, Lt Green?	24 hours	3 days	3 days
T4 Total	Red, SST, Gold, Lt Green	24 hours	7 days	7 days
Theophylline	Red, SST, Gold Dk.Green, Lt Green, EDTA	24 hours	7 days	7 days
T Uptake	Red, SST, Gold, Lt Green	24 hours	7 days	7 days
Tobramycin	Red, SST, Gold Purple	24 hours	7 days	7 days
Transferrin	Red, SST, Gold Dk.Green, Lt Green	24 hours	7 days	7 days
Triglycerides	Red, SST, Gold Dk.Green, Lt Green	24 hours	7 days	7 days
Troponin I	Red, SST, Gold Dk.Green, Lt Green, Purple	12 hours	24 hours	24 hours

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TSH	Red, SST, Gold, Lt Green	24 hours	5 days	5 days
Urea (BUN)	Red, SST, Gold Dk.Green, Lt Green	24 hours	7 days	7 days
Uric Acid	Red, SST, Gold Dk.Green, Lt Green	24 hours	7 days	7 days
Valproic Acid	Red, SST, Gold Dk.Green, Lt Green, Purple	24 hours	7 days	7 days
Vancomycin	Red, SST, Gold Dk.Green, Lt Green, Purple	24 hours	7 days	7 days
Vitamin B12	Red, SST, Gold	24 hours	3 days	3 days

Tube types and corresponding anticoagulant:

Red-stopper tube: Silica clot activator, no anticoagulant or preservative.

Mottled red/gray or Gold-stopper (serum-separator) tube: Contains clot activator and gel for separating serum from cells, but not anticoagulant.

Lavender (Purple)-stopper tube: Contains liquid K₃ EDTA.

Gray-stopper tube: Contains sodium fluoride (a preservative) and potassium oxalate (an anticoagulant). Glycolytic inhibitor.

Dark Green-stopper tube: Contains sodium heparin

Light Green-stopper tube: Contains lithium heparin