

آزمایشگاه پاتوبیولوژی و ژنتیک

سلام

کتابچه راهنمای آزمایشات

با آزمایشگاه سلام

○ تکنولوژی های فوق پیشرفته

○ تجهیزات مدرن

○ جوابدهی فوق اورژانسی

○ دقت، صحت، سرعت، کیفیت

و دیگر خدمات نوین را تجربه کنید



☎ ۰۴۱ - ۴۱۳۹

☎ ۰۹۰۳۶۶۰۲۱۹۸

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Row	Test name	Sample S.type	minimum s.vol.(ml) sample vol (ml)	Assay method	Testing & Reporting time	Emergency	Storage	Transport	Preparation before sampling	Reject	Others
1	3 α -diol	Serum	1	Elisa	10 Days Later	-	1 Day at 2-8 $^{\circ}$ C, 2 months at -20 $^{\circ}$ C	at 2-8 $^{\circ}$ C, at -20 $^{\circ}$ C	Not recommended	Gross hemolysis	avoid repeated freeze/ thaw cycles
2	5-Hydroxyindoleacetic acid (SHIAA)	Urine 24 hrs & Random	10	Elisa	Tuesday 1 weeks Later	-	7 Days at 2-8 $^{\circ}$ C, 14 Days at -20 $^{\circ}$ C (dark place)	at 2-8 $^{\circ}$ C, at -20 $^{\circ}$ C	<p>Patient Prep: Patients should abstain, if possible, from medications, OTC drugs, and herbal remedies for at least 72 hours prior to the test. Foods rich in serotonin (avocados, bananas, eggplant, pineapple, plums, tomatoes, walnuts), chocolate, mango, date, grape fruit, melon, watermelon, kiwi, nuts, plantain and medications that may affect metabolism of serotonin, Imipramine, isonia-zid, methyldopa, etc must be avoided at least 72 hours before and during collection of urine.</p>	Short sample	<p>Increased:Acetaminophen, acetanilide, caffeine, coumaric acid, diazepam (Valium$^{\circ}$), ephedrine, fluorouracil, glycerol guaiacolate (Guaifenesin), melphalan (Alkeran$^{\circ}$), mephenesin, methamphetamine (Desoxyn), methocarbamol (Robaxin$^{\circ}$), naproxen, nicotine, phenacetin, phenmetrazine, phenobarbital, phentolamine, rauwolfia, reserpine. Decreased: Aspirin, chlorpromazine (Thorazine), corticotropin, dihydroxyphenylacetic acid, ethanol, gentisic acid, homogentisic acid, hydrazine derivatives, imipramine (Tofranil$^{\circ}$), isocarboxazid (Marplan), keto acids, levodopa, MAO inhibitors, methenamine, methyldopa (Aldomet$^{\circ}$), perchlorperazine, phenothiazines (Compazine$^{\circ}$), promazine, promethazine (Mepergan$^{\circ}$).</p>



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3	14-3-3 protein	CSF	1	Elisa	25 days Later	-	5 days at 2-8°C, 1 month at -20°C	at 2-8°C, at -20°C	Not recommended	Gross hemolysis	-
4	17 ketosteroids	U (24h & R) pH:2-4	10	Chemical , column chrom.	By contact	-	7 days at 2-8°C, 1 month at -20°C	at 2-8°C, at -20°C	A large number of substances may interfere with this test. Decreases may be caused by: carbama-zepine, cephaloridine, cephalothin, chlormerodrin, digoxin, glucose, metyrapone, promazine, propoxyphene, reserpine, and others. Increases may be caused by acetone, acetophenide, ascorbic acid, chloramphenicol, chlorothiazide, chlorpromazine, cloxacillin, dexamethasone, erythromycin, ethinamate, etryptamine, methicillin, methyprylon, morphine, oleandomycin, oxacillin, penicillin, phenaglycodol, phenazopyridine, phenothiazine, piperidine, quinidine, secobarbital, spironolactone, and others.	-	-
5	17 OH Progestrone	S, PH	0.5	Elisa	sun , wed same day	-	7 days at 2-8°C, 1 month at -20°C	at 2-8°C, at -20°C	avoid using medication	Hemolysis, Icteric, Lipemic	-



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Row	Test name	Sample S.type	minimum s.vol.(ml) sample vol (ml)	Assay method	Testing & Reporting time	Emergency	Storage	Transport	Preparation before sampling	Reject	Others
6	2ME	S, BF	0.4	Tube aggl.	Daily 1 Day later	-	7 days at 2-8°C, for longer time at -20°C	at 2-8°C, at -20°C	Not recommended	Hemolysis, Icteric, Lipemic	-
7	ABG (Arterial blood gas)	WB (H) (Arterial blood)	1	Optical fluorescence	1 hr after receiving the sample Same day	1-2 hrs	30 min on ice	On ice	Not recommended	Incorrect anticoagulant warm sample	-
8	ACE	S, BF	0.5	Enzymatic	Daily Same day	2-4 hrs	5 days at 2-8°C, 2 months at -20°C	at 2-8°C, at -20°C	Notice using of captopril, enalapril,... that affect ACE level	Hemolysis, Icteric, Lipemic	Be separated quickly.
9	Acetaminophen	S	1	HPLC	3 Days Same day	-	7 days at 2-8°C, 2 months at -20°C	at 2-8°C, at -20°C	Not recommended	-	-
10	Acetylcholine receptor Ab	S	0.5	Elisa	Sat 14 day	-	7 days at 2-8°C, for longer time at -20°C	at 2-8°C, at -20°C	Not recommended	Hemolysis, Icteric, Lipemic	Be separated quickly. Avoid repeated freeze/ thaw cycles
11	Acid phosphatase (prostatic)	S (Add 30 µl Acetic Acid 1.5 mol/L to 1ml of serum and mix)	0.5	Photometric	Daily Next day	-	5 hrs. at RT, 7 days at 2-8°C	at 2-8°C	Fasting is recommended. Abstain using of cefotaxime few days prior to collection. Avoid prostate massage & rectal exam 2 days prior to collection.	Hemolysis, Icteric, Lipemic	Be separated quickly. Avoid repeated freeze/ thaw cycles



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12	Acid phosphatase (total)	S (Add 30 µl Acetic Acid 1.5 mol/L to 1ml of serum and mix)	0.5	Photometric	Daily Next day	-	5 hrs. at RT, 5days at 2-8°C, 3 months at -20°C	at 2-8°C, at -20°C	Fasting is recommended. Abstain using of cefotaxime few days prior to collection. Avoid prostate massage & rectal exam 2 days prior to collection	Hemolysis, Icteric, Lipemic	Be separated quickly. Avoid repeated freeze/ thaw cycles
13	ACTH	PE	1	CLIA	Daily same day	-	14 days at -20°C CRITICAL FROZEN	at -20°C	Fasting. Avoid using of tourniquet.	Hemolysis	Be separated quickly and transport on ice. Refrigerated centrifuge must be used.
14	Acylcarnitine profile	DBS (see sop1)	5 spots on paper	MS/MS	30 days Same day	-	BBS: with cover 7 days at RT, 1 month at 2-8°C, 3 months at -20°C	at RT, at 2-8°C, at -20°C	Not recommended	-	-
15	ADA	S, PE, CSF, BF	0.5	Enzymatic	Daily Next day	1-2 hrs	5 days at 2-8°C, 1month at -20°C	at 2-8°C, at -20°C	Not recommended	Hemolysis	-
16	Addis count	U (R & 12hrs)	20	Microscopic count	Daily Next day	-	Must be done the same day	2 hrs. at 2-8°C	Not recommended	-	-
17	Adenovirus PCR	Plasma (EDTA), Serum, Throat,Urine Nasopharyngeal or eye swabs.	1ml, 2 swabs	Qualitative PCR	5 days Same day	-	7 days at 2-8°C, 1month at -20°C	at 2-8°C, at -20°C	Not recommended	Incorrect anticoagulant (heparin), Calcium alginate swabs, Hemolysis	-



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18	ADH (antidiuretic hormone)	Plasma PE EDTA	5	RIA	25 days Same day	-	1 month at -20°C CRITICAL FROZEN	at -20°C	Not recommended	Gross hemolysis	-
19	Adiponectin	S	1	Elisa	10 days Same day	-	5 Days at 2-8°C 1 month at -20°C	at 2-8°C at -20°C	Not recommended	Hemolysis	-
20	Adrenaline (Epinephrine)	PE, U (24h & R) (see table1)	1, 10	S: Elisa, U: HPLC	PE: 10 days, U: Tue Next day	-	PE: 1 month at -20°C U: 7 days at 2-8°C 1 month at -20°C PE: CRITICAL FROZEN	PE: -20°C U: at 2-8°C at -20°C	Abstain from emotional and mental stress, medications for 3 days prior to collection.	Gross hemolysis	-
21	AH50	S	1	Hemolysis	20 days Same day	-	2 hrs at RT, 14 days at -20°C CRITICAL FROZEN	at -20°C	Not recommended	Hemolysis	avoid repeated freeze / thaw cycles
22	Albumin	S, PE, PH,B, U (R & 24h) (see table1)	0.5	Photometric	Daily	1-2 hrs	7 Days at 2-8°C 3 months at -20°C	at 2-8°C at -20°C	Not recommended	Hemolysis, Icteric, Lipemic gross	avoid repeated freeze / thaw cycles
23	Albumin Index	S & CSF	1.0, 1.0	Photo metric	2 days Same day	-	7 Days at 2-8°C 3 months at -20°C	at 2-8°C at -20°C	Not recommended	Hemolysis, Icteric, Lipemic gross	avoid repeated freeze / thaw cycles
24	Aldolase	S, Plasma Heparine	0.5	Enzymatic	Daily Next day	-	5 Days at 2-8°C 2 months at -20°C	at 2-8°C at -20°C	Not recommended	Hemolysis, mild & gross, Icteric, Lipemic gross	Be separated quickly



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25	Aldosterone	S, PE, U (R & 24h) (see table1)	S, PE:0.4 U:10	CLIA	Daily Same day	2-4 hrs	3 Days at 2-8°C 1 month at -20°C	at 2-8°C at -20°C	Abstain using of anti-blood pressure, diuretic,... 14 days prior to collection.	Hemolysis, Icteric, Lipemic	avoid repeated freeze / thaw cycles
26	Alkaline phosphatase	S,PH	0.2	Photo metric	Daily Same day	1-2 hrs	2 Days at 2-8°C 1 month at -20°C	at 2-8°C at -20°C	Fasting, Notice use of hepatotoxic drugs	Hemolysis, Icteric, Lipemic	avoid repeated freeze / thaw cycles
27	Alkaline phosphatase isoenyme	S,PH	0.5	Termal, Photo metric	Daily Next day	-	at 2-8°C 2 Months at -20°C	at 2-8°C at -20°C	Fasting, Notice use of hepatotoxic drugs	Hemolysis, Icteric, Lipemic	avoid repeated freeze / thaw cycles
28	Alpha 1 Anti trypsin	S,PE	0.5	Enzymatic	Sun & Wed Next day	-	7 days at 2-8°C 2 Months at -20°C	at 2-8°C at -20°C	Fasting is recommended. Avoid using of cefotaxime prior to collection	Hemolysis, Icteric, Lipemic	-
29	Alpha fetoprotein	S, PE, PH, Amniotic fluid, BF	0.5	CLIA	Daily Same day	2-4 hrs	7 days at 2-8°C 3 Months at -20°C	at 2-8°C at -20°C	Not recommended	Hemolysis	-
30	Alfa Glucosidase	DBS (see stop1)	5 spots on paper	GC-MS	25 Days Same day	-	DBS: With cover 7 days at RT, 1 month at 2-8°C, 3 months at -20°C	at RT, at 2-8°C at -20°C	Not recommended	-	-
31	Alprazolam	S	2	HPLC	3 Days Same day	-	7 days at 2-8°C 2 Months at -20°C	at 2-8°C at -20°C	Not recommended	-	-



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32	AML 1/ETO PCR - AML - 2 (qualitative)	WB (E)	7	PCR	4 days Same day	-	2 days at 2-8°C	at 2-8°C	Not recommended	Hemolysis, Frozen, Incorrect anticoagulant	-
33	AML 1/ETO PCR - AML - 2 (quantitative)	WB (E)	7	PCR	5 days Same day	-	2 days at 2-8°C	at 2-8°C	Not recommended	Hemolysis, Frozen, Incorrect anticoagulant	-
34	Amino Asids chromatography	PE (preferred) CSF, U(Random)	U:3 Others:1	HPLC	3 days Same day	-	1 day at 2-8°C, 1 month at -20°C	at 2-8°C at -20°C	Fasting Urine must be fresh.	Hemolysis	Plasma sample be separated quickly
35	Ammonia	PE	0.5	Photometric	Daily Same day	1-2 hrs	20 min, at 4°C, 3 months at -20°C CRITICAL FROZEN	at -20°C	Avoid using of tourniquet	Hemolysis, Icteric, Lipemic	Refrigerated centrifuge
36	Amylase	S, PE, PH, U (R & 24h) (see table 1)	0.5	Photometric	Daily Same day	1-2 hrs	S & U: 7days at 2-8°C, S: 1 month at -20° U: 7days at -20°C	at 2-8°C at -20°C	Fasting	Hemolysis, Icteric, Lipemic	avoid repeated freeze/ thaw cycles
37	ANA	S, PE, BF	0.5	Elisa	Daily 14 days later	2-4 hrs	7days at 2-8°C, 3 months at -20°C	at 2-8°C at -20°C	Not recommended	Gross: Hemolysis, Icteric, Lipemic	-
38	Anaerobic culture	Tissue, BF, Aspirates, ...	T:>1 gr BF&A:>1	Anaerobic	Daily 10 days later	-	The same time must be done.	-	Not recommended	-	-



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39	ANCA	S,PE,BF	0.5	Elisa	Daily Same day	-	7days at 2-8°C, 3months at -20c	at 2-8°C, at -20°C	Not recommended	Gross: Hemolysis, Icteric, Lipemic	-
40	Androstenedione	S	0.5	CLIA	Daily Same day	-	7days at 2-8°C, 3months at -20c	at 2-8°C, at -20°C	Fasting. Sample collection 7 days before or after menstruation.	Hemolysis, Icteric, Lipemic	-
41	Anti-Adrenal Cortex Ab (21Hydroxylase Ab)	S	1	Elisa	25 days Same day	-	5days at 2-8°C, 3months at -20c	at 2-8°C, at -20°C	Not recommended	Gross Hemolysis	-
42	Anti-Alpha fodrin(IgA)	S	0.5	Elisa	7 days Same day	-	5days at 2-8°C, 3months at -20c	at 2-8°C, at -20°C	Not recommended	Hemolysis	-
43	Anti-Alpha fodrin(IgG)	S	0.5	Elisa	7 days Same day	-	5days at 2-8°C, 3months at -20c	at 2-8°C, at -20°C	Not recommended	Hemolysis	-
44	Anti A titer (Isohemagglutinin)	S	0.5	Agglutination	Daily Next day	-	7days at 2-8°C, for longer time at -20c	at 2-8°C, at -20°C	Not recommended	Hemolysis, Icteric, Lipemic	-
45	Anti B titer (Isohemagglutinin)	S	0.5	Agglutination	Daily Next day	-	7days at 2-8°C, for longer time at -20c	at 2-8°C, at -20°C	Not recommended	Hemolysis, Icteric, Lipemic	-



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46	Anti B2 Glycoprotein Ab (IgG)	S,PE	0.5	Elisa	Daily Same day	-	7days at 2-8°C, 3months at -20c	at 2-8°C, at -20°C	Not recommended	Hemolysis, Icteric, Lipemic	Avoid repeated freeze/ thaw cycles
47	Anti B2 Glycoprotein Ab (IgM)	S,PE	0.5	Elisa	Daily Same day	-	7days at 2-8°C, 3months at -20c	at 2-8°C, at -20°C	Not recommended	Hemolysis, Icteric, Lipemic	Avoid repeated freeze/ thaw cycles
48	Anti C1q	S	0.5	Elisa	Even days	-	7days at 2-8°C, 3months at -20c	at 2-8°C, at -20°C	Not recommended	Gross: Hemolysis, Lipemic	Avoid repeated freeze/ thaw cycles
49	Anti Cardiolilipin Ab (IgG)	S	0.5	CLIA	7 days Thursday	-	5days at 2-8°C, 3months at -20c	at 2-8°C, at -20°C	Not recommended	Hemolysis, Lipemic	Avoid repeated freeze/ thaw cycles
50	Anti Cardiolilipin Ab (IgM)	S	0.5	CLIA	Daily Same day	-	5days at 2-8°C, 3months at -20c	at 2-8°C, at -20°C	Not recommended	Hemolysis, Lipemic	Avoid repeated freeze/ thaw cycles
51	Anti Centromere Ab (IgG)	S	0.5	Elisa	sat 7days	-	7days at 2-8°C, 3months at -20c	at 2-8°C, at -20°C	Not recommended	Hemolysis, Icteric, Lipemic	-
52	Anti Desmoglein I	S	0.5	Elisa	sat Next day	-	7days at 2-8°C, 14 days at -20c	at 2-8°C, at -20°C	Not recommended	Hemolysis, Lipemic	-



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53	Anti Desmoglein III	S	0.5	Elisa	Thu Next day	-	5days at 2-8°C, 14 days at -20c	at 2-8°C, at -20°C	Not recommended	Hemolysis, Lipemic	-
54	Anti DGP Ab (IgA) (Deaminated Gliadin Peptide)	S	0.5	Elisa	Daily Same day	-	5days at 2-8°C, 3 months at -20c	at 2-8°C, at -20°C	Not recommended	Gross Hemolysis	-
55	Anti DGP Ab (IgG) (Deaminated Gliadin Peptide)	S	0.5	Elisa	Daily Same day	-	5days at 2-8°C, 3 months at -20c	at 2-8°C, at -20°C	Not recommended	Gross Hemolysis	-
56	Anti DNA (ds)	S	0.5	Elisa	Daily Same day	2-4 hrs	7days at 2-8°C, 3 months at -20c	at 2-8°C, at -20°C	Not recommended	Gross: Hemolysis, Lipemic	Avoid repeated freeze/ thaw cycles
57	Anti DNase B	S	1	Nephelometry	25 days Same day	-	7days at 2-8°C, 3 months at -20c	at 2-8°C, at -20°C	Not recommended	Gross: Hemolysis, Lipemic	-
58	Anti Endomesial Ab (IgA)	S.PE	0.5	IFA	sat 7days	-	7days at 2-8°C, 3 months at -20c	at 2-8°C, at -20°C	Not recommended	-	-
59	Anti Endomesial Ab (IgG)	S.PE	0.5	IFA	sat 7days	-	5days at 2-8°C, 3 months at -20c	at 2-8°C, at -20°C	Not recommended	-	-



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60	Anti-Factor H Ab	S	0.5	Elisa	20 days Same day	-	5days at 2-8°C, 3 months at -20c	at 2-8°C, at -20°C	Not recommended	Gross: Hemolysis	-
61	Anti-GAD Ab	S	1	Elisa	Tue 14 day	-	5days at 2-8°C, 3 months at -20c	at 2-8°C, at -20°C	Not recommended	-	-
62	Anti GBM Ab	S	0.5	CLIA	Daily same day	-	5days at 2-8°C, 3 months at -20c	at 2-8°C, at -20°C	Not recommended	-	-
63	Anti-Gliadin Ab (IgA)	S	0.5	Elisa	Daily same day	-	5days at 2-8°C, 3 months at -20c	at 2-8°C, at -20°C	Fasting is recommended	Hemolysis, Icteric, Lipemic	-
64	Anti-Gliadin Ab (IgG)	S	0.5	Elisa	Daily same day	-	5days at 2-8°C, for longer time at -20c	at 2-8°C, at -20°C	Fasting is recommended	Hemolysis, Icteric, Lipemic	-
65	Anti-histone Ab	S	0.5	Elisa	Tue 10 day	-	5days at 2-8°C, 6 months at -20c	at 2-8°C, at -20°C	Not recommended	Hemolysis	-
66	Anti Hyaluronidase	S	1	Nephelometry	25 days Same day	-	5days at 2-8°C, 2 months at -20c	at 2-8°C, at -20°C	Not recommended	Gross: Hemolysis Lipemic	-



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67	Anti-Insulin Ab	S	0.5	Elisa	Tue Same day	-	7days at 2-8°C, 2 months at -20c	at 2-8°C, at -20°C	Not recommended	Hemolysis, Icteric, Lipemic	-
68	Anti-Intrinsic Factor	S	0.5	Elisa	sun Nextday	-	5days at 2-8°C, 6 months at -20c	at 2-8°C, at -20°C	Not recommended	-	avoid repeated freeze / thaw cycles
69	Anti-Islet cell Ab	S	0.5	Elisa	10 days Same day	-	7days at 2-8°C, 3 months at -20c	at 2-8°C, at -20°C	Not recommended	Hemolysis, Icteric, Lipemic	-
70	Anti Leptospira Ab (IgG)	S	0.5	IFA	Thu Next day	-	7days at 2-8°C, 2 months at -20c	at 2-8°C, at -20°C	Not recommended	-	-
71	Anti Leptospira Ab (IgM)	S	0.5	IFA	Thu Next day	-	7days at 2-8°C, 2 months at -20c	at 2-8°C, at -20°C	Not recommended	-	-
72	Anti jo-1 Ab	S	0.5	IFA	Daily same day	-	7days at 2-8°C, 2 months at -20c	at 2-8°C, at -20°C	Not recommended	-	-
73	Anti MBP Ab (Anti myelin Basic Protein)	S	0.5	Elisa	30 days same day	-	5days at 2-8°C, 2 months at -20c	at 2-8°C, at -20°C	Not recommended	Gross hemolysis	-



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74	Anti-mitochondrial Ab (AMA)	S,PE	0.5	Elisa	Daily Next day	-	7days at 2-8°C, 3 months at -20c	at 2-8°C, at -20°C	Not recommended	Gross hemolysis	-
75	Anti MOG Ab (Anti Myelin Oligodendrocyte Glycoprotein)	S	0.5	Elisa	Daily 10 day	-	5days at 2-8°C, 1 month at -20c	at 2-8°C, at -20°C	Not recommended	Gross: Hemolysis Lipemic	-
76	Anti Mullerian hormone (AMH)	S	0.5	CLIA	Daily Same day	-	7days at 2-8°C, 3 months at -20c	at 2-8°C, at -20°C	Not recommended	Hemolysis, Icteric, Lipemic	avoid repeated freeze / thaw cycles
77	Anti Musk Ab	S	0.5	Elisa	Daily 30 day	-	7days at 2-8°C, 1 month at -20c	at 2-8°C, at -20°C	Not recommended	Gross hemolysis	-
78	Anti NMDA receptor (N-Methyl D-Aspartate)	S	0.5	IFA	30 day Same day	-	5days at 2-8°C, 2 months at ≤ -20c	at 2-8°C, at -20°C	Not recommended	Gross: Hemolysis Icteric	-
79	Anti Neutrophil Ab	S	0.5	IFA	3 day Same day	-	7days at 2-8°C, 3 months at -20c	at 2-8°C, at -20°C	Not recommended	Hemolysis, Icteric, Lipemic	avoid repeated freeze / thaw cycles
80	Anti Parietal cell Ab	S	0.5	IFA	Daily Next day	-	5days at 2-8°C, 3 months at -20c	at 2-8°C, at -20°C	Not recommended	-	-



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81	Anti Pemphigus Ab (IgG)	S	0.5	IFA	Daily Next day	-	5days at 2-8°C, 3 months at -20c	at 2-8°C, at -20°C	Not recommended	-	-
82	Anti Pemphigus Ab (IgG) (Neoplastic)	S	0.5	IFA	Daily Next day	-	5days at 2-8°C, 3 months at -20c	at 2-8°C, at -20°C	Not recommended	-	-
83	Anti phospholipase A2 receptor Ab	S	0.5	IFA	7day Same day	-	5days at 2-8°C, 3 months at -20c	at 2-8°C, at -20°C	Not recommended	Gross hemolysis	-
84	Anti Phospholipid Ab (IgG)	S,PH	0.5	Elisa	Tue same day	-	5days at 2-8°C, 3 months at -20c	at 2-8°C, at -20°C	Not recommended	Hemolysis, Icteric, Lipemic	-
85	Anti Phospholipid Ab (IgM)	S,PH	0.5	Elisa	Tue same day	-	7days at 2-8°C, 3 months at -20c	at 2-8°C, at -20°C	Not recommended	Hemolysis, Icteric, Lipemic	-
86	Anti Platelet Ab	S	0.5	IFA	sun Next day	-	5 days at 2-8°C, 3 months at -20c	at 2-8°C, at -20°C	Not recommended	-	-
87	Anti PR3	S,PE	0.5	Elisa	Daily Same day	-	7 days at 2-8°C, 3 months at -20c	at 2-8°C, at -20°C	Not recommended	Hemolysis, Icteric, Lipemic	-



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Row	Test name	Sample S.type	minimum s.vol.(ml) sample vol (ml)	Assay method	Testing & Reporting time	Emergency	Storage	Transport	Preparation before sampling	Reject	Others
88	Anti RNP Ab	S	0.5	Elisa	10days Next day	-	7 days at 2-8°C, 3 months at -20c	at 2-8°C, at -20°C	Not recommended	Hemolysis, Icteric, Lipemic	-
89	Anti SCL-70 Ab (Topoisomerase)	S,PE	0.5	Elisa	Daily Same day	-	7 days at 2-8°C, 3 months at -20c	at 2-8°C, at -20°C	Not recommended	Hemolysis, Icteric, Lipemic	-
90	Anti SLA (soluble Liver Ag)	S	0.5	Elisa (SMC)	5days Same day	-	7 days at 2-8°C, 2 months at -20c	at 2-8°C, at -20°C	Not recommended	Gross hemolysis	-
91	Anti smith Ab	S	0.5	Elisa	Sat 5days	-	7 days at 2-8°C, 3 months at -20c	at 2-8°C, at -20°C	Not recommended	Hemolysis, Icteric, Lipemic	-
92	Anti smooth muscle Ab (ASMA)	S	0.5	IFA	Daily 14 days	-	7 days at 2-8°C, 3 months at -20c	at 2-8°C, at -20°C	Not recommended	Gross hemolysis	-
93	Anti sperm Ab	S,Seminal plasma	0.5	IFA	Mon Next day	-	5 days at 2-8°C, 2 months at -20c	at 2-8°C, at -20°C	Not recommended	-	-
94	Anti SSA (Ro) Ab	S	0.5	Elisa	Daily Same day	-	7days at 2-8°C, 3 months at -20c	at 2-8°C, at -20°C	Not recommended	Hemolysis, Icteric, Lipemic	-



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Row	Test name	Sample S.type	minimum s.vol.(ml) sample vol (ml)	Assay method	Testing & Reporting time	Emergency	Storage	Transport	Preparation before sampling	Reject	Others
95	Anti SSB (La) Ab	S	0.5	Elisa	Daily Same day	-	7days at 2-8°C, 3 months at -20c	at 2-8°C, at -20°C	Not recommended	Hemolysis, Icteric, Lipemic	-
96	Anti striated Muscle Ab	S	0.5	Elisa (SMC)	7days Same day	-	5days at 2-8°C, 2 months at -20c	at 2-8°C, at -20°C	Not recommended	Gross hemolysis	-
97	Anti thrombin III	PC (platelet-poor plasma)	0.5	Photometric	Odd days Next day	-	5days at 2-8°C, 1 month at -20c	at 2-8°C, at -20°C	Not recommended	hemolysis	Avoid repeated freeze / thaw cycles Be separated quickly
98	Anti Thyroglobulin Ab	S,PE	0.5	CLIA	Daily Same day	2-4 hrs	7days at 2-8°C, 1 month at -20c	at 2-8°C, at -20°C	Not recommended	Hemolysis, Icteric, Lipemic	-
99	Anti TSH receptor	S	0.5	ECLIA	Daily Same day	2-4 hrs	5days at 2-8°C, 1 month at -20c	at 2-8°C, at -20°C	Not recommended	Hemolysis, Icteric, Lipemic	-
100	Apo A1	S,PE,PH	0.4	Immunoturb	Daily next day	-	7days at 2-8°C, 1 month at -20c	at 2-8°C, at -20°C	Fasting	Hemolysis, Icteric, Lipemic	avoid repeated freeze / thaw cycles
101	Apo B	S,PE,PH	0.4	Immunoturb	Daily next day	-	7days at 2-8°C, 1 month at -20c	at 2-8°C, at -20°C	Fasting	Hemolysis, Icteric, Lipemic	avoid repeated freeze / thaw cycles



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Row	Test name	Sample S.type	minimum s.vol.(ml) sample vol (ml)	Assay method	Testing & Reporting time	Emergency	Storage	Transport	Preparation before sampling	Reject	Others
102	APTT	PC (platelet-poor plasma)	1	Coagulation	Daily Same day	45 min	2hrs at RT 14days at-20°C CRITICAL FROZEN	at RT at-20°C	Notice use of argatroban , heparin,heroine,...	Hemolysis	Be separated quicly
103	Arsenic	WB (E) , U (24h) (see table1)	3,10	AAS	25days Same day	-	7days at 2-8°C, 1 month at -20c	at 2-8°C, at -20°C	Not recommended	-	-
104	Arylsulfatase A	WB (H & dextran 6% in saline9%) (Call with lab)	10	Chemical	3days Same day	-	Be performed quickly	Be performed quickly	Not recommended	Hemolysis Clotting Incorrect anticoagulant	-
105	ASCA (IgG)	S	0.5	Elisa	Daily Same day	-	7days at 2-8°C, 3 months at -20c	at 2-8°C, at -20°C	Not recommended	Hemolysis, Icteric, Lipemic	centrifige 1000 rpm 10 min
106	Ascitic fluid culture	Ascitic fluid	10	Aerobic & An	Daily 4&8 days	-	The same time must be done	at 2-8°C	Avoid using antibiotic	-	-
107	ASO	S	0.5	photometric	Daily Same day	1-2 hrs	5days at 2-8°C, 2 months at -20c	at 2-8°C, at -20°C	Not recommended	Hemolysis, Icteric, Lipemic	-
108	Aspergillus Ab (IgG)	S	0.5	Elisa	Wed Next day	-	5days at 2-8°C, 1 month at -20°C	at 2-8°C, at -20°C	Not recommended	Gross hemolysis	-



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Row	Test name	Sample S.type	minimum s.vol.(ml) sample vol (ml)	Assay method	Testing & Reporting time	Emergency	Storage	Transport	Preparation before sampling	Reject	Others
109	Aspergillus Ab (IgM)	S	0.5	Elisa	Wed Next day	-	5days at 2-8°C, 2 months at -20°C	at 2-8°C, at -20°C	Not recommended	Gross hemolysis	-
110	Aspirin (salicylate)	S	1	HPLC	Odd days same day	-	7days at 2-8°C, 1 month at -20°C	at 2-8°C, at -20°C	Not recommended	-	-
111	B2 Transferrin (CSF leakage)	S & nose or ear discharge	1 & 1	IEF & Immunofixation	2 days same day	-	4hrs at RT, 7days at 2-8°C, 2months at -20°C	at 2-8°C	Avoid Freezing / both samples are required for testing	-	-
112	B2 microglobuline	S, PE, PH, CSF, U, (R&24h) (see table 1)	0.5	CLIA	Daily Next day	-	3 days at 2-8°C, 3months at -20°C (U:2 months & CSF 14 days at -20°)	at 2-8°C, at -20°C	Not recommended	Hemolysis, Icteric, Lipemic	Avoid repeated freeze / thaw cycles
113	BCR/ABL (P190) PCR- ALL (qualitative)	WB (E), BMA (E)	7	PCR	4days Same day	-	2 days at 2-8°C	at 2-8°C	Not recommended	Hemolysis, Frozen, Clotting, Incorrect anticoagulant	-
114	BCR/ABL (P190) PCR- ALL (quantitative)	WB (E), BMA (E)	7	PCR	5days Same day	-	2 days at 2-8°C	at 2-8°C	Not recommended	Hemolysis, Frozen, Clotting, Incorrect anticoagulant	-
115	BCR/ABL (P210) PCR- CML (qualitative)	WB (E), BMA (E)	7	PCR	4days Same day	-	2 days at 2-8°C	at 2-8°C	Not recommended	Hemolysis, Frozen, Clotting, Incorrect anticoagulant	-



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Row	Test name	Sample S.type	minimum s.vol.(ml) sample vol (ml)	Assay method	Testing & Reporting time	Emergency	Storage	Transport	Preparation before sampling	Reject	Others
116	BCR/ABL (P210) PCR-CML (quantitative)	WB (E), BMA (E)	7	PCR	5days Same day	-	2 days at 2-8°C	at 2-8°C	Not recommended	Hemolysis, Frozen, Clotting, Incorrect anticoagulant	-
117	Bence jones protein	U (R&24h) (see table 1)	10	Chemical	Daily Next day	-	7days at 2-8°C, 1 month at -20°C	at 2-8°C, at -20°C	Not recommended	-	-
118	Beta amyloid 1-42	CSF	1	Elisa	10 days Same day	-	1 month at ≤ -20°C CRITICAL FROZEN	at -20°C	Not recommended	Gross hemolysis	-
119	Beta crosslap (CTX)	S, PE	0.5	ECLIA	10 days Same day	-	8 hrs at 2-8°C, 14 days at -20°C	at 2-8°C, at -20°C	Not recommended	hemolysis	-
120	Beta fibrinogen	WB (E)	5	PCR	4 days Same day	-	3 days at RT, 7 days at 2-8°C	at RT at 2-8°C	Not recommended	Hemolysis, Frozen, Clotting, Incorrect anticoagulant	-
121	Beta galactosidase	DBS (see sop1)	5 spots on paper	TMS	25 days same day	-	DBS: with cover 7days at RT, 1month at 2-8°C, 3months at -20°C	at RT at 2-8°C, at -20°C	Not recommended	-	-
122	BhCG	S,PE	0.5	CLIA, ECLIA	Daily Same day	1-2 hrs	5 days at 2-8°C, 3months at -20°C	at 2-8°C, at -20°C	Abstain using of chlorpromazine few days prior test (False positive)	Hemolysis, Icteric, Lipemic	Avoid repeated freeze / thaw cycles



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Row	Test name	Sample S.type	minimum s.vol.(ml) sample vol (ml)	Assay method	Testing & Reporting time	Emergency	Storage	Transport	Preparation before sampling	Reject	Others
123	Bilirubin	S, PE	0.5	Photometric	Daily same day	1-2 hrs	5 days at 2-8°C, 3months at -20°C (dark place)	at 2-8°C, at-20°C (dark place)	Notice to using of hepatotoxic drugs	Hemolysis	Avoid repeated freeze / thaw cycles
124	BK Virus PCR	WB (E) Plasma (EDTA), serum, CSF, Urine, ...	2	Real time PCR	7 days same day	-	8hrs RT, 3 days 2-8°C, 1 m < -20°C	at 2-8°C (Preferred)	Not recommended	Incorrect anticoagulant (heparin), Formalinized fluids, Clot sample, Hemolysis: gross	-
125	BK Virus viral load PCR	WB (E) Plasma (EDTA), serum, CSF, Urine, ...	2	Real time PCR	5 days same day	-	8hrs RT, 3 days 2-8°C, 1 m < -20°C	at 2-8°C (Preferred)	Not recommended	Incorrect anticoagulant (heparin), Formalinized fluids, Clot sample, Hemolysis: gross	-
126	Bleeding time	-	-	Duce	Daily same day	30 min	-	-	Avoid using of anticoagulant drugs	-	-
127	Blood culture	WB	10% of culture medium volume	Aerobic	Daily 5,7 days later	-	The same time transported at 37°C	at RT < 1hr	Avoid using antibiotic	-	-
128	Blood group & RH	WB (E) & S	1, 0.5	Hemagglu	Daily same day	1 hour	1day at RT, 7 days at 2-8°C	at RT, at 2-8°C	Not recommended	Hemolysis, Frozen, Clotting, Rouleaux formation	-



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Row	Test name	Sample S.type	minimum s.vol.(ml) sample vol (ml)	Assay method	Testing & Reporting time	Emergency	Storage	Transport	Preparation before sampling	Reject	Others
129	Bone marrow aspiration culture	BM	1	Aerobic & Ana	Daily 2,5 days later	-	The same time must be done	at 2-8°C	Avoid using antibiotic for 7 days before sample collection	-	-
130	Bone marrow aspiration pathology	WB (E)	1	-	3 days Same day	-	3 months after fixation	at RT	Not recommended	-	-
131	Bone marrow biopsy culture	BMB	-	Aerobic & Ana	Daily + 8 days 2,5 days later	-	The same time must be done	-	Avoid using antibiotic for 7 days before sample collection	-	-
132	Bone marrow biopsy pathology	BMB (10% formalin)	5 mm	-	5 days same day	-	1 month after fixation	at RT	Not recommended	-	-
133	Bordetella pertussis Ab (IgA)	S	0.5	Elisa	7 days same day	-	5 days at 2-8°C, 3 months at -20°C	at 2-8°C at -20°C	Not recommended	Hemolysis	-
134	Bordetella pertussis Ab (IgG)	S	0.5	Elisa	7 days same day	-	5 days at 2-8°C, 3 months at -20°C	at 2-8°C at -20°C	Not recommended	Hemolysis	-
135	Borrelia parasite	WB (E)	1	Giemsa stain	Daily same day	-	1 day at RT, 7 days at 2-8°C	at 2-8°C	Not recommended	-	-



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Row	Test name	Sample S.type	minimum s.vol.(ml) sample vol (ml)	Assay method	Testing & Reporting time	Emergency	Storage	Transport	Preparation before sampling	Reject	Others
136	Borrelia Burgdorferi Ab (IgG) - (Lyme di.)	S, PE, PC, CSF	0.5	CLIA	Sat & Tue Next day	-	7days at 2-8°C, 3 months at -20°C	at 2-8°C at -20°C	Not recommended	Hemolysis, Icteric, Lipemic	-
137	Borrelia Burgdorferi Ab (IgM) - (Lyme di.)	S, PE, PC, CSF	0.5	CLIA	Sat & Tue Next day	-	7days at 2-8°C, 3 months at -20°C	at 2-8°C at -20°C	Not recommended	Hemolysis, Icteric, Lipemic	-
138	Borrelia Burgdorferi Ab - western blot	S, PE	0.5	western blot	By contact	-	7days at 2-8°C, 3 months at -20°C	at 2-8°C at -20°C	Not recommended	Hemolysis, Lipemic	-
139	BRAF gene	Biopsy, paraffin block	B: 5mm, Pb:5mm tissue	PCR	By contact	-	Biopsy (formalin fixed) 1 month at RT, Paraffin block with 5 mm tissue	at RT	Not recommended	-	-
140	Breast dis. culture	Breast dis.	5	Aerobic & An	Daily 2,5 days later	-	The same time must be tested	-	Avoid using antibiotic	-	-
141	Bronchia dis. Culture	Bronchia dis.	5	Aerobic	Daily + 8 days 2,5 days later	-	The same time must be tested	-	Avoid using antibiotic	-	-
142	Brucella Ab (IgG)	S, PE, PC, CSF	0.5	Elisa	Thu Next day	-	7days at 2-8°C, 3 months at -20°C	at 2-8°C at -20°C	Not recommended	Hemolysis, Icteric, Lipemic	Avoid repeated freeze / thaw cycles



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آزمایشگاه پاتوبیولوژی و ژنتیک

Row	Test name	Sample S.type	minimum s.vol.(ml) sample vol (ml)	Assay method	Testing & Reporting time	Emergency	Storage	Transport	Preparation before sampling	Reject	Others
143	Brucella Ab (IgM)	S, PE, PC, CSF	0.5	Elisa	Thu Next day	-	7days at 2-8°C, 3 months at -20°C	at 2-8°C at -20°C	Not recommended	Hemolysis, Icteric, Lipemic	Avoid repeated freeze / thaw cycles
144	Brucella culture	W	5	Aerobic	Daily 3 weeks later	-	at 37°C	at 37°C	Avoid using antibiotic for 7 days before sample collection	-	-
145	Brucella PCR	WB (EDTA), CSF, BM, Lymph node aspiration, BF, ...	1	Qualitative staining	5 days same day	-	1day RT, 2days At 2-8°C, 1 m -20°C	at 2-8°C (preferred)	Not recommended	Incorrect anticoagulant (heparin), Clot sample, Hemolysis	-
146	Buccal smear	Mouth epi. Cells	4 fixed slides	Papanicolaou staining	3 days same day	-	3 months after fixation	-	Not recommended	-	Fixation with ethanol
147	C1 Inhibitor (Concentration) (quantitative)	S	0.5	Immunoturb	Thu Next day	-	2 days at 2-8°C, 3 months at -20°C	at 2-8°C at -20°C	Fasting is recommended	Hemolysis, Icteric, Lipemic	Avoid repeated freeze / thaw cycles
148	C1 Inhibitor (Concentration) (qualitative)	PC	1	SRID	10 days same day	-	2 days at 2-8°C, 3 months at -20°C	at 2-8°C at -20°C	Fasting is recommended	Hemolysis, Icteric, Lipemic	Avoid repeated freeze / thaw cycles
149	C1q	S	0.5	SRID	10 days same day	-	7 days at 2-8°C, 1 month at -20°C	at 2-8°C at -20°C	Not recommended	Gross: Hemolysis, Lipemic	Hemolysis, Icteric, Lipemic



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Row	Test name	Sample S.type	minimum s.vol.(ml) sample vol (ml)	Assay method	Testing & Reporting time	Emergency	Storage	Transport	Preparation before sampling	Reject	Others
150	C2	S	1	SRID	25 days same day	-	1 month at -20°C CRITICAL FROZEN	at -20°C	Not recommended	-	-
151	C3	S,PE,PH	0.5	Photometric	Daily Same day	1-2 hrs	7 days at 2-8°C, 1 month at -20°C	at 2-8°C at -20°C	Not recommended	Hemolysis, Icteric, Lipemic	Avoid repeated freeze / thaw cycles
152	C4	S,PE,PH	0.5	Photometric	Daily Same day	1-2 hrs	7 days at 2-8°C, 1 month at -20°C	at 2-8°C at -20°C	Not recommended	Hemolysis, Icteric, Lipemic	Avoid repeated freeze / thaw cycles
153	CA 125	S,PE,PH,BF	0.5	CLIA or ECLIA	Daily Same day	2-4 hrs	7 days at 2-8°C, 3 months at -20°C	at 2-8°C at -20°C	Not recommended	Hemolysis, Icteric, Lipemic	Avoid repeated freeze / thaw cycles
154	CA 15-3	S,PE,PH,BF	0.5	CLIA	Daily Same day	2-4 hrs	7 days at 2-8°C, 3 months at -20°C	at 2-8°C at -20°C	Not recommended	Hemolysis, Icteric, Lipemic	Avoid repeated freeze / thaw cycles
155	CA 19-9	S,PE,PH,BF	0.5	CLIA	Daily Same day	2-4 hrs	7 days at 2-8°C, 3 months at -20°C	at 2-8°C at -20°C	Not recommended	Hemolysis, Icteric, Lipemic	Avoid repeated freeze / thaw cycles
156	CA 242	S,PE,BF	0.5	Elisa	Sat Next day	-	3 days at 2-8°C, for longer time at -20°C	at 2-8°C at -20°C	Not recommended	Hemolysis, Icteric, Lipemic	Avoid repeated freeze / thaw cycles



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Row	Test name	Sample S.type	minimum s.vol.(ml) sample vol (ml)	Assay method	Testing & Reporting time	Emergency	Storage	Transport	Preparation before sampling	Reject	Others
157	CA 72-4 (TAG-72)	S	0.5	Elisa	Mon Next day	-	3 days at 2-8°C, for longer time at -20°C	at 2-8°C at-20°C	Not recommended	Hemolysis, (Mild, Gross)	-
158	Calcitonin	S	0.5	CLIA or Elisa	Sat & Tue Same day	2-4 hrs	5 days at 2-8°C, for longer time at -20°C	at 2-8°C at-20°C	Fasting is recommended	-	-
159	Calcium	S,BF,U (R & 24h) (see table1)	0.5	Photometric	Daily Same day	1-2 hrs	8 days at 2-8°C, for longer time at -20°C	at 2-8°C at-20°C	Fasting is recommended Avoid using of tourniquet.	Hemolysis, Icteric, Lipemic	Avoid repeated freeze / thaw cycles
160	Calprotectin (stool)	Stool	1gr	Elisa	Odd days Same day	-	6 days at 2-8°C	at 2-8°C	Not recommended	-	-
161	Candida species PCR	BF, Tissue, Pure isolated of candisa sp.	Tissue: 3mm, others 1.0 ml	PCR	5 days Same day	-	BF: 7days at 2-8°C, 14days at -20°C, Isolated: 14 days at 2-8°C	BF: at 2-8°C, at-20°C Tissue: at -20°C Isolated: at 2-8°C	Not recommended	-	-
162	Cannabis (THC) (quantity)	U (R)	2	Enzymatic	By contact	-	2 days at 2-8°C, 1 month at -20°C	at 2-8°C at-20°C	Not recommended	-	-
163	Carbamazepine	S	0.5	HPLC	Daily Same day	-	2 days at 2-8°C, 1 month at -20°C	at 2-8°C at-20°C	Not recommended	-	-



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Row	Test name	Sample S.type	minimum s.vol.(ml) sample vol (ml)	Assay method	Testing & Reporting time	Emergency	Storage	Transport	Preparation before sampling	Reject	Others
164	CBC	WB(E)	1	Flow cytometry	Daily Same day	30 min	4 hrs at RT , 1 day at 2-8°C	at RT & at 2-8°C	Not recommended	Hemolysis, Clotting, Frozen, Incorrect anticoagulant	-
165	CBFB/MYH11 inv. (16)-AML-4	WB(E)	7	PCR	4 days Same day	-	1 hr at RT , 2 days at 2-8°C	at 2-8°C	Not recommended	Hemolysis, Clotting, Frozen, Incorrect anticoagulant	-
166	CCP Ab	S, PE, PH	0.5	Elisa	Daily Same day	2-4 hrs	7 days at 2-8°C, 3 months at -20°C	at 2-8°C, at -20°C	Not recommended	Hemolysis, Icteric, Lipemic	-
167	CD markers	WB(E), WB(H), BF (see table4)	0.5	Flow cytometry	Daily 3days later	-	2 days at RT	at RT	Not recommended	Hemolysis, Clotting, Frozen, Incorrect anticoagulant	-
168	CEA	S, PE, PH, BF	0.5	CLIA	Daily same day	2-4 hrs	5 days at 2-8°C, 3 months at -20°C	at 2-8°C, at -20°C	Not recommended	Hemolysis, Icteric, Lipemic	-
169	Cell Free DNA (NIPT)	WB (special tube) (see sop 4)	20	NGS	12 days Next day	-	5 days at RT	at RT	Not recommended	-	-
170	Ceruloplasmin	S, PE, PH	0.5	Immunoturb	Daily Next day	1-2 hrs	7 days at 2-8°C, for longer time at -20°C	at 2-8°C, at -20°C	Fasting is recommended	Hemolysis, Icteric, Lipemic	-



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Row	Test name	Sample S.type	minimum s.vol.(ml) sample vol (ml)	Assay method	Testing & Reporting time	Emergency	Storage	Transport	Preparation before sampling	Reject	Others
171	CH50	S	1	Elisa	Sat Same day	-	2 hrs at RT, 14 days at -20°C CRITICAL FROZEN	at -20°C	Not recommended	Hemolysis	Avoid repeated freeze / thaw cycles
172	Chlamydia pneumoniae PCR	Respiratory samples, Pleural fluid	2	Qualitative PCR	By contact Same day	-	1day RT, 2w 2-8°C, 1m -20°C	2-8°C (preferred)	Not recommended	Calcium alginate tipped, wood and gel media swab	-
173	Chlamydia trachomatis (IgG)	S	1	Elisa	Mon & Thu Next day	-	1day at RT, 7days at 2-8°C, 3months at -20°C	at 2-8°C, at -20°C	Not recommended	-	-
174	Chlamydia trachomatis (IgM)	S	1	Elisa	Mon Next day	-	1day at RT, 7days at 2-8°C, 3months at -20°C	at 2-8°C, at -20°C	Not recommended	-	-
175	Chlamydia trachomatis PCR	Respiratory samples, Urine (first), Urethra & Vaginal Swab, Thin Prep, Ocular dis.	1ml fluid / 2swabs	Qualitative PCR	3 days Same day	-	1w RT, 1w 2-8°C, 3m -20°C	2-8°C (preferred)	Not recommended	Formalinized sample, bloody sample	-
176	Chloride	S, PH,BF, U(R & 24h) (see table1)	1	Photometric	Daily Same day	1 hour	24 hrs. at RT, 7 days at 2-8°C, 3 months at -20°C	at 2-8°C, at -20°C	Fasting is recommended	Hemolysis, Icteric, Lipemic	Avoid repeated freeze / thaw cycles



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Row	Test name	Sample S.type	minimum s.vol.(ml) sample vol (ml)	Assay method	Testing & Reporting time	Emergency	Storage	Transport	Preparation before sampling	Reject	Others
177	Cholesterol	S, PE, PH	0.5	Photometric	Daily Same day	1-2 hrs	24 hrs. at RT, 7 days at 2-8°C, 3 months at -20°C	at 2-8°C, at -20°C	Fasting is recommended	Hemolysis, Icteric, Lipemic	Avoid repeated freeze / thaw cycles
178	Cholinesterase	S, PE, PH	0.5	Photometric	Daily Same day	-	Serum: 7days at 2-8°C, 3months at -20°, WB: 3days at 2-8°C	Serum: at 2-8°C, at -20°C WB: at 2-8°C	Not recommended	Hemolysis, Lipemic	-
179	Chromogranin A	S	1	Elisa	10 days Same day	-	3 months at -20°C CRITICAL FROZEN	at -20°C	Not recommended	Gross hemolysis	-
180	CIC (Circulating Immune Complex)	S	0.5	Immunoturb	Even days 2days	-	2 days at 2-8°C, 1 month at -20°C	at -20°C, at -20°C	Fasting is recommended	-	-
181	Citrate	U (24h & R) (see table1) pH=2	10	Enzyme Colorimetry	Tue 7days	-	7days at 2-8°C, 1 month at -20°	at 2-8°C, at -20°C	Not recommended	-	-
182	Clonazepam	S	2	HPLC	Odd days Same day	-	7days at 2-8°C, 3 months at -20°C	at 2-8°C, at -20°C	Not recommended	-	-
183	Clostridium difficile toxins (A & B)	Stool	1gr	Elisa	Thu Same day	-	2 hrs. at RT, 3 days at 2-8°C, 2 months at -20°C	at 2-8°C, at -20°C	Not recommended	-	-



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Row	Test name	Sample S.type	minimum s.vol.(ml) sample vol (ml)	Assay method	Testing & Reporting time	Emergency	Storage	Transport	Preparation before sampling	Reject	Others
184	Clotting time	WB	1	Tube method	Must be tested the same time same day	30 min	-	-	Abstain using of anti-coagulant drugs for a few days	-	-
185	CMV Ab(IgG)	S, PE, PH, PC, BF, CSF	0.5	CLIA	Daily Next day	-	7 days at 2-8°C, 3 months at -20°C	at 2-8°C, at -20°C	Not recommended	Hemolysis, Icteric, Lipemic	Avoid repeated freeze / thaw cycles
186	CMV Ab(IgG) - avidity	S	0.5	Elisa	Thu Next day	-	7 days at 2-8°C, 3 months at -20°C	at 2-8°C, at -20°C	Not recommended	Hemolysis, Icteric, Lipemic	Avoid repeated freeze / thaw cycles
187	CMV Ab(IgM)	S, PE, PH, PC, BF, CSF	0.5	Elisa	7 days Next day	-	7 days at 2-8°C, 3 months at -20°C	at 2-8°C, at -20°C	Not recommended	Hemolysis, Icteric, Lipemic	Avoid repeated freeze / thaw cycles
188	CMV Ag (pp65)	WB (E)	3	DIF	Daily 2days later	-	6hrs at RT	at RT	Not recommended	Hemolysis, Clotting, Incorrect, anticoagulant	-
189	CMV PCR	CSF, WB (EDTA), Tissue, Respiratory samples Amniotic fluid, Urine, Body fluids, Serum, PE, BM	Tissue 5mm, others 1ml Urine 10ml	Qualitative PCR	7 days Same day	-	WB: 8hrs RT, 3days at 2-8°C, 1year at -20°C Others: 8hrs RT, 3days at 2-8°C, 3months at -20°C	Tissue: Frozen Others: at 2-8°C (preferred)	Not recommended	Incorrect anticoagulant (heparin), Formalinized fluids, Tissue (formalin fixes), Calcium alginate tipped, Wood and gel media swab, Hemolysis	-



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Row	Test name	Sample S.type	minimum s.vol.(ml) sample vol (ml)	Assay method	Testing & Reporting time	Emergency	Storage	Transport	Preparation before sampling	Reject	Others
190	CMV PCR (quantitative)	WB (E)	2	Real time PCR	4 days Same day	-	WB: 8hrs RT, 3 days at 2-8°C, 1year at -20°C	at 2-8°C at -20°C	Not recommended	Incorrect anticoagulant (heparin), Hemolysis	-
191	Cocaine	U(R)	1	Photometric	By contact	-	7 days at 2-8°C 1 month at -20°C	at 2-8°C at -20°C	Not recommended	-	-
192	Cold Agglutinin	S	0.5	Agglutination	Daily Next day	-	7 days at 2-8°C 1 month at -20°C	at 2-8°C	Not recommended	-	-
193	Consult & Block pathology	Block & Slide	-	-	4 days Same day	-	Minimum 15 years after fixation	-	Not recommended	-	-
194	Coombs wright	S,BF,CSF	1	Agglutination	Daily Same day	-	2days at RT, 7 days at 2-8°C	at 2-8°C at -20°C	Not recommended	Hemolysis	-
195	Coombs (direct)	WB (E)	0.5	Hemagglutination	Daily Same day	-	1 day at RT, 5 days at 2-8°C	at 2-8°C	Not recommended	Hemolysis, Clotting, Frozen	-
196	Coombs (Indirect)	S	0.5	Hemagglutination	Daily Same day	-	5 days at 2-8°C, 1 month at -20°C	at 2-8°C at -20°C	Not recommended	Hemolysis	-



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Row	Test name	Sample S.type	minimum s.vol.(ml) sample vol (ml)	Assay method	Testing & Reporting time	Emergency	Storage	Transport	Preparation before sampling	Reject	Others
197	Copper	S, PH, BF U(R & 24h) (see table1)	0.5 , 10	Photometric	Daily Same day	1-2 hrs	7 days at 2-8°C, 3 months at - 20°C	at 2-8°C at -20°C	Not recommended	Hemolysis, Icteric, Lipemic	-
198	Cortisol	S, U(R & 24h) (see table1)	0.5 , 5	S: CLIA U: Elisa	Even days Same day	2-4 hrs	7 days at 2-8°C, 3 months at - 20°C	at 2-8°C at -20°C	Avoid using of spironolactone, quinacrine, Abstain stress, ...	Hemolysis, Icteric, Lipemic	Sampling time between 6-8 am.
199	C-peptide	S, PH	0.5	CLIA	S: Daily U: Even days Next day	2-4 hrs	7 days at 2-8°C, 3 months at - 20°C	at 2-8°C at -20°C	Fasting	Hemolysis, Icteric, Lipemic	Avoid repeated freeze/ thaw cycles
200	CPK	S, PH, BF	0.5	Photometric	Daily Same day	1-2 hrs	7 days at 2-8°C, 1 month at - 20°C (dark place)	at 2-8°C at -20°C	Avoid heavy physical activity Prior test	Hemolysis, Icteric, Lipemic	Avoid repeated freeze/ thaw cycles
201	CK-MB	S, PH	0.5	Photometric	Daily Same day	1-2 hrs	7 days at 2-8°C, 1 month at - 20°C (dark place)	at 2-8°C at -20°C	Avoid heavy physical activity Prior test	Hemolysis, Icteric, Lipemic	Avoid repeated freeze/ thaw cycles
202	Creatine	U (R & 24h) (see table1)	10	Photometric	2 Days Same day	1-2 hrs	7 days at 2-8°C, 3 months at - 20°C	at 2-8°C at -20°C	Not recommended	-	-
203	Creatinine	S, PE, PH, U (R & 24h) (see table1)	0.5	Photometric	Daily Same day	1-2 hrs	7 days at 2-8°C, 3 months at - 20°C	at 2-8°C at -20°C	Avoid using of nephrotoxic drugs.	Hemolysis, Icteric, Lipemic	Avoid repeated freeze/ thaw cycles



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Row	Test name	Sample S.type	minimum s.vol.(ml) sample vol (ml)	Assay method	Testing & Reporting time	Emergency	Storage	Transport	Preparation before sampling	Reject	Others
204	Creatinine clearance	S & U (R & 24h) (see table1)	0.2 , 3	Photometric	Daily Same day	-	7 days at 2-8°C, 3 months at - 20°C	at 2-8°C at -20°C	Avoid using of nephrotoxic drugs.	Hemolysis, Icteric, Lipemic	Avoid repeated freeze/ thaw cycles
205	CRP	S, PH, BF	0.2	Immunoturb	Daily Same day	1-2 hrs	7 days at 2-8°C, 3 months at - 20°C	at 2-8°C at -20°C	Not recommended	Hemolysis, Icteric, Lipemic	-
206	CRP high sensitive	S, PH, BF	0.2	Immunoturb	Daily Same day	-	7 days at 2-8°C, 3 months at - 20°C	at 2-8°C at -20°C	Not recommended	Hemolysis, Icteric, Lipemic	Avoid repeated freeze/ thaw cycles
207	Cryoglobulin	S (see others column)	1	Percipitation	Daily 7 days later	-	4 days at RT 7 days at 2-8°C	at RT, at 2-8°C	Fasting	Hemolysis, Icteric, Lipemic, Frozen	Whole blood drawn in a Pre- warmed (37°C) tube or syringe. Maintain collected blood at 37°C until clotting is complete. Separate serum from cells using a 37°C centrifuge, if possible.
208	Cryptococcus Neoformans Ag	CSF, S	1	Latex Agglutination	25 days Same day	-	14 days at -20°C CRITICAL FROZEN	at -20°C	Not recommended	-	-
209	Cryptococcus Neoformans PCR	BF, Tissue	Tissue: 5mm BF: 1.0 ml	PCR	5 days Same day	-	7 days at 2-8°C, 14 days at - 20°C	at 2-8°C at -20°C	Not recommended	-	-



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Row	Test name	Sample S.type	minimum s.vol.(ml) sample vol (ml)	Assay method	Testing & Reporting time	Emergency	Storage	Transport	Preparation before sampling	Reject	Others
210	Cryptosporidium Parvum	Stool	2.0 gr.	Direct smear, ziehl neelsen stain	Daily 2days later	-	1 day at RT, 2days at 2-8°C	at RT, at 2-8°C	Not recommended	-	-
211	CSF electrophoresis (OCB)	S & CSF	1	IEF & Immuno fixation	Odd days Next day	-	7 days at 2-8°C, 3months at -20°C	at 2-8°C at -20°C	Not recommended	-	-
212	CSF Culture	CSF	1	Aerobic & Anaerobic	Daily 2, 5, 8 days later	-	The same time must be tested	at RT	Abstain using antibiotic, second tube sampling is appropriate	-	-
213	CSF IgG	CSF	0.2	Immunoturb	Even days Same day	-	7 days at 2-8°C, 3months at -20°C	at 2-8°C at -20°C	Not recommended	-	-
214	Cyclosporine	WB(E)	1	CMLA	Daily Next day	-	5 days at 2-8°C, 1month at -20°C	at 2-8°C at -20°C	Not recommended	Hemolysis, Icteric, Lipemic	-
215	Cyfra 21	S, PE, PH	1	ECLIA	Thu Next day	-	4 weeks at 2-8°C, 4 months at -20°C	at 2-8°C at -20°C	Not recommended	-	-
216	Cystatine C	S, PE	0.5	Immunoturbid	Even days 2 days	-	7 days at 2-8°C, 2months at -20°C	at 2-8°C at -20°C	Not recommended	-	Avoid repeated freeze/ thaw cycles



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Row	Test name	Sample S.type	minimum s.vol.(ml) sample vol (ml)	Assay method	Testing & Reporting time	Emergency	Storage	Transport	Preparation before sampling	Reject	Others
217	Cystine	U (R & 24h) (see table1)	5	Chemical	Daily Next day	-	1 month at -20°C CRITICAL FROZEN	at -20°C	Avoid using of penicillin amine few days prior to collection	-	-
218	Cytology	BF, U (ethanol 70%) Or (formalin added) Formalin 10% (10% solution vol) (see sop 3)	10	Papanicolaou staining	4 days Same day	-	2 days at 2-8°C prepared slide, 3 months at RT	Fluid: at 2-8°C Slide: at RT	Not recommended	-	-
219	D-dimer	PC, PH (platelet-poor plasma)	1	Immunoturb	Daily Same day	2-4 hrs	8 hrs at 2-8°C, 1 month at -20°C	at 2-8°C at -20°C	Not recommended	-	Centrifuge at 1500 rpm 15 min, Avoid repeated freeze / thaw cycles
220	Delta aminolevulinic acid (D-ALA)	U (R & 24h) (see table1)	10	Chemical	30 days Same day	-	4 days at 2-8°C, 1 month at -20°C, (dark place)	at 2-8°C at -20°C	Not recommended	-	Increased ALA concentration is associated with exposure to alcohol, lead, and a variety of other agents. Massive elevation of ALA occurs in the acute porphyrias and hereditary tyrosinemia.
221	DHEA SO4	S, PE, PH	0.5	ECL	Daily Same day	2-4 hrs	7 days at 2-8°C, 2 months at -20°C	at 2-8°C at -20°C	Not recommended	Hemolysis, Icteric, Lipemic	Avoid repeated freeze / thaw cycles
222	Diazepam	S	2	HPLC	3 days Same day	-	7 days at 2-8°C, 2 months at -20°C	at 2-8°C at -20°C	Not recommended	-	-



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Row	Test name	Sample S.type	minimum s.vol.(ml) sample vol (ml)	Assay method	Testing & Reporting time	Emergency	Storage	Transport	Preparation before sampling	Reject	Others
223	Dihydrotestosterone (DHT)	S	0.5	Elisa	Mon Next day	-	1 day at 2-8°C 1 month at -20°C	at 2-8°C at -20°C	Not recommended	-	-
224	Digoxin	S	0.5	ECL	Daily Same day	-	7 days at 2-8°C 3 months at -20°C	at 2-8°C at -20°C	Abstain using of neomycin spironolactone, ... 7 days Prior to collection	Hemolysis, Icteric, Lipemic	Avoid repeated freeze/ thaw cycles
225	Diphtheria Ab (IgG)	S	0.5	Elisa	15 days Same day	-	7 days at 2-8°C for longer time at -20°C	at 2-8°C at -20°C	Not recommended	Hemolysis, Icteric, Lipemic	Avoid repeated freeze/ thaw cycles
226	Direct immunofluorescence (DIF)	Biopsy in normal saline on ice	-	IFA	By contact Same day	-	6 hrs on ice, prepared slide, 3 months at -20°C	at -20°C	Not recommended	-	-
227	DNA Fragmentation Index (SDFA)	Semen	1	-	3 days Same day	-	1 hr at RT 14 days at -20°C	at RT at -20°C	Not recommended	-	Avoid repeated freeze/ thaw cycles
228	Dopamine	U (24h & R) (see table1) Serum	5	HPLC	Thu 35 days	-	7 days at 2-8°C 1 month at -20°C	at 2-8°C at -20°C	Not recommended	Patient prep: Abstain from medications for 72 hours before collection.	-
229	DU factor	WB (E)	1	Hemeagglut.	Daily Same day	-	1 day at RT 7 days at 2-8°C	at 2-8°C	Not recommended	Hemolysis, freeze, Clot Sample, Rouleaux Formation	-



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Row	Test name	Sample S.type	minimum s.vol.(ml) sample vol (ml)	Assay method	Testing & Reporting time	Emergency	Storage	Transport	Preparation before sampling	Reject	Others
230	Dysmorphic RBC	U. RX1 or UR. R x 3 samples interval half to one hour	10	Phase contrast microscope	Daily Same day	1 hour	Rapidly must be analyzed	-	Not recommended	-	-
231	Ear dis. Culture	Ear dis.	-	Aerobic	Daily 2, 5 days later	-	The same time must be tested	at RT	Avoid using antibiotic	-	-
232	EBV Ab (IgG)	S, PE, PH, PC, BF, CSF	0.5	Elisa	Daily Next day	-	7 days at 2-8°C 3 months at -20°C	at 2-8°C at -20°C	Not recommended	Hemolysis, Icteric, Lipemic	Avoid repeated freeze/ thaw cycles
233	EBV Ab (IgM)	S, PE, PH, PC, BF, CSF	0.5	Elisa	Daily Next day	-	7 days at 2-8°C 3 months at -20°C	at 2-8°C at -20°C	Not recommended	Hemolysis, Icteric, Lipemic	Avoid repeated freeze/ thaw cycles
234	EBV PCR	CSF, Serum, WB (EDTA), Tissue, Plasma (EDTA), Saliva, Body fluids, BM	Tissue 5 mm, others 1 ml	Qualitative PCR	7 Days Same day	-	WB: 8 hrs RT, 3 days 2-8°C others: 24 hrs RT, 5 days 2-8°C, 1yr -20°C, Tissue Fresh Freeze 1 yr. Paraffin block atRT(unlimited)	at 2-8°C (Preferred)	Not recommended	Incorrect anticoagulant (heparin), Hemolysis, Clot sample (WB), Formalinized sample	-
235	EGFR gene (Epidermal Growth Factor Receptor)	Biopsy, Paraffin block	B: 5mm, Pb: 5mm tissue	PCR	By contact	-	Biopsy, (formalin fixed) 1 month at RT, Paraffin block with 5mm tissue	at RT	Not recommended	-	-



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Row	Test name	Sample S.type	minimum s.vol.(ml) sample vol (ml)	Assay method	Testing & Reporting time	Emergency	Storage	Transport	Preparation before sampling	Reject	Others
236	Elastase stool	stool	3.0 gr	Elisa	Wed Next day	-	2 days at RT, 7 days at 2-8°C, 6 months at -20°C	at RT, at 2-8°C, at -20°C	Not recommended	-	-
237	Entamoeba histolytica Ab (IgG)	S	0.5	Elisa	Mon Next day	-	7 days , at 2-8°C, 3 months at -20°C	at 2-8°C at -20°C	Not recommended	Hemolysis, Icteric, Lipemic	Avoid repeated freeze/thaw cycles
238	Enterovirus PCR	WB (E), Serum, Plasma (E), CSF, Respiratory samples, Stool, Swab sample, Body fluids, Urine	1	Qualitative PCR	5 days Same day	-	1 hr RT, 3 days at 2-8°C, 3months at <-20°C	2-8°C (Preferred) or <-20°C	Not recommended	Incorrect anticoagulant (heparin), Formalinized fluids, Calcium alginate tipped, wood and gel media swab, Clot sample	-
239	Eosinophil count	WB, Nasal dis., U (R), BF, ...	1	Direct smear Giemsa staining	Daily Next day	-	The same time must be tested	at RT	Not recommended	-	-
240	Erythropoietin (EPO)	S (After sampling and before separating, sample must stored at 2-8°C, then separated at refrigerated centrifuge)	0.5	CLIA	Daily Same day	2-4 hrs	1 day at 2-8°C, 3 months at -20°C	at 2-8°C at -20°C	Not recommended	Hemolysis, Icteric, Lipemic	Avoid repeated freeze/thaw cycles. Separated at refrigerated centrifuge
241	ESR	WB (C)	2	Automation	Daily Same day	1 hour	4 hrs, at RT, 12 hrs. at 2-8°C	at RT, at 2-8°C	Not recommended	Hemolysis, Clotting	-



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Row	Test name	Sample S.type	minimum s.vol.(ml) sample vol (ml)	Assay method	Testing & Reporting time	Emergency	Storage	Transport	Preparation before sampling	Reject	Others
242	Estradiol	S, PE	0.5	CLIA	Daily Same day	2-4 hrs	5 days at 2-8°C, 3 months at -20°C	at 2-8°C at -20°C	Fasting	Hemolysis, Icteric, Lipemic	Avoid repeated freeze/ thaw cycles
243	Ethosuximide	S	0.5	HPLC	Daily Next day	-	7 days at 2-8°C, 1 month at -20°C	at 2-8°C at -20°C	Not recommended	-	-
244	Eye dis. Culture	Eye dis.	-	Aerobic	Daily 2,5 days later	-	The same time must be tested	at RT	Avoid using antibiotic	-	-
245	Factor II, V, VII, VIII, IX, X, XI, XII, XIII coagulation	PC, (Platelet - Poor plasma)	1	coagulation	Tue Next day	-	2 hrs at RT, 14 days at -20°C, 6 months at -80°C	at -20°C	Not recommended	Hemolysis, Incorrect, anticoagulant	Avoid repeated freeze/ thaw cycles Be separated quickly / Two times centrifugation is preferred.
246	Factor II (GA 20210) mutation	WB (E)	5	PCR	4 days Same day	-	1 day at RT, 7 days at 2-8°C	at -20°C	Not recommended	Hemolysis, Frozen, Clotting, Incorrect, anticoagulant	-
247	Factor V Leiden (APCR)	PC, (Platelet - Poor plasma)	1	coagulation	Daily Next day	-	2 hrs at RT, 14 days at -20°C, 6 months at -80°C	at -20°C	Not recommended	Hemolysis, Incorrect, anticoagulant	Avoid repeated freeze/ thaw cycles Be separated quickly / Two times centrifugation is preferred.
248	Factor V mutation	WB (E)	5	PCR	5 days Same day	-	3 days at RT, 7 days at 2-8°C	at RT at 2-8°C	Not recommended	Hemolysis, Frozen, Clotting, Incorrect, anticoagulant	-



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Row	Test name	Sample S.type	minimum s.vol.(ml) sample vol (ml)	Assay method	Testing & Reporting time	Emergency	Storage	Transport	Preparation before sampling	Reject	Others
249	Factor VII mutation	WB (E)	5	PCR	5 days Same day	-	3 days at RT, 7 days at 2-8°C	at RT at 2-8°C	Not recommended	Hemolysis, Frozen, Clotting, Incorrect, anticoagulant	-
250	Factor XIII mutation	WB (E)	5	PCR	5 days Same day	-	3 days at RT, 7 days at 2-8°C	at RT at 2-8°C	Not recommended	Hemolysis, Frozen, Clotting, Incorrect, anticoagulant	-
251	Factor B	S	0.5	SRID	20 days Same day	-	6 months at -20°C CRITICAL FROZEN	at -20°C	Not recommended	Hemolysis, gross	Avoid repeated freeze/ thaw cycles
252	Factor H	S	0.5	SRID	20 days Same day	-	6 months at -20°C CRITICAL FROZEN	at -20°C	Not recommended	Hemolysis, gross	-
253	Factor I (i)	S	0.5	SRID	20 days Same day	-	6 months at -20°C CRITICAL FROZEN	at -20°C	Not recommended	Hemolysis, gross	-
254	Fasciola Ab (IgG)	S	0.5	Elisa	Mon Next day	-	2 days at 2-8°C, 1 month at -20°C	at 2-8°C at -20°C	Not recommended	Hemolysis, Icteric, Lipemic	Avoid repeated freeze/ thaw cycles
255	FDP (Fibrin / Fibrinogen Degradation split products)	PC (Platelet poor plasma)	1	Latex Agglutination	Daily Same day	-	4hrs at RT, 1 month at -20°C CRITICAL FROZEN	at RT at -20°C	Not recommended	Hemolysis, Increased RF titer, sample with fibrin	-



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Row	Test name	Sample S.type	minimum s.vol.(ml) sample vol (ml)	Assay method	Testing & Reporting time	Emergency	Storage	Transport	Preparation before sampling	Reject	Others
256	Ferritin	S, PE	1	CLIA	Daily Same day	2-4 hrs	1 day, at RT 2 days at 2-8°C 3 months at -20°	at 2-8°C, at -20°C	avoid using of 7 days prior to collection	Hemolysis, Icteric, Lipemic	Avoid repeated freeze/ thaw cycles
257	Fibrinogen	PC, (Platelet - poor plasma)	0.5	Coagulation	Daily Same day	1 hour	2hrs, at RT 1 day at 2-8°C 1 month at -20°	at 2-8°C, at -20°C	Not recommended	Hemolysis, Icteric, Lipemic	Be separated quickly
258	Fluid analysis	BF	1	Microscopic count	Daily Same day	-	The same time must be tested	at RT < 1 hr	Not recommended	-	-
259	FNA (Fine Needle Aspiration)	Asp. Fluid	1 ml fluid or 3 slides	Papanicolaou staining	4 days Same day	-	Fluid 1 day at 2-8°C, after fixation 3 months for prepared slides at RT.	at RT	Not recommended	-	Slides should be prepared at the same time and dried in air and fixed
260	Folic acid	S, WB (E)	0.5, 1	ECLIA	Daily Same day	3-4 hrs	4 hrs, at RT 2 days at 2-8°C, 3 months at -20°C out of light, WB must be treated same time and stored at -20°C.	at 2-8°C, at -20°C	Fasting	S: Hemolysis, Icteric, Lipemic WB: Frozen, Clotting, Incorrect, anticoagulant	Avoid repeated freeze/ thaw cycles



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Row	Test name	Sample S.type	minimum s.vol.(ml) sample vol (ml)	Assay method	Testing & Reporting time	Emergency	Storage	Transport	Preparation before sampling	Reject	Others
261	Free BhCG	S	1	ECLIA	Daily	2-4 hrs	8hrs. at RT, 7 days at 2-8°C, 3 months at -20°C	at 2-8°C, at -20°C	Not Recommended	Hemolysis	Cold chain compliance during transport. Avoid reported freeze / thaw cycles
262	Free cortisol	U (R & 24h) (see table1)	5	CLIA	Daily Same day	2-4 hrs	7 Days at 2-8°C, 3 months at -20°C	at 2-8°C, at -20°C	Not Recommended	-	-
263	Free Estriol	S	0.5	ELISA	Daily	2-4 hrs	8hrs. at RT, 7 days at 2-8°C, 1 month at -20°C	at 2-8°C, at -20°C	Not Recommended	Hemolysis, Icteric, Lipemic	-
264	Free Fatty Acid (NEFA)	S	0.5	Immunoturb	5 Days	-	7 Days at 2-8°C, 3 months at -20°C	at 2-8°C, at -20°C	Fasting	Gross Hemolysis	-
265	Free kappa	S, U (R)	0.5, 1	Immunoturb	Sat	-	7 Days at 2-8°C, 1 month at -20°C	at 2-8°C, at -20°C	Not Recommended	Hemolysis, Icteric, Lipemic	Avoid reported freeze / thaw cycles
266	Free lambda	S, U (R)	0.5, 1.0	Immunoturb	Sat	-	7 Days at 2-8°C, 1 month at -20°C	at 2-8°C, at -20°C	Not Recommended	Hemolysis, Icteric, Lipemic	Avoid reported freeze / thaw cycles
267	Free PSA	S	0.5	CLIA	Daily	2-4 hrs	7 Days at 2-8°C, 3 months at -20°C	at 2-8°C, at -20°C	Not Recommended	Hemolysis, Icteric, Lipemic	-



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Row	Test name	Sample S.type	minimum s.vol.(ml) sample vol (ml)	Assay method	Testing & Reporting time	Emergency	Storage	Transport	Preparation before sampling	Reject	Others
268	Free T3	S, PE, PH, PC	0.5	ECLIA	Daily Same day	2-4 hrs	7 Days at 2-8°C, 1 month at -20°C	at 2-8°C, at -20°C	Notice to drug interference such as Salicylates, ...	Hemolysis, Icteric, Lipemic	Avoid reported freeze / thaw cycles
269	Free T4	S, PE, PH, PC	0.5	ECLIA	Daily Same day	2-4 hrs	7 Days at 2-8°C, 1 month at -20°C	at 2-8°C, at -20°C	Notice to drug interference such as Salicylates, ...	Hemolysis, Icteric, Lipemic	Avoid reported freeze / thaw cycles
270	Free testosterone	S	0.5	Elisa	Daily Next day	2-4 hrs	8 hrs at RT 7 days at 2-8°C 3 months at -20°C	at 2-8°C, at -20°C	Not Recommended	Hemolysis, Icteric, Lipemic	-
271	Fructosamine	S	0.5	Chemical	4 days Same day	-	2 days at RT 7 days at 2-8°C 1 month at -20°C	at 2-8°C, at -20°C	Not Recommended	Gross, Hemolysis	-
272	FSH	S, PC	0.5	CLIA	Daily Same day	2-4 hrs	3 Days at 2-8°C, 3 months at -20°C	at 2-8°C, at -20°C	Not Recommended	Hemolysis, Icteric, Lipemic	-
273	FTA Ab	S	0.5	CLIA	Sun & Wed Next day	-	1 day at RT 7 days at 2-8°C 6 months at -20°C	at 2-8°C, at -20°C	Fasting is Recommended	Hemolysis, Icteric, Lipemic	-
274	FTA Ab (abs)	S, PE, PH, CSF	0.5	IFA	1 week later	-	1 day at RT 7 days at 2-8°C 6 months at -20°C	at 2-8°C, at -20°C	Fasting is Recommended	Hemolysis, Icteric, Lipemic	-



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Row	Test name	Sample S.type	minimum s.vol.(ml) sample vol (ml)	Assay method	Testing & Reporting time	Emergency	Storage	Transport	Preparation before sampling	Reject	Others
275	Fungi Direct smear & culture	Skin, scalp, nail, hair, BF,...	-	-	Daily 1, 8, 15 days later	-	BF: The same day must be tested Others: 5 days at RT	at RT	Avoid using antibiotic & washing	-	-
276	G6PD (quan. & qual.)	WB (E & H & ACD & C), DBS (see sop1)	WB: 1 ml, DBS: 5 spots on paper	Floures. & chem.	Daily Next day	2-4 hrs	1 day at RT, 7 days at 2-8°C	at 2-8°C	Not Recommended	Hemolysis, Frozen, Clotting, Incorrect, anticoagulant	-
277	Gabapentin	S	1	HPLC	4 days Same day	-	7 day at 2-8°C, 3 months at -20°C	at 2-8°C, at -20°C	Not Recommended	-	-
278	Galactomannan	S, BAL	0.5	Elisa	Wed 10 days	-	7 days at 2-8°C, 3 months at -20°C	at 2-8°C, at -20°C	Not Recommended	-	-
279	Galactose Blood	DBS (see sop1)	2 spots on Paper	Chemical	Thu Next day	-	DBS: with cover 7 days at RT, 1 month at 2-8°C, 3 months at -20°C	at RT, at 2-8°C, at -20°C	Not Recommended	-	-
280	Galactose 1PUT	DBS (see sop1)	4 spots on Paper	Chemical	30 days Same day	-	DBS: with cover 7 days at RT, 1 month at 2-8°C, 3 months at -20°C	at RT, at 2-8°C, at -20°C	Not Recommended	-	-



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Row	Test name	Sample S.type	minimum s.vol.(ml) sample vol (ml)	Assay method	Testing & Reporting time	Emergency	Storage	Transport	Preparation before sampling	Reject	Others
281	Gamma GT	S, PE	0.5	Photometric	Daily Same day	1-2 hrs	7 days at 2-8°C, 2 months at -20°C	at 2-8°C, at -20°C	Fasting is Recommended. Avoid using OCP	Hemolysis, Icteric, Lipemic	Avoid reported freeze / thaw cycles
282	Ganglioside Ab panel	S	1	Immunoblot	Wed Next day	-	5 days at 2-8°C, 2 months at -20°C	at 2-8°C, at -20°C	Not Recommended	Gross: Hemolysis, Lipemic	GMI, GM2, GM3, GD1a, GT1b, GQ
283	Gastrin	S, PE, PH	0.5	ELCIA	Daily Next day	2-4 hrs	5 hrs at 2-8°C, 1 month at -20°C	at 2-8°C, at -20°C	Fasting. The patient is not exposed to radioactive material few days before test.	Hemolysis, Icteric	Avoid reported freeze / thaw cycles. Refrigerated Centrifuge
284	GCT (glucose ehallenge test)	S	0.5	Photometric	Daily Same day	1-2 hrs	5 days at 2-8°C, 6 months at -20°C	at 2-8°C, at -20°C	Fasting	-	1 fasting blood sample and 1 blood sample after 1 hr. ingestion 50 gr. Oral glucose
285	Glucagon	PE	2	RIA	25 Days Same day	-	2 months at ≤ -20°C CRITICAL FROZEN	at -20°C	Fasting	Gross: Hemolysis, Incorrect anticoagulant	-
286	Glucose	S, PE, BF, U, (R & 24h), ... (see table1)	0.2	Photometric	Daily Same day	1-2 hrs	5 days at 2-8°C, 6 months at -20°C	at 2-8°C, at -20°C	Fasting	Hemolysis, Icteric, Lipemic	Avoid reported freeze / thaw cycles
287	Growth hormone	S	0.2	CLIA	Daily Same day	2-4 hrs	2 days at 2-8°C, 2 months at -20°C	at 2-8°C, at -20°C	Fasting, Avoid using Clonidine	Hemolysis	-



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آزمایشگاه پاتوبیولوژی و ژنتیک

Row	Test name	Sample S.type	minimum s.vol.(ml) sample vol (ml)	Assay method	Testing & Reporting time	Emergency	Storage	Transport	Preparation before sampling	Reject	Others
288	GTT (glucose tolerance test)	S	0.5	Photometric	Daily Same day	1-2 hrs	5 days at 2-8°C, 6 months at -20°C	at 2-8°C, at -20°C	Fasting	-	1 fasting blood sample and 4-5 blood sample after ingestion oral glucose (adults : 75 gr., children 1.75 gr. Per kg body weight, maximum 75 gr.) at 30, 60, 90, 120, 180 min.
289	H. pylori (IgA)	S, PE	0.5	Elisa	Daily Next day	-	1 day at RT, 7 days at 2-8°C, 6 months at -20°C	at 2-8°C, at -20°C	Not Recommended	Hemolysis, Icteric, Lipemic	Avoid reported freeze / thaw cycles
290	H. pylori (IgG)	S, PE	0.5	CLIA	Daily Same day	-	1 day at RT, 7 days at 2-8°C, 6 months at -20°C	at 2-8°C, at -20°C	Not Recommended	Hemolysis, Icteric, Lipemic	Avoid reported freeze / thaw cycles
291	H. pylori (IgM)	S, PE	0.5	Elisa	Daily Next day	-	1 day at RT, 7 days at 2-8°C, 6 months at -20°C	at 2-8°C, at -20°C	Not Recommended	Hemolysis, Icteric, Lipemic	Avoid reported freeze / thaw cycles
292	H. pylori culture (in stool)	Tissue, biopsy	-	Aerobic	Daily 14 days later	-	The same time must be tested	Phosphate buffer, RT	Not Recommended	-	Before sampling contact with lab
293	H. pylori PCR	Tissue, Gastric juice, Dental bacterial plaque, sputum, stool, ...	Tissue 5 mm, stool 5 gr. Others 1ml	Qualitative PCR	By contact	-	6 hrs at RT, 1 day at 2-8°C, 1 month at -20°C	2-8°C (preferred)	Not Recommended	Formalinized sample	-



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آزمایشگاه پاتوبیولوژی و ژنتیک

Row	Test name	Sample S.type	minimum s.vol.(ml) sample vol (ml)	Assay method	Testing & Reporting time	Emergency	Storage	Transport	Preparation before sampling	Reject	Others
294	H. pylori stool Ag	Stool	1 gram	Elisa	Daily Next day	-	2 days at 2-8°C for 1 month at -20°C	at 2-8°C, at -20°C	Not Recommended	-	-
295	Haemophiluse influenzae PCR	Respiratory samples; Nasopharyngeal swab, BAL, Nasal Wash, Pleural Fluid, ...	Fluids: 2ml swab: 1	Qualitative PCR	4 days Same day	-	5 days at 2-8°C 2 months at -20°C	at 2-8°C, at -20°C	Not Recommended	-	-
296	Hams test	S & WB (E)	3, 2	Hemolysis	daily Same day	-	1 day at RT	at RT	Not Recommended	Hemolysis, Icteric, Lipemic, Incorrect anticoagulant	-
297	Haptoglobin	S, PE, PH	0.5	Photometric	Thu Next day	-	1 day at RT, 7 days at 2-8°C, 3 months at -20°C	at 2-8°C, at -20°C	Notice use of androgen & sulfasalazine drugs.	Hemolysis	-
298	HAV Ab (IgM)	S	0.5	CLIA	daily Same day	2-4 hrs	7 days at 2-8°C, 3 months at -20°C	at 2-8°C, at -20°C	Not Recommended	Hemolysis	-
299	HAV Ab (Total)	S	0.5	CLIA	daily Same day	2-4 hrs	7 days at 2-8°C, 3 months at -20°C	at 2-8°C, at -20°C	Not Recommended	Hemolysis	-
300	Hb A2	WB (E)	2	Capillary elect.	daily Same day	-	7 days at 2-8°C	at 2-8°C	Not Recommended	Hemolysis, Clotting, Frozen, Incorrect anticoagulant	-



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آزمایشگاه پاتوبیولوژی و ژنتیک

Row	Test name	Sample S.type	minimum s.vol.(ml) sample vol (ml)	Assay method	Testing & Reporting time	Emergency	Storage	Transport	Preparation before sampling	Reject	Others
301	Hb electrophoresis	WB (E)	4	Capillary elect.	daily Same day	-	7 days at 2-8°C	at 2-8°C	Not Recommended	Hemolysis, Clotting, Frozen, Incorrect anticoagulant	-
302	Hb F	WB (E)	4	Capillary elect.	daily Same day	-	7 days at 2-8°C	at 2-8°C	Not Recommended	Hemolysis, Clotting, Frozen, Incorrect anticoagulant	-
303	Hb A1c	WB (E or H)	1	Immunoturb	daily Same day	2-4 hrs	7 days at 2-8°C	at 2-8°C	Not Recommended	Hemolysis, Clotting, Frozen, Incorrect anticoagulant	-
304	HBc Ab (IgM)	S, PE, PH, PC	0.5	CLIA	daily Same day	2-4 hrs	7 days at 2-8°C 3 months at -20°C	at 2-8°C, at -20°C	Not Recommended	Hemolysis, Lipemic	-
305	HBc Ab (Total)	S, PE, PH, PC	0.5	CLIA	daily Next day	2-4 hrs	7 days at 2-8°C 3 months at -20°C	at 2-8°C, at -20°C	Not Recommended	Hemolysis, Lipemic	-
306	HBe Ab	S, PE, PH, PC	0.5	CLIA	daily Same day	2-4 hrs	7 days at 2-8°C 3 months at -20°C	at 2-8°C, at -20°C	Not Recommended	Hemolysis, Lipemic	-
307	HBe Ag	S, PE, PH, PC	0.5	CLIA	daily Same day	2-4 hrs	7 days at 2-8°C 3 months at -20°C	at 2-8°C, at -20°C	Not Recommended	Hemolysis, Lipemic	-



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Row	Test name	Sample S.type	minimum s.vol.(ml) sample vol (ml)	Assay method	Testing & Reporting time	Emergency	Storage	Transport	Preparation before sampling	Reject	Others
308	HBs Ab	S, PE, PH, PC	0.5	CLIA	daily Same day	2-4 hrs	7 days at 2-8°C 3 months at -20°C	at 2-8°C, at -20°C	Not Recommended	Hemolysis, Lipemic	-
309	HBs Ag (quantitative)	S, PE, PH	0.5	CLIA	daily Same day	2-4 hrs	7 days at 2-8°C 3 months at -20°C	at 2-8°C, at -20°C	Not Recommended	Hemolysis, Lipemic	-
310	HBV PCR (qualitative)	Plasma (EDTA or ACD), Serum	1	qualitative PCR	7 days Same day	-	3 days at RT, 1 week at 2-8°C, 6 weeks at < -20°C	2-8°C (preferred) or < -20°C	Not Recommended	Incorrect anticoagulant (heparin), Hemolysis	-
311	HBV viral load PCR	Plasma (EDTA or ACD), Serum	1	Real time PCR	sun, wed same day	-	3 days at RT, 1 week at 2-8°C, 6 weeks at < -20°C	at 2-8°C (preferred) at or < -20°C	Not Recommended	Incorrect anticoagulant (heparin), Hemolysis	-
312	HCV genotyping PCR	Plasma (EDTA or ACD), Serum	1	PCR	Wed Same day	-	4 hrs at RT, 2 days at 2-8°C, 3 days at -20°C 4 months at -70°C	at 2-8°C (preferred) at -20°C	Not Recommended	Incorrect anticoagulant (heparin)	-
313	HCV Ab	S	0.5	ECLIA	Daily Same day	2-4 hrs	7 days at 2-8°C 3 months at -20°C	at 2-8°C, at -20°C	Not Recommended	Hemolysis, Icteric, Lipemic	-
314	HCV Ab (Riba / western Blot)	S, PE	0.5	Immunoblot	7 days Same day	-	7 days at 2-8°C 3 months at -20°C	at 2-8°C, at -20°C	Not Recommended	Hemolysis, Icteric, Lipemic	-



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Row	Test name	Sample S.type	minimum s.vol.(ml) sample vol (ml)	Assay method	Testing & Reporting time	Emergency	Storage	Transport	Preparation before sampling	Reject	Others
315	HCV PCR (qualitative)	Plasma (EDTA or ACD), Serum	1	qualitative PCR	7 days Same day	-	4 hrs at RT, 2 days at 2-8°C, 3 days at -20°C 4 months at -70°C	at 2-8°C (preferred) at -20°C	Not Recommended	Incorrect anticoagulant (heparin), Hemolysis	-
316	HCV viral load PCR	Plasma (EDTA or ACD), Serum	1	Real time PCR	5 days Same day	-	4 hrs at RT, 2 days at 2-8°C, 3 days at -20°C 4 months at -70°C	at 2-8°C (preferred) at -20°C	Not Recommended	Incorrect anticoagulant (heparin), Hemolysis	-
317	HDL cholesterol	S, PE, PH	0.5	Photometric	Daily Same day	1-2 hrs	24 hrs. at RT, 7 days at 2-8°C, 3 months at -20°C (dark place)	at 2-8°C, at -20°C	Fasting. Avoid using clofibrate 7 days prior sample collection	Hemolysis, Icteric, Lipemic	-
318	HDV Ab	S, PE, PH, BF	0.5	Elisa	Mon & Thu Next day	-	7 days at 2-8°C, 3 months at -20°C	at 2-8°C, at -20°C	Not Recommended	Hemolysis, Icteric, Lipemic	Avoid reported freeze / thaw cycles
319	HDV PCR	Plasma (EDTA), Serum	1	qualitative PCR	5 days Same day	-	6 hrs. at RT, 3 days at 2-8°C, 1 month at < -70°C	at 2-8°C (preferred) at -20°C	Not Recommended	Incorrect anticoagulant (heparin), Hemolysis	-
320	HE4	S, PE, PH	0.5	ECLIA	Daily Same day	2-4 hrs	2 days at 2-8°C, 3 months at 20°C	at 2-8°C, at -20°C	Not Recommended	Hemolysis, Icteric, Lipemic	-



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Row	Test name	Sample S.type	minimum s.vol.(ml) sample vol (ml)	Assay method	Testing & Reporting time	Emergency	Storage	Transport	Preparation before sampling	Reject	Others
321	Hematocrit	WB (E)	0.5	Cell counter	Daily Same day	30 min	4 hrs at RT, 24 hrs. At 2-8°C	at 2-8°C	Not Recommended	Hemolysis, Clotting, Frozen, Incorrect anticoagulant	-
322	Hemosiderin	U (R) (Formalin added, 1/10 formalin 10%)	10	Slide staining	1 day Same day	-	3 days at 2-8°C, prepared slide 3 months at RT	at 2-8°C	First - morning sample collection is preferred.	-	-
323	Hemoglobin	WB (E)	0.5	Cell counter	Daily Same day	30 min	4 hrs at RT, 24 hrs. at 2-8°C	at 2-8°C	Not Recommended	Hemolysis, Clotting, Frozen, Incorrect anticoagulant	-
324	HEV Ab	S	0.5	Elisa	7 days Next day	-	7 days at 2-8°C, 3 months at -20°C	at 2-8°C, at -20°C	Not Recommended	Gross: Hemolysis, Icteric	-
325	HEV PCR	S, PE	1	Qualitative PCR	6 days Same day	-	2 days at 2-8°C, 14 days at -20°C	at 2-8°C, at -20°C	Not Recommended	-	-
326	HIV Ab (1 & 2)	S, BF	0.5	ECLIA	Daily Same day	-	5 days at 2-8°C, 2 months at -20°C	at 2-8°C, at -20°C	Not Recommended	Hemolysis, Icteric, Lipemic	-
327	HIV Ab (Western Blot)	S, PE, PH	0.5	Western Blot	7 days Same day	-	5 days at 2-8°C, 2 months at -20°C	at 2-8°C, at -20°C	Not Recommended	Hemolysis, Icteric, Lipemic	-



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آزمایشگاه پاتوبیولوژی و ژنتیک

Row	Test name	Sample S.type	minimum s.vol.(ml) sample vol (ml)	Assay method	Testing & Reporting time	Emergency	Storage	Transport	Preparation before sampling	Reject	Others
328	HIV P24 Ag	S, BF	0.5	Elisa	Daily Next day	2-4 hrs	5 days at 2-8°C, 2 months at -20°C	at 2-8°C, at -20°C	Not Recommended	-	-
329	HIV PCR (qualitative)	Plasma (EDTA), Serum, CSF, Body fluid, Amniotic fluid,...	1	Qualitative PCR	7 Days Same day	-	1 day at RT, 6 days at 2-8°C, 6 weeks at < -20°C	at 2-8°C (preferred) at -20°C	Not Recommended	Incorrect anticoagulant (heparin), Hemolysis	-
330	HIV viral load PCR	Plasma (EDTA)	1	Real time PCR	5 Days Same day	-	1 day at RT, 6 days at 2-8°C, 6 weeks at < -20°C	at 2-8°C (preferred) at -20°C	Not Recommended	Incorrect anticoagulant (heparin), Hemolysis	-
331	HLA B27, B5, B51, B8, ...	WB (E) Defibrinate	3	Serology	Daily Next day	-	5 days at 2-8°C	at 2-8°C	Not Recommended	Hemolysis, Clotting, Frozen, Incorrect anticoagulant	-
332	HLA class I (ABC) PCR	WB (E) Mouth wash solution	10	PCR	10 Days Next day	-	5 days at 2-8°C	at 2-8°C	Not Recommended	Hemolysis, Clotting, Frozen, Incorrect anticoagulant	-
333	HLA class II (DQ) PCR	WB (E) Mouth wash solution	10	PCR	10 Days Next day	-	5 days at 2-8°C	at 2-8°C	Not Recommended	Hemolysis, Clotting, Frozen, Incorrect anticoagulant	-
334	HLA class II (DR) PCR	WB (E) Mouth wash solution	10	PCR	10 Days Next day	-	5 days at 2-8°C	at 2-8°C	Not Recommended	Hemolysis, Clotting, Frozen, Incorrect anticoagulant	-



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Row	Test name	Sample S.type	minimum s.vol.(ml) sample vol (ml)	Assay method	Testing & Reporting time	Emergency	Storage	Transport	Preparation before sampling	Reject	Others
335	HLA DQ2, DQ8	WB (E)	5	PCR	10 Days Next day	-	5 days at 2-8°C	at 2-8°C	Not Recommended	Hemolysis, Clotting, Frozen, Incorrect anticoagulant	-
336	HLA DR3, DR4, DR7	WB (E)	5	PCR	10 Days Next day	-	5 days at 2-8°C	at 2-8°C	Not Recommended	Hemolysis, Clotting, Frozen, Incorrect anticoagulant	-
337	Homocysteine	S, PE, PH, U (R)	0.5, 10	Enzyme Colorimetry U: Chemical	Daily Same day	-	5 Days at 2-8°C, 3 months at -20°C	at 2-8°C, at -20°C	Fasting is recommended.	Hemolysis, Lipemic	-
338	Homogentisic acid	U (24 hrs) (see table 1)	10	GC-MS	25 Days Next day	-	5 Days at 2-8°C, 3 months at -20°C	at 2-8°C, at -20°C	Not Recommended	-	-
339	Homovanillic acid (HVA)	U (R & 24h) (see table 1)	20	HPLC	Wed 2 days later	-	5 Days at 2-8°C, 3 months at -20°C	at 2-8°C, at -20°C	Patient prep : abstain using of medications 3 days prior collection.	-	-
340	HPV typing PCR	Tissue, Cervical swab, papule & Vesicle swab, Thin prep, E. Prep, ...	Tissue: 5mm Others: 2 ml	Microarray	7 days Same day	-	2 weeks at RT, 3 weeks at 2-8°C, 3 months at -20°C	2-8°C (Preferred)	Not Recommended	Frozen, Formalin fixed tissue, Using anti- fungal vaginal cream & contraceptive jelly, Douching	-
341	HSV Ab (IgG)	S, PE, PH, BF, CSF	0.5	Elisa	sun, wed same day	-	24 hrs. at RT, 7 days at 2-8°C, 3 months at -20°C	at 2-8°C, at -20°C	Not Recommended	Hemolysis, Icteric	Avoid reported freeze / thaw cycles



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Row	Test name	Sample S.type	minimum s.vol.(ml) sample vol (ml)	Assay method	Testing & Reporting time	Emergency	Storage	Transport	Preparation before sampling	Reject	Others
342	HSV Ab (IgM)	S, PE, PH, BF, CSF	0.5	Elisa	sun, wed same day	-	24 hrs. at RT, 7 days at 2-8°C, 3 months at -20°C	at 2-8°C, at -20°C	Not Recommended	Hemolysis, Icteric	Avoid reported freeze / thaw cycles
343	HSV PCR	CSF, Serum, WB (EDTA), Tissue, Respiratory sample, Plasma (E), Dermal & Genital (vaginal & cervix) Lesion or swab, Amniotic fluid, Thin prep, Ocular dis.	Tissue: 5 mm, others: 1 ml	Qualitative PCR	7 days Same day	-	Tissue: 3 days at 2-8°C, 3 months at -20°C Others: 8hrs. At RT, 3 days at 2-8°C, 3 months at -20°C	Tissue : Frozen Others: 2-8°C (preferred)	Not Recommended	Incorrect anticoagulant (heparin), Formalinized fluids, Tissue (formalin fixes), Clot (WB) Calcium alginate tipped, wood and gel media swab	-
344	HTLV Ab (1 & 2)	S, PE, PH	0.5	Elisa	5 days Next day	-	Less than 5 days at 2-8°C for longer time at -20°C	at 2-8°C, at -20°C	Not Recommended	-	-
345	HTLV 1 PCR	WB (EDTA), CSF, ...	1	Qualitative PCR	5 days Next day	-	2 Days at RT, 2 weeks at 2-8°C	at 2-8°C (preferred)	Not Recommended	Incorrect anticoagulant (heparin), Frozen sample, Clotting, Hemolysis	-
346	Hydatid Ab (IgG)	S, PE	0.5	Elisa	Tue Same day	-	7 Days at 2-8°C, 3 months at -20°C	at 2-8°C, at -20°C	Not Recommended	-	-



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Row	Test name	Sample S.type	minimum s.vol.(ml) sample vol (ml)	Assay method	Testing & Reporting time	Emergency	Storage	Transport	Preparation before sampling	Reject	Others
347	IA2 Ab (Islet Antigen 2) Ab	S	0.5	Elisa	10 days Same day	-	5 Days at 2-8°C, 3 months at -20°C	at 2-8°C, at -20°C	Not Recommended	Gross: Hemolysis, Icteric, Lipemic	-
348	IFOB	Stool	0.5 gr	FIT	Daily Same day	1-2 hrs	3 days at RT	at 2-8°C,	Not Recommended	Frozen	-
349	IgA	S, PE, PH	0.5	Immunoturb	Daily Same day	2-4 hrs	7 Days at 2-8°C, 3 months at -20°C	at 2-8°C, at -20°C	Not Recommended	Hemolysis, Icteric, Lipemic	Avoid reported freeze / thaw cycles
350	IgE	S, PE, PH	0.5	Elisa	Daily Same day	2-4 hrs	7 Days at 2-8°C, 3 months at -20°C	at 2-8°C, at -20°C	Not Recommended	Hemolysis, Icteric, Lipemic	Avoid reported freeze / thaw cycles
351	Allergen test 295 Morkers	S	1	Immunoturb	Even days Next day	-	7 Days at 2-8°C, 3 months at -20°C	at 2-8°C, at -20°C	Not Recommended	Hemolysis, Icteric, Lipemic	Avoid reported freeze / thaw cycles



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Row	Test name	Sample S.type	minimum s.vol.(ml) sample vol (ml)	Assay method	Testing & Reporting time	Emergency	Storage	Transport	Preparation before sampling	Reject	Others
352	IgG	S, PE, PH, BF, CSF	0.5	Immunoturb	Daily Same day	1-2 hrs	7 Days at 2-8°C, 3 months at -20°C	at 2-8°C, at -20°C	Not Recommended	Hemolysis, Icteric, Lipemic	Avoid reported freeze / thaw cycles
353	IgG index	S & CSF	1, 1	Immunoturb	Daily Same day	-	7 Days at 2-8°C, 3 months at -20°C	at 2-8°C, at -20°C	Not Recommended	Hemolysis, Icteric, Lipemic	Avoid reported freeze / thaw cycles
354	IgG subclass 1, 2, 3, 4	S	1	Nephelometry	7 days Next day	-	7 Days at 2-8°C, 3 months at -20°C	at 2-8°C, at -20°C	Fasting is Recommended	Hemolysis, Icteric, Lipemic	Avoid reported freeze / thaw cycles
355	IgM	S, PE, PH	0.5	Immunoturb	Daily Same day	1-2 hrs	7 Days at 2-8°C, 3 months at -20°C	at 2-8°C, at -20°C	Not Recommended	Hemolysis, Icteric, Lipemic	Avoid reported freeze / thaw cycles
356	IgF-1	S	0.5	CLIA	Daily Next day	2-4 hrs	2 months at -20°C CRITICAL FROZEN	at -20°C	Fasting is Recommended	Gross: Hemolysis, Lipemic	Avoid reported freeze / thaw cycles
357	IgF-BP3	S	0.5	Elisa	5 Days Same day	-	2 Days at 2-8°C, 3 months at -20°C	at 2-8°C, at -20°C	Fasting is Recommended	Gross: Hemolysis, Icteric	Avoid reported freeze / thaw cycles
358	IGRA (Quantiferon)	Special tube (see sob 2)	5	Elisa	Mon Next day	-	After sample treatment 28 days at 2-8°C or 3 months at -20°C	at 2-8°C	Not Recommended	Hemolysis gross	-



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Row	Test name	Sample S.type	minimum s.vol.(ml) sample vol (ml)	Assay method	Testing & Reporting time	Emergency	Storage	Transport	Preparation before sampling	Reject	Others
359	IL-6	S, PE, CSF	0.5	ECLIA	10 days Same day	-	2 months at -20°C CRITICAL FROZEN	at 2-8°C	Not Recommended	Hemolysis, Icteric, Lipemic	Be separated quickly
360	Immuno-electrophoresis	S, U (24h) (see table 1)	1, 10	Electrophoresis (Capillary elect.)	ur: 15 days s: even day	-	S: 7 days at 2-8°C, 1 month at -20°C, U (24h): 5 days at 2-8°C, 1 month at -70°C	at 2-8°C, at -20°C U 24: at 2-8°C	Not Recommended	-	U 24h : No preservative
361	Immuno-histochemistry (IHC)	Biopsy, block (see table 4)	-	-	7 days Same day	-	Minimum 1 year after fixation (tissue) or block preparation.	at RT	Not Recommended	-	-
362	India ink	CSF	0.5	India ink stain	Daily Next day	-	1 day at RT	at RT	Not Recommended	-	-
363	Inhibin A	S	1	Elisa	sun, wed Same day	-	2 Days at 2-8°C, 3 months at -20°C	at 2-8°C, at -20°C	Not Recommended	Hemolysis, Icteric, Lipemic	-
364	Inhibin B	S	1	Elisa	Mon Next day	-	2 Days at 2-8°C, 1 month at -20°C	at 2-8°C, at -20°C	Not Recommended	Hemolysis, Lipemic	-



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Row	Test name	Sample S.type	minimum s.vol.(ml) sample vol (ml)	Assay method	Testing & Reporting time	Emergency	Storage	Transport	Preparation before sampling	Reject	Others
365	Insulin	S, PE	0.5	ECL	Daily Same day	2-4 hrs	7 days at 2-8°C 3 months at -20°C	at 2-8°C, at -20°C	Fasting is recommended. Abstain using of cimetidine, Alcohol, chlorpropamide, ... few days prior sample collection.	Hemolysis, Icteric, Lipemic	Be separated quickly
366	Iron	S, PH	0.5	Photometric	Daily Same day	1-2 hrs	7 days at 2-8°C 3 months at -20°C	at 2-8°C, at -20°C	Fasting, abstain iron compound 7 days prior sample collection and OCP, sampling should be done preferably at 8-10 am.	Hemolysis, Icteric, Lipemic	Avoid reported freeze / thaw cycles. Patient's age and sex.
367	Isospora belli (Cystoisospora belli)	Stool	1.0 gr	Direct smear, Ziehl neelsen stain	Daily 2 days later	-	1 day at RT 2 days at 2-8°C	at RT, at 2-8°C	Not Recommended	-	-
368	Jak-2 mutation PCR	WB (E)	5	PCR	4 days Same day	-	2 days at RT 5 days at 2-8°C	at 2-8°C	Not Recommended	-	-
369	JC virus	Plasma (EDTA), Serum, CSF, Urine,...	1	Qualitative PCR	5 days Same day	-	8 hrs at RT, 3 days at 2-8°C, 1 month at <-20°	2-8°C (Preferred)	Not Recommended	Incorrect anticoagulant Hemolysis	-
370	Kala azar Ab (IgM)	S, BF	0.5	IFA	3 days Same day	-	5 days at 2-8°C 3 months at -20°C	at 2-8°C, at -20°C	Not Recommended	-	-



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Row	Test name	Sample S.type	minimum s.vol.(ml) sample vol (ml)	Assay method	Testing & Reporting time	Emergency	Storage	Transport	Preparation before sampling	Reject	Others
371	Kala azar Ab (Total)	S, BF	0.5	IFA	3 days Same day	-	5 days at 2-8°C 3 months at -20°C	at 2-8°C, at -20°C	Not Recommended	-	-
372	KRAS gene	Biopsy, paraffin block	B: 5mm, Pb: 5mm tissue	PCR	By contact	-	Biopsy (formalin fixed) 1 month at RT, Paraffin block with 5 mm tissue	at RT	Not Recommended	-	-
373	Lactate	PH, BF, CSF, PE	1	Photometric	Daily Same day	1-2 hrs	1 day at 2-8°C 1 month at -20°C	at 2-8°C, at -20°C	Blood sampling without tourniquet. Abstain using of cefotaxim.	Hemolysis, Icteric, Lipemic	separated within 20 min.
374	Lactoferrin stool	Stool	2.0 gr.	Elisa	odd days Same day	-	5 days at 2-8°C 14 days at -20°C	at 2-8°C, at -20°C	Not Recommended	-	Avoid reported freeze / thaw cycles
375	Lamotrigin	S	0.5	HPLC	Daily 3 days	-	5 days at 2-8°C 3 months at -20°C	at 2-8°C, at -20°C	Not Recommended	-	-
376	LDH	S, BF, CSF	0.5	Photometric	Daily Same day	1-2 hrs	2 days at RT, 4 days at 2-8°C 1 month at -20°C	at 2-8°C	Abstain using of codeine, clofibrate, prior to few days sample collection.	Hemolysis, Icteric, Lipemic	Avoid reported freeze / thaw cycles
377	LDL cholesterol	S, PH	0.5	Photometric	Daily Same day	1-2 hrs	5 days at 2-8°C 1 month at -20°C (dark place)	at 2-8°C, at -20°C	Fasting	Hemolysis, Icteric, Lipemic	Avoid reported freeze / thaw cycles



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Row	Test name	Sample S.type	minimum s.vol.(ml) sample vol (ml)	Assay method	Testing & Reporting time	Emergency	Storage	Transport	Preparation before sampling	Reject	Others
378	LE cell	WB (Defibrinate), S	10, 1.0	-	Daily Next day	-	The same time must be tested	-	Not Recommended	-	-
379	Lead	WB (E)	2	Atomic abs.	Sat 2 days	-	5 days at RT, 7 days at 2-8°C 1 month at -20°C	at 2-8°C, at -20°C	Not Recommended	Incorrect anticoagulant, Clotting	-
380	Legionella P. Ag	U (R)	10	EIA	25 days Same day	-	4 days at 2-8°C 1 month at -20°C	at 2-8°C, at -20°C	Not Recommended	-	-
381	Leishman body	Skin wound dis. BMA, BMB	2 slides	Slide staining (Geimsa)	Daily Next day	-	Unlimited after fixation at RT.	at RT	Avoid using of tropical crem 3 days prior to collection.	-	-
382	Leptin	S, PE	0.5	Elisa	10 days Same day	-	2 days at 2-8°C, 1 month at -20°C	at 2-8°C, at -20°C	Fasting	-	-
383	Leptospira Ab (IgG)	S, PH, CSF	0.5	IFA	Thu Next day	-	7 days at 2-8°C, 3 months at -20°C	at 2-8°C, at -20°C	Not Recommended	Hemolysis, Icteric, Lipemic	-
384	Leptospira Ab (IgM)	S, PH, CSF	0.5	IFA	Thu Next day	-	7 days at 2-8°C, 3 months at -20°C	at 2-8°C, at -20°C	Not Recommended	Hemolysis, Icteric, Lipemic	-



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Row	Test name	Sample S.type	minimum s.vol.(ml) sample vol (ml)	Assay method	Testing & Reporting time	Emergency	Storage	Transport	Preparation before sampling	Reject	Others
385	Levotiracetam (keppra)	S	1	HPLC	7 days Same day	-	7 days at 2-8°C, 1 month at -20°C	at 2-8°C, at -20°C	Not Recommended	-	-
386	LH	S, PE	0.5	CLIA	Daily Next day	2-4 hrs	3 days at 2-8°C, 3 months at -20°C	at 2-8°C, at -20°C	Not Recommended	Hemolysis, Icteric, Lipemic	Avoid reported freeze / thaw cycles
387	Lipase	S, PH	0.5	photometric	Daily Same day	1-2 hrs	5 days at 2-8°C, 3 months at -20°C	at 2-8°C, at -20°C	Fasting	-	-
388	Serum Protein electrophoresis	S	1	Capillary elect. elect	Same day 1 week later	-	7 days at -20°C	at 2-8°C	Fasting	Hemolysis, Icteric, Lipemic, Frozen	-
389	Listeria Ab (IgG)	S	0.2	IFA	14 days Next day	-	7 days at 2-8°C, 3 months at -20°C	at 2-8°C, at -20°C	Not Recommended	-	-
390	Listeria Ab (IgM)	S	0.2	IFA	4 days Next day	-	7 days at 2-8°C, 3 months at -20°C	at 2-8°C, at -20°C	Not Recommended	-	-
391	Lithium	S	1	ISE	Daily Same day	1-2 hrs	1 day at 2-8°C, 3 months at -20°C	at 2-8°C, at -20°C	Specimens are commonly drawn approximately 12 hours after last dose of lithium taken. Notice using of diuretics, metronidazole, fluoxetine, drugs.	Hemolysis	-



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Row	Test name	Sample S.type	minimum s.vol.(ml) sample vol (ml)	Assay method	Testing & Reporting time	Emergency	Storage	Transport	Preparation before sampling	Reject	Others
392	LKM Ab	S	0.5	IFA	Thu Next day	2-4 hrs	7 days at 2-8°C, 3 months at -20°C	at 2-8°C, at -20°C	Not Recommended	-	-
393	Lpa (Lipoprotein A)	S, PE, PH	0.5	Immunoturb	Sat & Tue Next day	-	7 days at 2-8°C, 3 months at -20°C	at 2-8°C, at -20°C	Not Recommended	-	-
394	Lupus anti coagulant (DRVVT & APTT-LA)	PC (platelet-poor plasma)	1	Coagulation	Even days Same day	1-2 hrs	4 hrs at RT or 2-8°C, 1 month at -20°C, 18 months at -70°C	at RT, at 2-8°C, at -20°C	Not Recommended	Hemolysis, Incorrect anticoagulant Icteric & lipemic for non- coagulation method.	Avoid repeated freeze/thaw cycles. Be separated quickly/Two times centrifugation is preferred.
395	Lysozyme	S, U (R), CSF	S, CSF: 1U (R): 2	Nephelometry	25 days Same day	-	5 days at 2-8°C, 3 months at -20°C	at 2-8°C, at -20°C	Not Recommended	Gross: Hemolysis Icteric Lipemic	-
396	M2-PK stool	Stool	2.0 gr	Elisa	Wed 7 days later	-	5 days at 2-8°C, 3 months at -20°C	at 2-8°C, at -20°C	Not Recommended	-	Watery sample with normal values must be repeated an formed sample
397	Macroprolactin	S, PE, PH	1	CLIA	2 days Same day	2-4 hrs	4 days at 2-8°C, 3 months at -20°C	at 2-8°C, at -20°C	Sample collecting 3 hrs after awake. Abtains sexual activity and stress 2 days before test. Avoid using estrogen, Insulin, a few days before test.	Hemolysis Icteric Lipemic	-



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Row	Test name	Sample S.type	minimum s.vol.(ml) sample vol (ml)	Assay method	Testing & Reporting time	Emergency	Storage	Transport	Preparation before sampling	Reject	Others
398	Magnesium	S, PH, BF, U(R & 24h) (see table 1)	0.5, 1	Photometric	Daily Same day	1-2 hrs	7 days at 2-8°C, 3 months at -20°C	at 2-8°C, at -20°C	Not Recommended	Hemolysis Icteric Lipemic	Avoid reported freeze / thaw cycles
399	Malaria parasite	WB (E)	0.5	Slide staining (Geimsa)	Daily Same day	-	Unlimited after fixation at RT	at RT	Fever presence	Hemolysis	-
400	Manganese	WB (E), S, U (24h) (see table)	3, 10	AAS	25 days Same day	-	7 days at 2-8°C, 3 months at -20°C	at 2-8°C, at -20°C	Not Recommended	-	-
401	MCV	WB (E)	1	Cell counter	Daily Same day	30 min	4 hrs at 2-8°C, 24 hrs at -20°C	at 2-8°C	Not Recommended	Hemolysis, Icteric, Lipemic, Clotting, Frozen, Incorrect, anticoagulant	-
402	MCV Ab	S	0.5	Elisa	15 days Next day	-	7 days at 2-8°C, 3 months at -20°C	at 2-8°C, at -20°C	Not Recommended	Hemolysis, Icteric, Lipemic	Avoid reported freeze / thaw cycles
403	MDA	S	1	Chemical	By contact	-	5 days at 2-8°C, 3 months at -20°C	at 2-8°C, at -20°C	Not Recommended	Hemolysis	-
404	Measles Ab (IgG)	S, BF, CSF	0.5	Elisa	7 days Next day	-	5 days at 2-8°C, 3 months at -20°C	at 2-8°C, at -20°C	Not Recommended	Hemolysis, Icteric, Lipemic	Avoid reported freeze / thaw cycles



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Row	Test name	Sample S.type	minimum s.vol.(ml) sample vol (ml)	Assay method	Testing & Reporting time	Emergency	Storage	Transport	Preparation before sampling	Reject	Others
405	Measles Ab (IgM)	S, BF, CSF	0.5	Elisa	7 days Next day	-	5 days at 2-8°C, 3 months at -20°C	at 2-8°C, at -20°C	Not Recommended	Hemolysis, Icteric, Lipemic	Avoid reported freeze / thaw cycles
406	Measles PCR	Throat & nasopharynx & nasal swab, Cord blood (EDTA), Plasma (EDTA), Saliva, CSF, Amniotic fluid, Urine	1 ml	Qualitative PCR	5 days Same day	-	Swab: 3 days at 2-8°C, 1 week at < -20°C (with transport media) Others: 1 day at 2-8°C, 6 weeks at -20°C	others: at 2-8°C (preferred) or < -20°C	Not Recommended	Incorrect anticoagulant (heparin), Formalinized fluids, Calcium alginate tipped, wood and gel media swab, Hemolysis	-
407	Melatonin	S	1.5	RIA	25 days	-	2 months at ≤ -20°C CRITICAL FROZEN	at ≤ -20°C	Not Recommended	Gross: Hemolysis, Lipemic	-
408	Mercury (Hg)	WB (E), U (R), (24h) (see table 1)	2	Atomic abs.	Thu Next day	-	5 days at RT, 7 days at 2-8°C, 1 month at -20°C	at RT, at 2-8°C	Not Recommended	Clotting, Incorrect anti-coagulant	-
409	Metabolic Screen Neonate panel	DBS (see sop 1)	5 spots on paper	MS/MS	14 days Same day	-	DBS: with cover 7 days at RT, 1 month at 2-8°C, 3 months at 20°C	at RT, at 2-8°C, at -20°C	Not Recommended	-	-



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Row	Test name	Sample S.type	minimum s.vol.(ml) sample vol (ml)	Assay method	Testing & Reporting time	Emergency	Storage	Transport	Preparation before sampling	Reject	Others
410	Metanephrines	U (24h & R) (see table 1)	5	Elisa	Tue Next day	-	7 days at 2-8°C, 1 month at -20°C (dark place)	at 2-8°C, at -20°C	Abstain from emotional and mental stress, medications for 3 days prior to collection.	-	Avoid reported freeze / thaw cycles
411	Methylmalonic acid (MMA)	S, U (R)	S: 2 ml U: 10 ml	LC-MS	15 days Same day	-	4 days at 2-8°C, 1 month at -20°C	at 2-8°C, at -20°C	Not Recommended	Seum: Gross Hemolysis, Lipemic	-
412	Microsporidia stool	Stool	2.0 gr.	Direct smear, Ziehl-Neelsen stain	Daily 2 days later	-	1 day at RT, 1 day at 2-8°C	at RT, at 2-8°C	Not Recommended	-	-
413	Mixing Test	PC (platelet- poor plasma)	1	Coagulation	Daily same day	1 hour	2 hrs at RT 14 days at -20°C CRITICAL FROZEN	at -20°C	Notice use warfarin, coumadin, heroine, ...	Hemolysis	Be separated quickly
414	Mono test	S	0.5	Agglutination	5 days Next day	1 hour	7 days at 2-8°C, 3 months at -20°C	at 2-8°C, at -20°C	Not Recommended	Hemolysis	-
415	Morphine (Quantitative)	U (R)	2	GC-MS	Odd days Next day	-	7 days at RT, 1 month at 2-8°C, 1 year at -20°C	at 2-8°C, at -20°C	Notice using of codeine drugs, ...	-	-
416	MPO Ab	S, PE, PC, PH	0.5	Elisa	Daily Same day	-	7 days at 2-8°C, 3 months at -20°C	at 2-8°C, at -20°C	Not Recommended	-	-



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Row	Test name	Sample S.type	minimum s.vol.(ml) sample vol (ml)	Assay method	Testing & Reporting time	Emergency	Storage	Transport	Preparation before sampling	Reject	Others
417	MSUD (DNPH)	U (R)	10	Chemical TLC	8 days Same day	-	1 day at 2-8°C, 1 month at -20°C	at 2-8°C, at -20°C	Not Recommended	-	-
418	MTHFR A 1298 C mutation PCR	WB (E)	5	PCR	4 days Same day	-	3 days at RT 7 days at 2-8°C	at 2-8°C	Not Recommended	Frozen, Incorrect anticoagulant, Clotting, Hemolysis	-
419	MTHFR C 677T mutation PCR	WB (E)	5	PCR	4 days Same day	-	3 days at RT 7 days at 2-8°C	at 2-8°C	Not Recommended	Frozen, Incorrect anticoagulant, Clotting, Hemolysis	-
420	MTX (Methotrexate)	S	1	HPLC	2 days Same day	-	1 day at 2-8°C, 3 months at -20°C (dark place)	at 2-8°C, at -20°C	Not Recommended	-	-
421	Mucopolysaccharides (MPS)	U (R)	5	Chemical	3 days Same day	-	1 month at -20°C CRITICAL FROZEN	at -20°C	Not Recommended	-	-
422	Mumps Ab (IgG)	S, CSF	0.5	Elisa	Sat Next day	-	7 days at 2-8°C 3 months at -20°C	at 2-8°C, at -20°C	Not Recommended	Hemolysis	Avoid reported freeze / thaw cycles
423	Mumps Ab (IgM)	S, CSF	0.5	Elisa	Sat Next day	-	7 days at 2-8°C 3 months at -20°C	at 2-8°C, at -20°C	Not Recommended	Hemolysis	Avoid reported freeze / thaw cycles



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424	Mumps PCR	Buccal & Oral swab, Saliva, Plasma (EDTA), CSF, Saliva, Urine, Amniotic fluid, ...	Two swabs in stril normal saline, fluid: 2 ml	Qualitative PCR	5 days Same day	-	1 hour at RT, 1 day at 2-8°C, 1 Week at -70°C	2-8°C, swab & urine sediman (15 min at 2500 g 4°C) in VTM (Phosphate buffer saline with 1% BSA, 0.5% gelatin, 2% serum)	Not Recommended	Incorrect anticoagulant (heparin), Formalized fluids, Calcium alginate tipped, wood and gel media swab, Hemolysis	-
425	Mycobacterium Culture	Sput., tissue, BF, ...	S: >1 ml T: >1 gr B: >2 ml	Petroff	Daily 2 months later	-	2 days at 2-8°C	at 2-8°C	Not Recommended	-	-
426	Mycobacterium Direct smear	Sput., tissue, BF, ...	S: >1 ml T: >1 gr B: >2 ml	ziehl Neelsen	Daily 2 days later	-	2 days at 2-8°C	at 2-8°C	Not Recommended	-	-
427	Mycobacterium (Tuberculosis & Bovis) PCR	Respiratory sample, Tissue (Fresh & block), BF, Gastric juice, Urine, Stool, ...	Fluids: 5 ml, Tissue: 5 mm, Stool: 5 gr	Qualitative PCR	3 days Same day	-	7 days at 2-8°C 3 Weeks at -20°C	at 2-8°C (preferred)	Not Recommended	Blood samples, Formalin added sample	-
428	Mycobacterium Tuberculosis MDR (Isoniazid & Rifampin)	Respiratory sample, Tissue (Fresh & block), BF, Gastric juice, Urine, Stool, Pure culture of TB, ...	Fluids: 5 ml, Tissue: 5 mm, Stool: 5 gr	Qualitative PCR	6 days Same day	-	7 days at 2-8°C	at 2-8°C	Not Recommended	Blood samples, Formalin added sample	-



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429	Mycoplasma hominis culture	Vaginal, Urethral, Urine, Semen, ...	-	PLO broth	Daily 5 days later	-	6 hours. at RT, 1 day at 2-8°C, in transport media	at 2-8°C in transport media	Abstain using antibiotic	-	-
430	Mycoplasma Pneumonia Ab (IgG)	S, PE, PH	0.5	Elisa	Mon & Thu Next day	-	7 days at 2-8°C, 3 months, at -20°C	at 2-8°C, at -20°C	Not Recommended	Hemolysis	-
431	Mycoplasma Pneumonia Ab (IgM)	S, PE, PH	0.5	Elisa	Thu Next day	-	7 days at 2-8°C, 3 months, at -20°C	at 2-8°C, at -20°C	Not Recommended	Hemolysis	-
432	Mycoplasma Pneumonia PCR	Respiratory samples, Throat and Nasopharynx swab, CSF, Pleural fluid	1 ml	Qualitative PCR	5 days Same day	-	1 day at RT, 3 days at 2-8°C, 1 month at -20°C	at 2-8°C, (preferred) at -20°C	Not Recommended	Formalinized sample	-
433	Myoglobin	U (R)	10	Chemical	Daily Next day	-	3 days at 2-8°C, 1 month, at -20°C	at 2-8°C, at -20°C	Not Recommended	-	-
434	Myositis Ab panel	S	1	Immunoblot	Wed Next day	-	5 days at 2-8°C, 2 months, at -20°C	at 2-8°C, at -20°C	Not Recommended	Gross: Hemolysis, Lipemic	Ribosomal-p, SRP, Ku, Mi-2, PL-12, PL-7, PM/scl-100, Jo-1, Mitochondrial
435	Nasal dis. Culture	Nasal dis.	-	Aerobic	Daily 4 days later	-	The same time must be tested.	at 2-8°C	Abstain using antibiotic	-	-



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436	NBT	WB (E)	1	-	Daily Sameday	-	The same day at 2-8°C (8 hrs)	at 2-8°C	Not Recommended	Hemolysis, Clotting, Incorrect antiquagulant, severe,Frozen leukopenia	-
437	Neisseria gonorrhoeae PCR	Urethra, vaginal & Cervix swab, Urine (first), ... Urethra, Vaginal & Cervix with transport media	1	Qualitative PCR	5 days Same day	-	7 days at RT, 7 days at 2-8°C, 3 months at -20°C	2-8°C, (preferred)	Not Recommended	-	-
438	Neisseria meningitidis PCR	CSF	1	Qualitative PCR	3 days Same day	-	1 day at RT, 7 days, at 2-8°C	1 day at RT, 1 week: at 2-8°C	Not Recommended	-	-
439	Neuronal Ab (panel 1) (paraneoplastic)	S	1	Immunoblot	Wed Next day	-	5 days at 2-8°C, 2 months, at -20°C	at 2-8°C, at -20°C	Not Recommended	Gross: Hemolysis, Lipemic	Amphiphysin, Cv2, PNMA2/ Ta (Ma2 / Ta), Ri, Yo, Hu, Recoverin, SOX1, Titin, Zic4, GAD65, Tr (DNER)
440	Neuronal Ab (panel 2) (paraneoplastic)	S	1	Immunoblot	8 days Same day	-	5 days at 2-8°C, 2 months, at -20°C	at 2-8°C, at -20°C	Not Recommended	Gross: Hemolysis, Lipemic	DPPX, LGL 1, CASPR 2, GABAB receptor, Glu. Recep(type AMPAR & NMDA), Hippocam, Cerebellum, Voltage G.P.C Ab
441	NGAL	U (R), S, PE	2, 0.5	Elisa	8 days Same day	-	1 day at 2-8°C, 2 months, at -20°C	at 2-8°C, at -20°C	Not Recommended	-	-



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Row	Test name	Sample S.type	minimum s.vol.(ml) sample vol (ml)	Assay method	Testing & Reporting time	Emergency	Storage	Transport	Preparation before sampling	Reject	Others
442	Noradrenaline (Norepinephrine)	PE, U (24h/R) (See table 1)	1, 10	Elisa/HPLC	15 days/Thu Next day	-	PE: 1m,at -20°C U: 7 days at 2-8°C, 1 month at -20°C PE: CRITICAL FROZEN	at 2-8°C, at -20°C	Abstain from emotional and mental stress, medications for 3 days prior to collection.	Gross: Hemolysis	-
443	Normetanephrine	U (see table 1) pH: 2-3	5	Elisa	Sun & Thu Next day	-	7 days at 2-8°C, 1 month at -20°C (dark place)	at 2-8°C, at -20°C	Abstain from emotional and mental stress, medications for 3 days prior to collection.	-	-
444	NMO-G Ab	S, PE, PC, CSF	1	IFA	10 days Next day	-	7 days at 2-8°C, 1 month at -20°C	at 2-8°C, at -20°C	Not Recommended	Hemolysis, Icteric, Lipemic	Avoid reported freeze / thaw cycles
445	NMP-22	U (R)	5	Immunochrm	Daily Same day	-	2 hrs: at RT	at RT	Not Recommended	-	-
446	NRAS	Biopsy, Paraffin block	B: 5mm, Pb: 5mm tissue	PCR	By contact	-	Biopsy (formalin fixed) 1 month at RT, Paraffin block with 5mm tissue	at RT	Not Recommended	-	-
447	NSE (Neuron Specific Enolase)	S, CSF	1	ECLIA	10 days Same day	-	5 days at 2-8°C, 3 months at -20°C	at 2-8°C, at -20°C	Not Recommended	-	-



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Row	Test name	Sample S.type	minimum s.vol.(ml) sample vol (ml)	Assay method	Testing & Reporting time	Emergency	Storage	Transport	Preparation before sampling	Reject	Others
448	Fecal Occult Blood	stool	1.0 gr.	Mayer	Daily Same day	-	1hr at RT, 1 day at 2-8°C, 3 days at -20°C	at RT, at 2-8°C, at -20°C	abstain ingestion of red meat, turnip, radish, kind of cabbages, carrot, fruits(melon, watermelon, cantaloupe), citrus, vitaminC ,tart extracts, 3 days prior sample collection and iron,anti inflammatory non steroidal drugs such as ibuprofen, naproxen, aspirin, colchicine, indomethacin, corton,... 7 days prior sample collection	-	-
449	Osmolality	S, Stool, U (R & 24h) (see table1)	1, 5, 1 gr.	S: calculation U: Refractometer	Daily Same day	-	7 days at 2-8°C, 2 months at -20°C (Stool must be frozen at once)	at 2-8°C, at -20°C	Not recommended	-	-
450	Osmotic fragility	WB (H) and WB (E)	2, 5	Hemolysis	Daily Next day	-	1 day at RT	at RT	Fasting	Hemolysis, Frozen, Clotting, Incorrect anticoagulant	-
451	Osteocalcin	S, PE	0.5	ECLIA	10 days Same day	-	3 days at 2-8°C, 2 months at -20°C	at 2-8°C, at -20°C	Not recommended	-	-
452	Oxalate	U (R & 24h) (see table1) pH: 1.5-2	10	Photometric	Tue 1 week	-	7 days at 2-8°C, 1 month at -20°C	at 2-8°C, at -20°C	Abstain ingestion of Vitamin C, Lemon, Grapefruit, Tomatoes, Spinach, Strawberry,... 3 days prior to collection	-	-



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Row	Test name	Sample S.type	minimum s.vol.(ml) sample vol (ml)	Assay method	Testing & Reporting time	Emergency	Storage	Transport	Preparation before sampling	Reject	Others
453	Oxazepam	S	2	HPLC	4 days Same day	-	7 days at 2-8°C, 3 months at -20°C	at 2-8°C, at -20°C	Not Recommended	-	-
454	Oxcarbamazepin	S	1	HPLC	5 days Same day	-	7 days at 2-8°C, 3 months at -20°C	at 2-8°C, at -20°C	Not Recommended	-	-
455	Oxidant/ antioxidant balance	S	0.5	Elisa	14 days Same day	-	2 days at 2-8°C, 2 months at -20°C	at 2-8°C, at -20°C	Not Recommended	-	-
456	P1NP	S, PE, PH	1	ECLIA	10 days Same day	-	5 days at 2-8°C, 6 months at -20°C	at 2-8°C, at -20°C	Not Recommended	-	-
457	PAI mutation (675 4G/5G & 844 A/G)	WB (E)	5	PCR	5 days Same day	-	3 days at RT, 7 days at 2-8°C	at 2-8°C	Not Recommended	Frozen, Incorrect anticoagulant, Clotting, Hemolysis	-
458	Pap smear (cytology)	Liquid bases. (Thin prep / E prep)	-	Betsda	1 day Same day	-	7 days at RT	at RT	Abstain sexual intercourse for 3 days. Avoid using vaginal cream,... for few days	-	-
459	Pap smear (cytology)	Prepared slides	-	Betsda	1 day Same day	-	Unlimited after fixation, at RT	at RT	Abstain sexual intercourse for 3 days. Avoid using vaginal cream,... for few days	-	-



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Row	Test name	Sample S.type	minimum s.vol.(ml) sample vol (ml)	Assay method	Testing & Reporting time	Emergency	Storage	Transport	Preparation before sampling	Reject	Others
460	Papp-A	S	0.5	ECLIA	Daily Same day	2-4 hrs	5 days at 2-8°C, 3 months at -20°C	at 2-8°C, at -20°C	Not recommended	Hemolysis, Icteric, Lipemic	-
461	Parvovirus B19 Ab (IgG)	S, BF, CSF	0.5	Elisa	Sun Next day	-	7 days at 2-8°C, 2 months at -20°C	at 2-8°C, at -20°C	Not recommended	-	-
462	Parvovirus B19 Ab (IgM)	S, BF, CSF	0.5	Elisa	Sun Next day	-	7 days at 2-8°C, 2 months at -20°C	at 2-8°C, at -20°C	Not recommended	-	-
463	Parvovirus PCR	Plasma (EDTA), Serum, CSF, Tissue, BMA, Bodyfluids, Amniotic fluid, vesicle fluid, WB (EDTA) , Paraffin Block	-	Qualitative PCR	5 days Same day	-	Tissue : Fresh, 1m at <-70°C BMA: 8 hrs, at RT, 3 days at 2-8°C Others: 8 hrs, at RT, 3 days at 2-8°C, 6 months at -20°C Paraffin block, at RT (unlimited)	Tissue : Fresh Others: 2-8°C (preferred) Paraffin: block at RT.	Not recommended	Incorrect anticoagulant (Heparin), Formalinized fluids. Lysed samples.	-
464	Pathergy test	Skin test	-	-	24 hrs. Same day	-	-	-	Not recommended	-	-



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Row	Test name	Sample S.type	minimum s.vol.(ml) sample vol (ml)	Assay method	Testing & Reporting time	Emergency	Storage	Transport	Preparation before sampling	Reject	Others
465	Paul Bunnell	S	0.5	Agglutination	Even days Next day	-	5 days at 2-8°C, 2 months at -20°C	at 2-8°C, at -20°C	Not recommended	-	-
466	PBS (peripheral blood Smear)	WB (E)	1	Wright & Giemsa stain	Daily Same day	-	4 hrs at RT, 1 day at 2-8°C,	at RT, at -20°C	Not recommended	Hemolysis, Frozen, Clotting, Incorrect anticoagulant	-
467	Pedicularis test	Skin, Hair, ..		Direct smear	Daily Next day	-	7 days at RT/ 2-8°C	at RT	Avoid using antibiotic & washing	-	-
468	Pericardial fluid culture	Pericardial fluid	5	Aerobic & aerobic	Daily 2, 5, 8 days later	-	The same time must be tested	at RT	Avoid using antibiotic	-	-
469	Phenobarbital	S	1	HPLC	Odd days Next day	-	2 days at RT, 7 days at 2-8°C, 14 days at -20°C	at 2-8°C, at -20°C	Not recommended	-	-
470	Phenylalanine	PE, DBS	1	HPLC	Odd days Next day	-	Fresh Plasma: 1 day at 2-8°C, 1 month at -20°C DBS: with cover 7 days at RT, 1 month at 2-8°C, 3 months at -20°C	at RT, at 2-8°C, at -20°C	Fasting	Hemolysis	-



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Row	Test name	Sample S.type	minimum s.vol.(ml) sample vol (ml)	Assay method	Testing & Reporting time	Emergency	Storage	Transport	Preparation before sampling	Reject	Others
471	Phenytoin	S	1	HPLC	Daily Next day	-	4 hrs. at RT, 4 days at 2-8°C, 1 month at -20°C	at 2-8°C, at -20°C	Abstain using salicylates before few days.	-	-
472	Phosphorus	S, PH, U	0.5	Photometric	Daily Same day	1-2 hrs	4 hrs. at RT, 4 days at 2-8°C, 3 months at -20°C	at 2-8°C, at -20°C	Fasting	Hemolysis, Icteric, Lipemic	Avoid repeated freeze / thaw cycles
473	PKU	U (R)	10	Chemical	1 day Same day	-	4 days at 2-8°C, 1 month at -20°C	at 2-8°C, at -20°C	Not recommended	-	-
474	Pleural fluid culture	Pleural fluid	5	Aerobotic & An.	Daily 2, 5, 8 days later	-	The same time must be tested.	at 2-8°C	Avoid using antibiotic	-	-
475	PML /RAR PCR- AML-3 (quality)	WB (E), BMA (E)	5	PCR	4 days Same day	-	2 days at 2-8°C	at 2-8°C	Not recommended	Hemolysis, Frozen, Clotting, Incorrect anticoagulant	-
476	PML /RAR PCR- AML-3 (quantity)	WB (E), BMA (E)	5	PCR	5 days Same day	-	2 days at 2-8°C	at 2-8°C	Not recommended	Hemolysis, Frozen, Clotting, Incorrect anticoagulant	-
477	Pneumonia Ab (IgG)	S	0.5	Elisa	15 days Same day	-	7 days at 2-8°C, 3 months at -20°C	at 2-8°C, at -20°C	Not recommended	Hemolysis, Icteric, Lipemic	-



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Row	Test name	Sample S.type	minimum s.vol.(ml) sample vol (ml)	Assay method	Testing & Reporting time	Emergency	Storage	Transport	Preparation before sampling	Reject	Others
478	Pneumonia Ab (IgG2)	S	0.5	Elisa	15 days Same day	-	7 days at 2-8°C, 3 months at -20°C	at 2-8°C, at -20°C	Not recommended	-	-
479	Porphobilinogen	U (R & 24h) (see table1)	10	Column chrom	25 days Same day	-	2 days at 2-8°C, 3 months at -20°C (dark place)	at 2-8°C, at -20°C	Take and storage in dark container	-	-
480	Porphyrines	U (R & 24h) (see table1)	10	Chemical	Daily Same day	-	2 days at 2-8°C, 3 months at -20°C (dark place)	at 2-8°C, at -20°C	Take and storage in dark container	-	-
481	PCT (Post coital test)	Vaginal dis.	0.5	Direct smear	Daily Same day	-	Must be tested rapidly.	-	Not sexual intercourse for 3 days	-	-
482	Potassium (Kalium)	S, BF, Stool, U (R & 24h) (see table1)	0.5, Stool 0.5 gr.	ISE	Daily Same day	1 hour	7 days at 2-8°C, 3 months at -20°C	at 2-8°C, at -20°C	Blood collecting without tourniquet.	Hemolysis, Icteric, Lipemic	-
483	Pregnancy test (B.HCG)	Serum PE	1	CLEA CMIA	Daily Same day	1-2 hrs	2 days at 2-8°C, 3 months at -20°C	at 2-8°C, at -20°C	Not recommended	-	-
484	Primidone	S	0.5	HPLC	Odd days Next day	-	7 days at 2-8°C, 3 months at -20°C	at 2-8°C, at -20°C	Not recommended	-	-



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Row	Test name	Sample S.type	minimum s.vol.(ml) sample vol (ml)	Assay method	Testing & Reporting time	Emergency	Storage	Transport	Preparation before sampling	Reject	Others
485	Progesterone	S, PE	0.5	CLIA	Daily Same day	2-4 hrs	7 days at 2-8°C, 3 months at -20°C	at 2-8°C, at -20°C	Not recommended	Hemolysis, Icteric, Lipemic	Avoid freeze/ thaw cycle
486	Prolactin	S, PE	0.5	CLIA	Daily Same day	2-4 hrs	4 days at 2-8°C, 3 months at -20°C	at 2-8°C, at -20°C	Sample collecting 3 hrs after awake. Abstain sexual activity and stress 2 days before test. Avoid using estrogen, Insulin, ... few days before test.	Hemolysis, Icteric, Lipemic	-
487	Procalcitonin	S, PE, PH	1	CLIA	Daily Same day	2-4 hrs	4 days at 2-8°C, 3 months at -20°C	at 2-8°C, at -20°C	Not recommended	Hemolysis (gross), Icteric	Avoid freeze/ thaw cycle
488	Prostatic dis. Culture	Prostatic dis.	-	Aerobic	Daily 4 days later	-	-	-	Avoid using antibiotic.	-	-
489	Protein C	PC, (Platelet - poor plasma)	1	Chromogenic	Odd days Next day	-	2 hrs at RT, 1 month at -20°C CRITICAL FROZEN	at -20°C	Abstain using Warfarine, Coumadin, Estrogen,... 10 days before test.	Hemolysis, Icteric, Lipemic Incorrect anticoagulant. Icteric, Lipemic for non- coagulation method	Avoid repeated freeze / thaw cycles. Be seperated quickly / Two times centrifugation is preferred.



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Row	Test name	Sample S.type	minimum s.vol.(ml) sample vol (ml)	Assay method	Testing & Reporting time	Emergency	Storage	Transport	Preparation before sampling	Reject	Others
490	Protein S	PC, (Platelete-poor plasma)	1	Coagulation	Odd days Next day	-	2 hrs at RT, 1 month at -20°C CRITICAL FROZEN	at -20°C	Abstain using Warfarine, Coumadin, Estrogen,... 10 days before test.	Hemolysis, Icteric, Lipemic Incorrect anticoagulant. Icteric, Lipemic for non-coagulation method	Avoid repeated freeze / thaw cycles. Be seperated quickly / Two times centrifugation is preferred.
491	Protein electrophoresis	S, U U (R & 24h) (see table3)	1, 10	Capillary elect., SDS page	Even days Same day	-	7 days at 2-8°C, 1 month at -20°C	at 2-8°C, at -20°C	Not recommended	Hemolysis	-
492	Pro BNP-NT	S, PE, PH	1	ECLIA	Daily Same day	2-4 hrs	6 days at 2-8°C, 3 months at -20°C	at 2-8°C, at -20°C	Not recommended	Hemolysis	-
493	Protein total	S, BF, U, CSF	0.5	Photometric	Daily Same day	1-2 hrs	7 days at 2-8°C, 3 months at -20°C	at 2-8°C, at -20°C	Not recommended	Hemolysis, Icteric, Lipemic	Avoid freeze/ thaw cycle
494	PSA	S, PH	0.5	CLIA	Daily Same day	2-4 hrs	2 days at 2-8°C, 3 months at -20°C	at 2-8°C, at -20°C	Fasting is recommended. Abstain Prostate exam, heavy exercise & ejaculation 2 days before test	Hemolysis, Icteric, Lipemic	Avoid freeze/ thaw cycle
495	PT (prothrombine time)	PC, (Platelete-poor plasma)	1	Coagulation	Daily Same day	45 min	2 hrs at RT, 14 days at -20°C CRITICAL FROZEN	at RT, at -20°C	Notice use Warfarin, Coumadin, Heroine, ...	Hemolysis	Be seperated quickly



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Row	Test name	Sample S.type	minimum s.vol.(ml) sample vol (ml)	Assay method	Testing & Reporting time	Emergency	Storage	Transport	Preparation before sampling	Reject	Others
496	PTH	S, PE	0.5	CLIA,ECLIA	Daily Same day	2-4 hrs	2 days at 2-8°C, 3 months at -20°C	at 2-8°C, at -20°C	Fasting	Hemolysis, Icteric, Lipemic	-
497	PTH (1-84)	S, PE	1	ECLIA	Wed Next day	-	1 day at 2-8°C, 2 months at -20°C	at 2-8°C, at -20°C	Fasting	Hemolysis, Incorrect anticoagulant	-
498	Pyruvate	WB on cold perchloric acid (0.6 M)	1	Photometric	Daily Next day	-	After preparation: 7 days at 2-8°C, 3 months at -20°C	at 2-8°C, at -20°C	Not recommended	Hemolysis	Be seperated quickly. Sample collecting with cold tube & syringe
499	Pyruvate kinase	WB (E)	2	Chemical	25 days Same day	-	7 days at 2-8°C	at 2-8°C	Not recommended	Hemolysis, Incorrect anticoagulant	-
500	R.P.R (VDRL)	S	0.5	Agglutination	Daily Same day	1 hour	7 days at 2-8°C, 3 months at -20°C	at 2-8°C, at -20°C	Not recommended	-	avoid freeze / thaw cycle
501	Reducing substance	U (R), stool	5 ml, 2 gr.	Chemical	Daily Same day	-	2 days at 2-8°C, 14 days at -20°C	at 2-8°C, at -20°C	Not recommended	-	-



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Row	Test name	Sample S.type	minimum s.vol.(ml) sample vol (ml)	Assay method	Testing & Reporting time	Emergency	Storage	Transport	Preparation before sampling	Reject	Others
502	Renin	PE	1	CLIA	Daily Same day	2-4 hrs	1 month at -20°C CRITICAL FROZEN	at -20°C	Fasting recommended, Notice use blood pressure drugs, diuretics and collecting sample position (upright & supine) .Normal sodium diet (100-200 mEq / day) for at least three days. Take no medications known to affect renin- aldosterone system.	Hemolysis, Icteric, Lipemic Incorrect anticoagulant.	avoidfreeze / thaw cycle, samples must be treated at the usual temperature (15-25°C), and centrifuged at room temperature and must be frozen immediately
503	Reticulocyte	WB (E)	0.5	Supravital stain.	Daily Same day	2 hrs	6 hrs. at RT, 7 days at 2-8°C	at RT, at 2-8°C	Not recommended	Hemolysis, Icteric, Lipemic, Clotting, frozen, Incorrect anticoagulant.	-
504	RF (quantitative & qualitative)	S, PE, PH	0.5	Immunoturb	Daily Same day	1-2 hrs	7 days at 2-8°C, 3 months at -20°C	at 2-8°C, at -20°C	Not recommended	Hemolysis	-
505	Rubella Ab (IgG)	S, PE, PH, BF, CSF	0.5	Elisa	Daily Same day	-	7 days at 2-8°C, 3 months at -20°C	at 2-8°C, at -20°C	Not recommended	Hemolysis, Icteric, Lipemic	-
506	Rubella Ab (IgG) - avidity	S	0.5	Elisa	Even days Next day	-	7 days at 2-8°C, 3 months at -20°C	at 2-8°C, at -20°C	Not recommended	Hemolysis, Icteric, Lipemic	-



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Row	Test name	Sample S.type	minimum s.vol.(ml) sample vol (ml)	Assay method	Testing & Reporting time	Emergency	Storage	Transport	Preparation before sampling	Reject	Others
507	Rubella Ab (IgM)	S, PE, PH, BF, CSF	0.5	Elisa	Daily Same day	-	7 days at 2-8°C, 3 months at -20°C	at 2-8°C, at -20°C	Not recommended	Hemolysis, Icteric, Lipemic	-
508	Rubella PCR	Plasma (EDTA), Body fluids, CSF, Cord blood (EDTA), Saliva, Ammunic fluid, Throat swab, Urine, WB (E)	1ml	Qualitative PCR	5 days Same day	-	8 hrs at RT, 1 day at 2-8°C, 1 month at < -20°C	at 2-8°C (preferred)	Not recommended	Incorrect anticoagulant (heparin), Formalinized fluids, Calcium aginate tipped, wood and gel media swab, Hemolysis	-
509	S-100	S	1	Elisa	10 days Same day	-	5 days at 2-8°C, 3 months at -20°C	at 2-8°C, at -20°C	Not recommended	Gross hemolysis	-
510	Scabiasis	Skin scratching sample	-	Direct smear	Daily Same day	-	Must be tested the same day	at RT	Not recommended	-	-
511	Scotch test	Perianal sample	2 slides	Direct smear	Daily Same day	-	Must be tested the same day	at RT	Not recommended	-	-
512	Selenium	S	1	Atomic abs.	11 days Same day	-	2 days at RT, 7 days at 2-8°C, 3 months at -20°C	at 2-8°C, at -20°C	Not recommended	-	-



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Row	Test name	Sample S.type	minimum s.vol.(ml) sample vol (ml)	Assay method	Testing & Reporting time	Emergency	Storage	Transport	Preparation before sampling	Reject	Others
513	Semen analysis	Semen	-	Manual , CASA method	Daily Same day	-	The same time must be tested. Post vasectomy 1 day at RT or 2-8°C.	-	Collect sample between 2-7 days after last ejaculation.	Mixing sample with water, urine	-
514	Semen culture	Semen	-	Aerobic	Daily 4 days later	-	the same time must be cultured	-	Avoid using antibiotic	-	-
515	Semen fructose	Seminal plasma	0.5	Chemical	3 days Same day	-	3 months at -20°C CRITICAL FROZEN	at -20°C	Not recommended	-	-
516	Serotonin	S, U 24h (Hcl) (see table 1)	1	HPLC	25 days Same day	-	2 months at -20°C CRITICAL FROZEN	at -20°C	Not recommended	-	-
517	SGOT (AST)	S, PH	0.5	Photometric	Daily Same day	1-2 hrs	7 days at 2-8°C, 3 months at -20°C	at 2-8°C, at -20°C	Notice use hepatotoxic drugs	Hemolysis, Incorrect anticoagulant, Lipemic	avoid freeze / thaw cycle
518	SGPT (ALT)	S, PH	0.5	Photometric	Daily Same day	1-2 hrs	7 days at 2-8°C, 3 months at -20°C	at 2-8°C, at -20°C	Notice use hepatotoxic drugs	Hemolysis, Incorrect anticoagulant, Lipemic	avoid freeze / thaw cycle
519	SHBG	S, PE	0.5	CLIA	Daily Same day	-	5 days at 2-8°C, 3 months at -20°C	at 2-8°C, at -20°C	Not recommended	Hemolysis, Icteric, Lipemic	avoid freeze / thaw cycle



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Row	Test name	Sample S.type	minimum s.vol.(ml) sample vol (ml)	Assay method	Testing & Reporting time	Emergency	Storage	Transport	Preparation before sampling	Reject	Others
520	Sickle prep	WB (E)	0.5	Physical observe	Daily Next day	-	2 days at 2-8°C	at 2-8°C	Not recommended	Frozen, Clotting, Incorrect anticoagulat, Hemolysis	-
521	Sirolimus	WB (E)	2	ECL	Daily Same day	2-4 hrs	7 days at 2-8°C, 2 months at -20°C	at 2-8°C, at -20°C	Not recommended	Hemolysis, Frozen, Clotting, Incorrect anticoagulat	-
522	Sodium	S, BF, U (R & 24h), Stool (see table 1)	0.5, stool 0.5 gr.	ISE	Daily Same day	1 hour	7 days at 2-8°C, 3 months at -20°C	at 2-8°C, at -20°C	Not recommended	Hemolysis	-
523	Special stain	Slides or block (see table 3)	1 slide	Slide staining	Daily 2 days later	-	at RT	at RT	Not recommended	-	-
524	Sperm washing	Semen	2	Swim down	Daily 2 hrs later	-	Must be tested quickly (maximum 30 min)	at 37°C	Collect sample between 2-7 days after last ejaculation.	Mixing sample with water, urine	-
525	Sputum culture	Sputum	1	Aerobic	Daily 5 days later	-	2hrs. at RT, 1 day at 2-8°C	at 2-8°C	Avoid using antibiotic	-	-
526	Stone analysis	Urinary tract stone	-	Chemical	Daily 2 days later	-	at RT	at RT	Not recommended	-	-



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Row	Test name	Sample S.type	minimum s.vol.(ml) sample vol (ml)	Assay method	Testing & Reporting time	Emergency	Storage	Transport	Preparation before sampling	Reject	Others
527	Stool Culture	Stool	1.0 gr.	Aerobic	Daily 3 days later	-	Unpreservative 2 hrs. at RT Preservative 2 days at RT or 2-8°C	With preservative (Carry blair media): 2 days at RT or at 2-8°C	Avoid using antibiotic	Frozen sample	-
528	Stool exam	Stool	1.0 gr.	Formalin ether, Direct smear	Daily Same day	-	Bloody & mucosal samples must be tested quickly Others: 3 days at RT, 1 month at 2-8°C. Added formalin 10%, stable 3 yrs.	at RT, at 2-8°C	Not recommended	Frozen sample, Specimens containing barium, oil, or urine.	-
529	Stool fat	Stool	0.5 gr.	Sudan black III	Daily Same day	-	1 hr at RT, 4 days at 2-8°C, 14 days at -20°C	at RT, at 2-8°C	Not recommended	-	-
530	Streptococcus pneumoniae PCR	CSF	1	PCR	5 days Same day	-	7 days at 2-8°C, 14 days at -20°C	at 2-8°C, at -20°C	Not recommended	-	-
531	Strongyloides stercoralis Ab (Total)	S	0.5	Elisa	Thu Next day	-	5 days at 2-8°C, 2 months at -20°C	at 2-8°C, at -20°C	Not recommended	Hemolysis	-



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Row	Test name	Sample S.type	minimum s.vol.(ml) sample vol (ml)	Assay method	Testing & Reporting time	Emergency	Storage	Transport	Preparation before sampling	Reject	Others
532	Strongyloides stercoralis culture	Stool	2.0 gr.	Ager plate	Daily 6 days later	-	1 day at RT, 2 days at 2-8°C	at 2-8°C, at -20°C	Not recommended	-	-
533	Sucrose hemolysis test	WB (E) & S and same samples with isoblood group	WB: 2.0, S: 1.0	Hemolysis	Daily Next day	-	1 day at RT	at RT	Not recommended	Hemolysis, Frozen, Clotting, Incorrect anticoagulat	Be separated quickly
534	Sugar Chromatography	U (R)	5	TLC	7 days Next day	-	4 days at 2-8°C, 1 month at -20°C	at 2-8°C, at -20°C	Not recommended	-	-
535	Sweat test	Sweat	200 mg	Automation	Daily Same day	-	1 day at 2-8°C	at 2-8°C	Not recommended	-	-
536	Synovial fluid culture	Synovial fluid	2	Aeorobic & An.	Daily 2, 5, 8 days later	-	The same time must be tested	at RT	Avoid using antibiotic	-	-
537	T3	S, PE, PH	0.5	ECLIA	Daily Same day	2-4 hrs	1 day at RT, 7 days at 2-8°C, 1 month at -20°C	at 2-8°C, at -20°C	Notice hormonal treatment & gestation	Hemolysis, Icteric, Lipemic	avoid freeze / thaw cycle
538	T3 up take	S, PE, PH	0.5	ECLIA	Daily Same day	22-4 hrs	1 day at RT, 7 days at 2-8°C, 3 months at -20°C	at 2-8°C, at -20°C	Fasting	Hemolysis, Icteric, Lipemic	-



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Row	Test name	Sample S.type	minimum s.vol.(ml) sample vol (ml)	Assay method	Testing & Reporting time	Emergency	Storage	Transport	Preparation before sampling	Reject	Others
539	T4	S, PE, PH	0.5	ECLIA	Daily Same day	2-4 hrs	1 day at RT, 7 days at 2-8°C, 1 month at -20°C	at 2-8°C, at -20°C	Notice hormonal treatment & gestation	Hemolysis, Icteric, Lipemic	avoid freeze / thaw cycle
540	Tacrolimus	WB (E)	2	ECLIA	Daily Next day	2-4 hrs	7 days at 2-8°C, 2 months at -20°C	at 2-8°C, at -20°C	Not recommended	Hemolysis, Frozen, Clotting, Incorrect anticoagulat	-
541	Tau protein	CSF	0.5	Elisa	25 days Same day	-	5 days at 2-8°C, 1 month at -20°C	at 2-8°C, at -20°C	Not recommended	-	-
542	Testosterone	S, PE, PH	0.5	CLIA	Daily Same day	2-4 hrs	5 days at 2-8°C, 3 months at -20°C	at 2-8°C, at -20°C	The best time for sampling is 6-10 am. Fasting is recommended.	Hemolysis, Icteric, Lipemic	-
543	Tetanus Ab (IgG)	S	0.5	Elisa	15 days Same day	-	7 days at 2-8°C, 3 months at -20°C	at 2-8°C, at -20°C	Not recommended	Hemolysis, Icteric, Lipemic	Be seperated quickly. Avoid freeze / thaw cycle
544	Thallium	WB (E)	3	ICP	25 days Same day	-	7 days at 2-8°C, 2 months at -20°C	at 2-8°C, at -20°C	Not recommended	-	-
545	Theophylline	S	1	CLIA	6 days Same day	-	7 days at 2-8°C, 3 months at -20°C	at 2-8°C, at -20°C	Not recommended	Hemolysis, Icteric, Lipemic	avoid freeze / thaw cycle



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Row	Test name	Sample S.type	minimum s.vol.(ml) sample vol (ml)	Assay method	Testing & Reporting time	Emergency	Storage	Transport	Preparation before sampling	Reject	Others
546	Throat Culture	Throat swab	3 swabs	Aerobic culture	Daily 4 days later	-	Must be tested the same time	at RT	Avoid using antibiotic	-	-
547	Thrombin time (TT)	PC, (Platelet - poor plasma)	1	Coagulation	Daily Same day	-	2 hrs. at RT, 14 days at -20°C, CRITICAL FROZEN	at RT, at -20°C	Notic use Warfarin, Coumadin, Heroine, ...	Hemolysis	Be seperated quickly
548	Thyroglobulin	S	0.5	ECLIA	Daily Same day	2-4 hrs	2 days at 2-8°C, 3 months at -20°C	at 2-8°C, at -20°C	Abstain from doing this test after FNA from thyroid, thyroid surgery and treatment with radioactive substance.	Hemolysis, Icteric, Lipemic	avoid freeze / thaw cycle
549	Thyroid Microsomal Ab	S, PE, PH, PC	0.5	CLIA	Daily Next day	-	4 days at 2-8°C, 3 months at -20°C	at 2-8°C, at -20°C	Not recommended	Hemolysis, Icteric, Lipemic	Be seperated until 20-30 min. Avoid freeze / thaw cycle
550	Thyroid peroxidase Anti TPO Ab	S, PE, PH, PC	0.5	CLIA	Daily Same day	2-4 hrs	4 days at 2-8°C, 3 months at -20°C	at 2-8°C, at -20°C	Not recommended	Hemolysis, Icteric, Lipemic	Be seperated until 20-30 min. Avoid freeze / thaw cycle
551	Thyroxine binding globulin (TBG)	S	0.5	Elisa	By contact	-	1 day at 2-8°C, 1 month at -20°C	at 2-8°C, at -20°C	Not recommended	Hemolysis, Icteric, Lipemic	Avoid freeze / thaw cycle
552	TIBC	S	1	Photometric	Daily Same day	1-2 hrs	7 days at 2-8°C, 3 months at -20°C	at 2-8°C, at -20°C	Fasting	Hemolysis, Icteric, Lipemic	Avoid freeze / thaw cycle



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Row	Test name	Sample S.type	minimum s.vol.(ml) sample vol (ml)	Assay method	Testing & Reporting time	Emergency	Storage	Transport	Preparation before sampling	Reject	Others
553	Tissue pathology	Tissue (10% formalin)	5 mm	.	5 days Same day	-	1 month after fixation (10% formalin) at RT or 2-8c	at RT, at 2-8°C	Not recommended	-	-
554	TNF-a	S, PE, PH	1	Elisa	14 days Same day	-	6 months at -20°C CRITICAL FROZEN	at -20°C	Not recommended	Gross: Hemolysis, Icteric, Lipemic	avoid freeze / thaw cycle
555	Topamax (Topiramate)	S	1	HPLC	4 days Same day	-	7 days at 2-8°C, 3 months at -20°C	at 2-8°C, at -20°C	Not recommended	-	-
556	Total lipid	S	1	Photometric	Daily Same day	1-2 hrs	10 days at 2-8°C	at 2-8°C, at -20°C	Fasting	Frozen sample	Be seperated quickly
557	Toxicology (Drug abuse)	WB, BF (see table 2)	10,50	TLC & chemical	Daily Next day	-	7 days at 2-8°C, 2 months at -20°C	at 2-8°C, at -20°C	Not recommended	-	-
558	Toxocara Ab (IgG)	S, PE, PH, BF	0.5	Elisa	Wed Next day	-	7 days at 2-8°C, 3 months at -20°C	at 2-8°C, at -20°C	Not recommended	Hemolysis, Icteric, Lipemic	avoid freeze / thaw cycle
559	Toxoplasma Ab (IgG)	S, PE, PH, BF, CSF	0.5	Elisa	Daily Same day	-	7 days at 2-8°C, 3 months at -20°C	at 2-8°C, at -20°C	Not recommended	Hemolysis, Icteric, Lipemic	-



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Row	Test name	Sample S.type	minimum s.vol.(ml) sample vol (ml)	Assay method	Testing & Reporting time	Emergency	Storage	Transport	Preparation before sampling	Reject	Others
560	Toxoplasma Ab (IgG) - avidity	S	1	CLIA	Sun, Wed Next day	-	7 days at 2-8°C, 3 months at -20°C	at 2-8°C, at -20°C	Not recommended	Hemolysis, Icteric, Lipemic	-
561	Toxoplasma Ab (IgM)	S, PE, PH, BF, CSF	0.5	Elisa	Daily Same day	-	7 days at 2-8°C, 3 months at -20°C	at 2-8°C, at -20°C	Not recommended	Hemolysis, Icteric, Lipemic	-
562	Toxoplasma PCR	Serum, WB (EDTA), BF, Ammniotic fluid, CSF, Tissue, Ocular fluid, ...	Fluid: 1 ml Tissue: 5 mm	Qualitative PCR	3days Same day	-	8 hrs , at RT, 3 days at 2-8°C, 3 months at -20°C Tissue: 3 months at < -70°C	at 2-8°C, (preferred)	Not recommended	Incorrect anticoagulant, (heparin), Hemolysis, Clot sample (WB), Formalinized sample	-
563	TPMT mutation PCR (G238C & G460A & A719G)	WB (E), WB (ACD)	5	PCR	4 days Same day	-	5 days at 2-8°C, 1 month at -20°C	at 2-8°C, at -20°C	Not recommended	Incorrect anticoagulant, Hemolysis	-
564	Transferrin	S, PE, PH	0.5	Nephlo	Daily Same day	1-2 hrs	7 days at 2-8°C, 3 months at -20°C	at 2-8°C, at -20°C	Not recommended	Hemolysis, Icteric, Lipemic	avoid freeze / thaw cycle
565	Transferrin saturation	S, PE, PH	0.5	Photometric	Daily Same day	-	7 days at 2-8°C, 3 months at -20°C	at 2-8°C, at -20°C	Not recommended	-	-
566	Triglycerides	S, PH	0.5	Photometric	Daily Same day	1-2 hrs	7 days at 2-8°C, 3 months at -20°C	at 2-8°C, at -20°C	Fasting 12 hrs. Abstain using alcohol before 3 days.	Hemolysis, Icteric	avoid freeze / thaw cycle



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Row	Test name	Sample S.type	minimum s.vol.(ml) sample vol (ml)	Assay method	Testing & Reporting time	Emergency	Storage	Transport	Preparation before sampling	Reject	Others
567	globulin I	S, PE, PH	0.5	CLIA	Daily Same day	-	7 days at 2-8°C, Indefinitely at -20°C	at 2-8°C, at -20°C	Not recommended	Hemolysis, Icteric, Lipemic	-
568	Trypsin activity (stool)	Stool	0.5 gr.	Chemical	Daily 3 days later	-	7 days at -20°C CRITICAL FROZEN	at -20°C	Not recommended	Specimens containing barium.	-
569	Tryptase	S	2	FEIA	25 days Same day	-	2 days at 2-8°C, 2 months at -20°C	at 2-8°C, at -20°C	Not recommended	Gross Hemolysis	-
570	TSH	S, PE, PH	0.5	CMIA	Daily Same day	2-4 hrs	5 days at 2-8°C, 1 month at -20°C	at 2-8°C, at -20°C	Notice to hormonal & chemotherapy drugs	Hemolysis, Icteric, Lipemic	-
571	TTG Ab (IgA)	S	0.5	Elisa	Daily Same day	-	7 days at 2-8°C, 3 months at -20°C	at 2-8°C, at -20°C	Not recommended	Hemolysis, Lipemic	avoid freeze / thaw cycle
572	TTG Ab (IgG)	S	0.5	Elisa	Daily Same day	-	7 days at 2-8°C, 3 months at -20°C	at 2-8°C, at -20°C	Not recommended	Hemolysis, Lipemic	avoid freeze / thaw cycle
573	Tuberculin test	Skin test	-	-	Daily 3 days later	-	Must be repeated 48-72 hrs. After injection.	-	Not recommended	-	-



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Row	Test name	Sample S.type	minimum s.vol.(ml) sample vol (ml)	Assay method	Testing & Reporting time	Emergency	Storage	Transport	Preparation before sampling	Reject	Others
574	Tyrosine	PE	1	HPLC	Odd days Next day	-	1 day at 2-8°C, 1 month at -20°C	at 2-8°C, at -20°C	Fasting. Abstain using from androgen drugs, glucagon, vitamin C before few days.	Hemolysis	Be separated quickly
575	UBT	(see sop 5)	-	with Carbon14	Daily Same day	1-2 hrs	Breathing card after collecting 14 days at paper envelope	at RT	Fasting 6 hrs. Abstain 1 month from antibiotics & bismuth, 7 days H2 receptor & proton pump inhibitor (Cimetidine, Omeprazole, Clidinium C, ...)	-	-
576	Urea	S, PE, U (R & 24h), BF (see table 1)	0.5	Photometric	Daily Same day	1-2 hrs	5 days at 2-8°C, 3 months at -20°C	at 2-8°C, at -20°C	Nephrotoxic drugs will change blood urea level.	Hemolysis, Icteric, Lipemic	avoid freeze / thaw cycle
577	Ureaplasma urealyticum culture	Urethal & vaginal dis., U, Prostate dis., semen,...	-	PLO browth	Daily 6 days later	-	7 hrs. at RT, 1 day at 2-8°C in transport media, 3 months at -20°C	at 2-8°C	Avoid using antibiotic	-	-
578	Ureaplasma urealyticum PCR	Urethal & vaginal dis., U, Prostate dis., semen,...	Swab, fluid: 1 ml	PCR	5 days Same day	-	7 days at RT, 14 days at 2-8°C, 3 months at -20°C	at RT, at 2-8°C, at -20°C	Not recommended	-	-
579	Urethal dis. Culture	Urethal dis.	-	Aerobic	Daily 4 days later	-	The same time should be tested.	-	Avoid using antibiotic	-	-



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Row	Test name	Sample S.type	minimum s.vol.(ml) sample vol (ml)	Assay method	Testing & Reporting time	Emergency	Storage	Transport	Preparation before sampling	Reject	Others
580	Uric acid	S, PE, U (R & 24h), BF (see table1)	0.5	Photometric	Daily Same day	1-2 hrs	Serum: 7 days at 2-8°C, 3 months at -20°C Urine: 7 days at 2-8°C, 14 days at -20°C	at 2-8°C, at -20°C	Abstain using salicylates before few days.	Hemolysis, Icteric, Lipemic	avoid freeze / thaw cycle
581	Urine Culture	U (R)	10	Aerobic	Daily 3 days later	-	Unpreservative 2 hrs. at RT, 1 day at 2-8°C	24 hrs. at 2-8°C	Avoid using antibiotic	-	-
582	Urine analysis	U (R)	10	-	Daily Same day	1 hour after sample preparation	2 hrs. at RT, 1 day at 2-8°C	at 2-8°C	Not recommended	-	-
583	Urine Organic acid profile	U (R)	10	GC-MS	10 days Same day	-	7 days at 2-8°C, 3 months at -20°C	at 2-8°C, at -20°C	Not recommended	-	-
584	Vaginal culture	Vaginal dis.	-	Aerobic & An.	Daily 4 days later	-	The same time should be tested.	-	Avoid using antibiotic	-	-
585	Valproic acid	S	0.5	HPLC	Daily Same day	-	7 days at 2-8°C, 4 months at -20°C	at 2-8°C, at -20°C	Not recommended	-	-



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Row	Test name	Sample S.type	minimum s.vol.(ml) sample vol (ml)	Assay method	Testing & Reporting time	Emergency	Storage	Transport	Preparation before sampling	Reject	Others
586	VBG (Venous blood gas)	WB (H) (Venous blood)	1	Optical fluorescence	Daily 1 hr later	1-2 hrs	30 min on ice	On ice	Not recommended	Incorrect anticoagulant, warm sample	-
587	VDRL	S, BF, CSF	0.5	Flocculation	Daily Same day	1-2 hrs	7 days at 2-8°C, 3 months at -20°C	at 2-8°C, at -20°C	Not recommended	Hemolysis	-
588	VIP (Vasoactive Intestinal Polypeptide)	PE	1	RIA	25 days Same day	-	3 months at -20°C CRITICAL FROZEN	at -20°C	Not recommended	Gross: Hemolysis, Lipemic	-
589	Vitamin A	S	0.5	HPLC	2 days Sat, Wed	-	7 days at 2-8°C, 3 months at -20°C (dark place)	at 2-8°C, at -20°C	Fasting. Sample collecting is done in cold tube, syringe. Abstain using alcohol 24 hrs. before.	Hemolysis, Icteric	Be separated in refrigerated centrifuge.
590	Vitamin B1 (Thiamine)	WB (E)	3	HPLC	25 days Same day	-	1 month at -20°C CRITICAL FROZEN	at -20°C	Fasting	Gross Lipemic	-
591	Vitamin B2 (Riboflavin)	WB (E)	3	HPLC	25 days Same day	-	7 days at 2-8°C (dark place)	at 2-8°C	Fasting	Hemolysis, gross Lipemic	-
592	Vitamin B6 (Pyridoxal 5-Phosphate)	PE	3	HPLC	25 days Same day	-	2 months at -20°C (dark place) CRITICAL FROZEN	at -20°C	Fasting	hemolysis, Lipemic	-



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Row	Test name	Sample S.type	minimum s.vol.(ml) sample vol (ml)	Assay method	Testing & Reporting time	Emergency	Storage	Transport	Preparation before sampling	Reject	Others
593	Vitamin B12 (cobolamin)	S	0.5	ECLIA	Daily Same day	2-4 hrs	2 days at 2-8°C, 1 month at -20°C (dark place)	at 2-8°C, at -20°C	Fasting	Hemolysis, Icteric	avoid freeze / thaw cycle
594	Vitamin C (Acid Ascorbic)	S (Centrifuge immediately)	0.5	Chemical	3 days Same day	-	1 hr at RT, 14 days at -20°C with preservative (20 mg oxalic acid in 1ml serum) 2 months at -20°C. (dark place)	at -20°C	Fasting preferred. Abstain using contraceptive drugs.	Hemolysis, Icteric	Be separated quickly. The oxalic acid preservative may interfere with other tests
595	Vitamin D (25OH)	S, PH	0.5	HPLC	Daily Same day	2-4 hrs	1 day at RT, 7 days at 2-8°C, 3 months at 20°C	at 2-8°C, at -20°C	Fasting	Hemolysis, Icteric	avoid freeze / thaw cycle
596	Vitamin E	S	0.5	HPLC	Sat, Wed Same day	-	7 days at 2-8°C, 3 months at 20°C (dark place)	at 2-8°C, at -20°C	Fasting, abstain from alcohol for 24 hrs.	-	-
597	Vitamin K	S	2	HPLC	25 days Same day	-	5 days at 2-8°C, 1 month at 20°C (dark place)	at 2-8°C, at -20°C	Fasting, abstain from alcohol for 24 hrs.	Gross Hemolysis, Lipemic	-
598	VLCFA (Very long Chain Fatty Acid)	PE	2	GC-MS	60 days Same day	-	2 months at -20°C CRITICAL FROZEN	at -20°C	Fasting	Lipemic	avoid freeze / thaw cycle



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Row	Test name	Sample S.type	minimum s.vol.(ml) sample vol (ml)	Assay method	Testing & Reporting time	Emergency	Storage	Transport	Preparation before sampling	Reject	Others
599	VLDL	S, PH	0.5	Calculation	Daily Same day	1 hour	5 days at 2-8°C, 3 months at 20°C	at 2-8°C, at -20°C	Fasting	Hemolysis, Lipemic	-
600	VMA (Vanillylmandelic acid)	U (24h & R) (see table 1)	10	Col. Chrom.	Mon Next day	-	7 days at 2-8°C, with Ph: 2-4, or 7 days at 20°C	at 2-8°C	Abstain using coffee, cacao, chocolate, blood pressure drugs, guanidine analogue drugs, mono amine oxidase inhibitors 3 days prior to urine collection.	-	-
601	Von Willebrand Factor (VWF)	PC	3	Coagulation	2 days Same day	-	6 hrs. at RT, 14 days at 20°C	at RT, at -20°C	Not recommended	-	-
602	VZV Ab (IgG)	S, BF, CSF	0.5	Elisa	Sun, Wed Next day	-	7 days at 2-8°C, 3 months at 20°C	at 2-8°C, at -20°C	Not recommended	Hemolysis, Ictric, Lipemic	-
663	VZV Ab (IgM)	S, BF, CSF	0.5	Elisa	Sun, Wed Next day	-	7 days at 2-8°C, 3 months at 20°C	at 2-8°C, at -20°C	Not recommended	Hemolysis, Ictric, Lipemic	-
604	VZV PCR	CFS, Serum Whole blood (EDTA), U Tissue, Respiratory sample, Plasma (E), Dermal & genital lesion or swab, Ammniotic fluid, Ccular dis., Urine	Tissue: 5 mm, Others: 1 ml	Qualitative PCR	3 days Same day	-	Tissue: 3 days at 2-8°C, 3 months at 20°C Others: 8 hrs. at RT, 3 days at 2-8°C, 3 months at 20°C	Tissue: Frozen, Others: 2-8°C (preferred)	Not recommended	Incorrect anticoagulat (heparin), Formalinized fluids, Tissue (Formalin fixes), Calcium alginate tipped, wood and gel media swab, Clot WB	-



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Row	Test name	Sample S.type	minimum s.vol.(ml) sample vol (ml)	Assay method	Testing & Reporting time	Emergency	Storage	Transport	Preparation before sampling	Reject	Others
605	Warfarine resistance gene mutation (CYP2C9, VKORC1)	WB (E)	5	PCR	4 days Same day	-	2 days at 2-8°C, 2 months at 20°C	at 2-8°C	Not recommended	Hemolysis, Clotting, Frozen, Incorrect anticoagulant	-
606	WBC	WB (E)	1	Cell counter	Daily Same day	30 min	4 hrs at RT, 1 day at 2-8°C	at RT, at 2-8°C	Not recommended	Hemolysis, Clotting, Frozen, Incorrect anticoagulant	-
607	WBC Xmatch Auto	WB (H) or WB (E) and serum	WB: 5.0, S: 1.0	Cytotoxicity Flow cytometry	Daily 3 days later	-	12 hrs. at 2-8°C	at 2-8°C	Not recommended	-	-
608	WBC Xmatch Auto (Augmented)	WB (H) or WB (E) and serum	WB: 5.0, S: 1.0	Cytotoxicity Flow cytometry	Daily 3 days later	-	12 hrs. at 2-8°C	at 2-8°C	Not recommended	-	-
609	WBC Xmatch Donor	WB (H or D) for donor and serum for recipient	WB: 5.0, S: 1.0	Cytotoxicity Flow cytometry	Daily 3 days later	-	12 hrs. at 2-8°C	at 2-8°C	Not recommended	Hemolysis, Clotting, Frozen, Incorrect anticoagulant	-
610	WBC Xmatch Donor (Augmented)	WB (H) or WB (E) donor and serum for recipient	WB: 5.0, S: 1.0	Cytotoxicity Flow cytometry	Daily 3 days later	-	12 hrs. at 2-8°C	at 2-8°C	Not recommended	Hemolysis, Clotting, Frozen, Incorrect anticoagulant	-
611	WBC Xm donor B-cell	WB (H or D) for donor and serum for recipient	WB: 5.0, S: 1.0	Flow cytometry	Daily 3 days later	-	12 hrs. at 2-8°C	at 2-8°C	Not recommended	Hemolysis, Clotting, Frozen, Incorrect anticoagulant	-



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Row	Test name	Sample S.type	minimum s.vol.(ml) sample vol (ml)	Assay method	Testing & Reporting time	Emergency	Storage	Transport	Preparation before sampling	Reject	Others
612	X mach WBC Xm donor T-cell	WB (H or D) for donor and serum for recipient	WB: 5.0, S: 1.0	Flow cytometry	Daily 3 days later	-	12 hrs. at 2-8°C	at 2-8°C	Not recommended	Hemolysis, Clotting, Frozen, Incorrect anticoagulant	-
613	WBC Xmatch panel	S	1	Cytotoxicity Flow cytometry	Daily 3 days later	-	7 days at 2-8°C, 3 months at 20°C	at 2-8°C, at -20°C	Not recommended	Hemolysis	-
614	WBC Xmatch panel (Augmented)	S	1	Cytotoxicity Flow cytometry	Daily 3 days later	-	7 days at 2-8°C, 3 months at 20°C	at 2-8°C, at -20°C	Not recommended	Hemolysis	-
615	WBC Xmatch panel B-cell	S	1	Flow cytometry	Daily 3 days later	-	7 days at 2-8°C, 3 months at 20°C	at 2-8°C, at -20°C	Not recommended	Hemolysis	-
616	WBC Xmatch panel T-cell	S	1	Flow cytometry	Daily 3 days later	-	7 days at 2-8°C, 3 months at 20°C	at 2-8°C, at -20°C	Not recommended	Hemolysis	-
617	Widal agg. Test	S, BF	1	Agglutination	Daily Same day	1-2 hrs	7 days at 2-8°C, 3 months at 20°C	at 2-8°C, at -20°C	Not recommended	Hemolysis, Icteric, Lipemic	-
618	Wound culture	Wound dis.	-	Aerobic & An.	Daily 7 days later	-	The same time must be tested	at RT	Avoid using antibiotic	-	-



سلام

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Row	Test name	Sample S.type	minimum s.vol.(ml) sample vol (ml)	Assay method	Testing & Reporting time	Emergency	Storage	Transport	Preparation before sampling	Reject	Others
619	Wright agg. Test	S, BF, CSF	0.5	Agglutination	Daily Same day	-	7 days at 2-8°C, 3 months at 20°C	at 2-8°C, at -20°C	Not recommended	-	-
620	Xylose absorption test	S, U (4h)	0.5, 5	Chemical	By contact	-	4 days at 2-8°C, 1 month at 20°C	at 2-8°C, at -20°C	Not recommended	-	-
621	Yersinia Ab (IgA)	S	0.5	Elisa (SMC)	7 days Same day	-	5 days at 2-8°C, 3 months at 20°C	at 2-8°C, at -20°C	Not recommended	-	-
622	Yersinia Ab (IgG)	S	0.5	Elisa (SMC)	7 days Same day	-	5 days at 2-8°C, 3 months at 20°C	at 2-8°C, at -20°C	Not recommended	-	-
623	Zinc	S, BF, U (R & 24h) (see table1)	0.5, 20	Photometric / Atomic abs.	Daily / By contact Same day	-	7 days at 2-8°C, 3 months at 20°C	at 2-8°C, at -20°C	Upon the advice of their physician, patients should be encouraged to discontinue nutritional supplements, vitamins, minerals, and nonessential OTC medications for one week prior to sample draw.	Hemolysis, Icteric, Lipemic	-



سلام

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Row	Test name	Sample S.type	minimum s.vol.(ml) sample vol (ml)	Assay method	Testing & Reporting time	Emergency	Storage	Transport	Preparation before sampling	Reject	Others
624	HPV Aptima (PANTHER)	Thin Prep	-	Aptima (TMA)	2 days a week	-	4 days at refrigerator temperature 2-8 °C	-	-	Repeat sampling in case of a few cells in sample	-
625	Jak 2 V617 F (Exon 14)	EDTA	-	Real Time PCR	1 day a week	-	1 week at refrigerator temperature	-	-	Hemolysis	-
626	STD PCR	Thin Prep and Urine Sample	-	Real Time PCR	1 day a week	-	1 week at refrigerator temperature	-	-	Repeat sampling in case of a few cells in sample	-
627	HIV/HBV/HCV (Multiplex PCR)	EDTA	-	Real Time PCR	1 day a week	-	1 week at refrigerator temperature	-	-	Hemolysis	-
628	CMV/BK/EBV (Multiplex PCR)	EDTA	-	Real Time PCR	1 day a week	-	1 week at refrigerator temperature	-	-	Hemolysis	-
629	HBV PCR (quantitative)	Serum	-	Real Time PCR	1 day a week	-	1 week at refrigerator temperature	-	-	Hemolysis	-
630	HBV PCR (qualitative)	Serum	-	Real Time PCR	1 day a week	-	2 week at refrigerator temperature	-	-	Hemolysis	-

Urine preservative Options (24hrs.)									Table 1	Description
Test Name	Ambient 15-25°	Refrigerate 2-8°	Frozen ≤-20°C	Boric Acid Adult=10gr child=5gr	Acetic acid 50% Adult =10cc	HCl 6N Adult=15cc Child=10cc	Toluene Adult= 10cc	HNO3 6N Adult= 10cc		
Albumin	OK	Preferred	OK	OK	NO	NO	OK	NO		
Aldosterone	OK	OK	OK	OK	Preferred	NO	OK	NO		
δAminolevulonic acid		NO	OK	NO	OK	OK	NO		Protection from sunlight	
Amylase		OK	NO	NO	NO	NO			Adjustment of pH to >7.0	
Amino acids		OK	OK	OK	NO					
B2 macroglobulin		OK	OK	NO	NO	NO				
Bence Jonse Protein		OK		OK	NO	NO				
Calcium	OK	Preferred	OK	OK	OK	OK	OK	OK		
Ceruloplasmin		OK		OK						
Chloride	OK	Preferred	OK	OK	OK	NO	OK	NO		
Citrate	NO	OK	OK	OK	NO	NO	Preferred	NO		
Copper	OK	Preferred	OK	NO	OK	OK	OK	OK		
Cortisol	NO	OK	OK	Preferred	OK	NO	OK	NO		
Cortisol, Free	NO	OK	OK	Preferred	OK	NO	OK	NO		
Creatine		OK	OK	OK			OK	OK		

Urine preservative Options (24hrs.)									Table 1	Description
Test Name	Ambient	Refrigerate	Frozen	Boric Acid	Acetic acid 50%	HCl 6N	Toluene	HNO3 6N		
	15-25°	2-8°	≤-20°C	Adult=10gr child=5gr	Adult =10cc	Adult=15cc Child=10cc	Adult= 10cc	Adult= 10cc		
Creatinine	OK	Preferred	OK	OK	OK	OK	OK	OK		
Glucose	NO	OK	OK	Preferred	OK	OK	OK	OK		
Heavy Metals Screen	NO	Preferred	OK	NO	OK	OK	OK	NO		
Homovanillic Acid (HVA)	NO	NO	NO	NO	Preferred	OK	NO	NO		
5-Hydroxyindoleacetic Acid (5-HIAA)	NO	OK	OK	OK	Preferred	OK	OK	OK	Protection from sunlight	
Immunoelectrophoresis		OK	OK	NO	NO	NO	OK			
Immunofixation	OK	OK	OK	NO	NO	NO	OK			
Lead	OK	Preferred	OK	NO	OK	OK	OK	OK		
17 ketosteroids				OK	OK	OK				
Magnesium	OK	Preferred	OK	OK	OK	OK	OK	OK		
Mercury	NO	Preferred	OK	NO	OK	OK	OK	OK		
Metanephrines	NO	OK	OK	Preferred	Preferred	OK	OK	OK		
Norepinephrine		NO	OK	NO	NO	OK				
Normetanephrines	NO	OK	OK	Preferred	Preferred	OK	OK	OK		
Osmolality			OK							
Oxalate	NO	OK	OK	NO	NO	OK	Preferred	NO		
Phosphorus	OK	Preferred	OK	OK	OK	OK	OK	OK		
pH	NO	OK	OK	NO	NO	NO	Preferred	NO		
Potassium	OK	Preferred	OK	OK	OK	OK	OK	OK		
Porphyrin		OK	OK						Protection from sunlight	

Toxicology (Drug abuse)
(Table 2)

Volatile toxins	Benzodiazepines	Antipsychotic	Cardiac	Anticholinergic	Hallucinogen
Methanol	Diazepam	Thiothixene	Digoxin	Atropin	Cannabis (THC)
Ethylenglycol	Oxazepam	Pimozide	Propranolol	Hyosine	LSD
Cyanide	Lorazepam	Fluvoxamine	Atenolol	Dicyclomine	Phencyclidine
Phosphide	Clonazepam	Risperidone	Furosemide	Narcotic	Marshroom
Co Hb	Flurazepam	Halopridol	Triamterene	Morphine	Marijuana
	Nitrazepam	Analgesics	Adalat	Codeine	Others
Pesticide toxins	Chlordiazepoxide	Aspirin	Captopril	Methadone	Glibenclamid
Phosphorous	Alprazolam	Acetaminophen	Diltiazem	Tramadol	Metformin
Chlorinated	Clobazam	Baclofen	Enalapril	Petidine	Sulfonylurea
Carbamates	Zolpidem	Diclofenac	Quinidine	Heroine	
Pyrethroid	Barbiturates	Ibuprofen	Dipyridamole	Diphenoxylate	
Metal toxin	Phenobarbital	Mefenamic acid	Lozartan	Nalorphine	
Arsenic	Cyclobarbitol	Indomethacin	Anticoagulant	Naltrexone	
Mercury	Hexobarbital	Oxyphenbutazone	Warfarin	Neurogesic	
Neutral drugs	Butabarbital	Piroxicam	Heparin	Temgesic	
Meprobamate	Secobarbital	Tolmetin	Comarine	Nicotine	
Metocarbamol	Thiopental	Jelofen	Dipyridamole	Bupropion	
Phenothiazines	Antidepression (TCA)	Anticonvulsants	Antihistamine	Buprenorphine	
Chlorpromazine	Imipramine	Phenytoin	Terfenadine	Stimulants	
Perphenazine	Amitriptyline	Phenobarbital	Loratadine	Amphetamine	
Promethazine	Nortriptyline	Carbamazepine	Cetirizine	Methamphetamine	
Thiethylprazine	Maprotyline	Valproate Na	Clemastine	Ecstasy	
Trifluoperazine	Bupropion	Gabapentin	Chlorpheniramine	Ritaline	
Tranquilizers	Desipramine	Ethosuximide	Cyproheptadine	Cocaine	
Flouxetine	Clomipramine	Primidone	Diphenhydramine	Krack	
Buspirone	Citalopram	Lamotrigin	Hydroxyzine	Cafeine	
Hydroxyzine	Trazodone	Topomax	Promethazine	Ephedrine	
Droperidol	Trimipramine	Keppra	Telfast	Crystal	
Thioridazine	Isocarboxazid				
	Flavoxamine				
	Tranlycypromine				
	Moclobemide				

CD Markers list			(Table 3)		
No	Antibody	Label	NO	Antibody	Label
1	CD1a	FITC	31	CD41	PE
2	CD2	PE	32	CD43	FITC
3	CD3	FITC	33	CD44	PE
4	CD4-8	4: FITC	34	CD45	FITC
5	CD4	FITC	35	CD54	FITC
6	CD5	PE	36	CD56	FITC
7	CD7	PE	37	CD55	PE
8	CD8	FITC	38	CD59	FITC
9	CD9	FITC	39	CD61	FITC
10	CD10	PE	40	CD64	PE
11	CD11a	PE	41	CD68	FITC
12	CD11b	PE	42	CD71	FITC
13	CD11c	FITC	43	CD79	PE
14	CD13	PE	44	CD103	PE
15	CD14	PE	45	CD117	PE
16	CD15	FITC	46	IgD	FITC
17	CD16	FITC	47	IgM	PE
18	CD18	PE	48	HLA-DR	FITC
19	CD19	CY5	49	TdT	FITC
20	CD19	PE	50	MPO	PE
21	CD20	FITC	51	FMC7	FITC
22	CD21	PE	52	NC	PE
23	CD22	PE	53	NC	CY5
24	CD23	PE	54	NC-Dual	F-P
25	CD25	FITC	55	CD45RO	PE
26	CD27	PE	56	CD138	PE
27	CD33	FITC			
28	CD34	FITC			
29	CD38	FITC			
30	CD38	PE			

IHC Markers				(Table 4)	
A) Lymphoma panel markers		B) Epithelial Markers		7	Inhibin
1	κ Light chain (polyclonal)	1	Cytokeratin	8	β-Catenin
2	λ Light chain (polyclonal)	2	EMA	D) Melanocytic markers	
3	CD20	3	PSA	1	S-100
4	CD3	4	αFP	2	HMB-45
5	CD45RO	5	Thyroglobulin	3	Melan-A
6	CD45 (LCA)	6	CEA (Polyclonal)	4	WT1
7	CD30	7	HMWK (BE12)	E) Endothelial & miscellaneous markers	
8	CD15	8	CK20	1	CD34
9	CD5	9	CK7	2	MIC2 (CD99)
10	Cycline D1	10	CK5/6	3	HHV-8
11	bcl-2	11	Calretinin	F) Neuroendocrine & neuron markers	
12	PC (plasma cell)= CD138	12	CDX2	1	Synaptophysin
13	CD68	13	TTF-1	2	Chromogranin A
14	Fascin	14	Hepatocyte	3	Neurofilament
15	CD43	15	GCDFP-15	4	GFAP
16	MPO	16	Cox-2	5	NSE
17	CD7	17	E-Cadherin	6	INI-1
18	ALK	18	RCC	G) Breast carcinoma markers (hormone receptor)	
19	CD10	19	P63	1	ER
20	CD23	C) Mesenchymal markers		2	PR
21	TdT	1	Vimentin	3	P53
22	CD19	2	SMA	4	Her2/neu (C-erb-B2)
23	Hairy cell (DBA44)	3	Myogenin	5	Ki-67
24	PAX5	4	Desmin	6	GCDFP-15
		5	PLAP	7	CA125
		6	CD117 (C-Kit)		

NO	Staining name	NO	Staining name
1	Periodic acid - schiff stain	9	Ziehl Neelsen stain
2	Reticulin stain	10	Wrights stain
3	Trichrome stain	11	Alcin blue stain
4	Amyloid stain	12	Orcein stain
5	Perls Prussian blue stain	13	Grocotts methenamine silver stain
6	Giemsa stain	14	Toluidine blue stain
7	Mucin stain	15	Von Kossa stain
8	Fontana Masson stain	16	Jones stain