

ALBUMIN

Spectrophotometric
BROMOCRESOL GREEN

Instrument: METROLAB 2100

Principle of the method

Albumin in the sample reacts with bromocresol green in acid medium forming a coloured complex that can be measured by spectrophotometry.

Samples

Serum, plasma.
Stable for 6 days at 2-8°C.

Reagent preparation

Reagent is ready to be used

Performance characteristics

- Interferences: Hemoglobin (1 g/L) and bilirubin (25 mg/dL) interfere.
- Linearity: Up to 70 g/L.

Instrument settings

Nombre:[ALBUMINA] Número:-- Sigla:[ALB] Nomenclador: []

TIPO-[3] REFERENCIA-[2] Longitud de Onda:[610] nm
 Cinética (1/4) Factor (1) Ref.Bicromática:[000] nm
 P. Final (2) Testigo(2)
 Color (3) Unidades:[g/L]
 Tiempos (5)

MUESTRAS de CONTROL

Vol.Muestra:[4] ul	C1	Desde []	Hasta []
1er.Reactivo:[400] ul	C2	Desde []	Hasta []
2o.Reactivo: [0] ul	C3	Desde []	Hasta []
1a.Incubación:[1] min	C4	Desde []	Hasta []
2a.Incubación:[] min	C5	Desde []	Hasta []

Límite Inferior(h):[35] Límite Superior(h):[50]

Límite Inferior(m):[35] Límite Superior(m):[50]

L.lineal:[70]

L.bl/sustrato:[0.200]

Consumo/min:[]

Testigo:[50]

Factor:[1.0]

Cálculo:[2]

Observaciones:[Biosystems 11547] OK<>

ALKALINE PHOSPHATASE (ALP)

Continuous-spectrophotometric
DEA BUFFER

Instrument: METROLAB 2100

Principle of the method

Alkaline phosphatase (ALP) catalyzes in alkaline medium the transfer of the phosphate group from 4-nitrophenylphosphate to diethanolamine (DEA), liberating 4-nitrophenol. The catalytic concentration is determined from the rate of 4-nitrophenol formation, measured at 405 nm.

Samples

Serum, plasma.

Alkaline phosphatase in serum or plasma is stable for 7 days at 2-8°C.

Heparin may be used as anticoagulant

Reagent preparation

Working Reagent: Dissolve the powder of a Reagent B vial with 20 mL of the Reagent A bottle (if 10x20 mL size) or dissolve the contents of a Reagent B vial with the entire volume of a Reagent A bottle (if 5x100 mL size).

Stable for 2 months at 2-8°C.

Performance characteristics

- Linearity: up to 1035 U/L.
- Interferences: Fluoride, oxalate, citrate and EDTA as anticoagulants interfere. Hemolysis interferes due to the alkaline phosphatase content in red cells.

Instrument settings

Nombre:[FOSFATASA AL] Número:-- Sigla:[FAL] Nomenclador: []

TIPO-[1] REFERENCIA-[1] Longitud de Onda:[405] nm
 Cinética (1/4) Factor (1) Ref.Bicromática: [] nm
 P. Final (2) Testigo(2)
 Color (3) Unidades:[UI/l]
 Tiempos (5)

MUESTRAS de CONTROL

Vol.Muestra:[8] ul	C1	Desde []	Hasta []
1er.Reactivo:[400] ul	C2	Desde []	Hasta []
2o.Reactivo: [0] ul	C3	Desde []	Hasta []
1a.Incubación:[0.5] min	C4	Desde []	Hasta []
2a.Incubación:[] min	C5	Desde []	Hasta []

Límite Inferior(h):[90] Límite Superior(h):[280]
 Límite Inferior(m):[90] Límite Superior(m):[280]
 L.lineal:[700] L.bl/sustrato:[0.200] Consumo/min:[0.133]

Testigo:[] Factor:[2764.0] Cálculo:[2]

Observaciones:[FOSFATASA ALCALINA BIOSYSTEM1153] OK<>

ALANINE AMINOTRANSFERASE (ALT)

Continuous-spectrophotometric
IFCC

Instrument: METROLAB 2100

Principle of the method

Alanine aminotransferase (ALT or GPT) catalyzes the transfer of the amino group from alanine to 2-oxoglutarate, forming pyruvate and glutamate. The catalytic concentration is determined from the rate of decrease of NADH, measured at 340 nm, by means of the lactate dehydrogenase (LDH) coupled reaction.

Samples

Serum.

Alanine aminotransferase in serum is stable for 7 days at 2-8°C.

Reagent preparation

Working Reagent: Pour the contents of the Reagent B into the Reagent A bottle. Mix gently.

Stable for 2 months at 2-8°C.

Performance characteristics

- Interferences: High pyruvate in the sample will consume NADH during the delay time before measurements, reducing the linearity of the method.
- Linearity: Up to 750 U/L.

Instrument settings

Nombre:[GPT]	Número:--	Sigla:[GPT]	Nomenclador: []
TIPO-[1]	REFERENCIA-[1]	Longitud de Onda:[340] nm	
Cinética (1/4)	Factor(1)	Ref.Bicromática:[000] nm	
P. Final (2)	Testigo(2)	Unidades:[U/L]	
Color (3)			
Tiempos (5)			
MUESTRAS de CONTROL			
Vol.Muestra:[20] ul	C1	Desde []	Hasta []
1er.Reactivo:[400] ul	C2	Desde []	Hasta []
2o.Reactivo: [0] ul	C3	Desde []	Hasta []
1a.Incubación:[1.5] min	C4	Desde []	Hasta []
2a.Incubación:[] min	C5	Desde []	Hasta []
Límite Inferior(h):[0]	Límite Superior(h):[42]		
Límite Inferior(m):[0]	Límite Superior(m):[42]		
L.lineal:[500]	L.bl/sustrato:[0.800]	Consumo/min:[0.150]	
Testigo:[]	Factor:[3333.0]	Cálculo:[1]	
Observaciones:[BioSystems ALT UV 37oC]		OK<>	

α-AMYLASE

Continuous-spectrophotometric
DIRECT SUBSTRATE

Instrument: METROLAB 2100

Principle of the method

α-Amylase catalyzes the hydrolysis of 2-chloro-4-nitrophenyl-maltotriose (CNP-G3) to 2-chloro-4-nitrophenol (CNP). The catalytic concentration is determined from the rate of 2-chloro-4-nitrophenol formation, measured at 405 nm.

Samples

Serum, plasma, urine.

α-Amylase in serum, plasma or urine is stable for 5 days at 2-8°C.

Heparin may be used as anticoagulant

Reagent preparation

Reagent is ready to be used.

Performance characteristics

- Linearity: up to 1300 U/L (serum) or 2600 U/L (urine).
- Interferences: Fluoride, oxalate, citrate and EDTA as anticoagulants interfere.

Instrument settings

Nombre:[**AMILASA**] Número:-- Sigla:[AMI] Nomenclador: []

TIPO-[1] REFERENCIA-[1] Longitud de Onda:[405] nm
 Cinética (1/4) Factor (1) Ref.Bicromática:[000] nm
 P. Final (2) Testigo(2)
 Color (3) Unidades:[U/L]
 Tiempos (5)

MUESTRAS de CONTROL

Vol.Muestra:[10] ul	C1	Desde []	Hasta []
1er.Reactivo:[400] ul	C2	Desde []	Hasta []
2o.Reactivo: [0] ul	C3	Desde []	Hasta []
1a.Incubación:[1] min	C4	Desde []	Hasta []
2a.Incubación:[] min	C5	Desde []	Hasta []

Límite Inferior(h):[0] Límite Superior(h):[220]
 Límite Inferior(m):[0] Límite Superior(m):[220]
 L.lineal:[3800] L.bl/sustrato:[0.200] Consumo/min:[0.300]

Testigo:[] Factor:[8400.0] Cálculo:[1]

Observaciones:[BioSystems cinético a 37oC] OK<>

ASPARTATE AMINOTRANSFERASE (AST)

Continuous-spectrophotometric
IFCC

Instrument: METROLAB 2100

Principle of the method

Aspartate aminotransferase (AST or GOT) catalyzes the transfer of the amino group from aspartate to 2-oxoglutarate, forming oxalacetate and glutamate. The catalytic concentration is determined from the rate of decrease of NADH, measured at 340 nm, by means of the malate dehydrogenase (MDH) coupled reaction.

Samples

Serum.

Aspartate aminotransferase in serum is stable for 7 days at 2-8°C.

Reagent preparation

Working Reagent: Pour the contents of the Reagent B into the Reagent A bottle. Mix gently.

Stable for 2 months at 2-8°C.

Performance characteristics

- Interferences: High pyruvate in the sample will consume NADH during the delay time before measurements, reducing the linearity of the method.
- Linearity: Up to 750 U/L.

Instrument settings

Nombre:[GOT] Número:-- Sigla:[GOT] Nomenclador: []

TIPO-[1] REFERENCIA-[1] Longitud de Onda:[340] nm
 Cinética (1/4) Factor (1) Ref.Bicromática:[000] nm
 P. Final (2) Testigo(2)
 Color (3) Unidades:[U/L]
 Tiempos (5)

MUESTRAS de CONTROL

Vol.Muestra:[20] ul	C1	Desde []	Hasta []
1er.Reactivo:[400] ul	C2	Desde []	Hasta []
2o.Reactivo: [0] ul	C3	Desde []	Hasta []
1a.Incubación:[1.5] min	C4	Desde []	Hasta []
2a.Incubación:[] min	C5	Desde []	Hasta []

Límite Inferior(h):[0] Límite Superior(h):[42]
 Límite Inferior(m):[0] Límite Superior(m):[42]
 L.lineal:[500] L.bl/sustrato:[0.800] Consumo/min:[0.150]

Testigo:[] Factor:[3333.0] Cálculo:[1]

Observaciones:[BioSystems AST UV] OK<>

DIRECT BILIRUBIN

Spectrophotometric
DIAZOTIZED SULFANILIC

Instrument: METROLAB 2100

Principle of the method

Direct bilirubin in the sample reacts with diazotized sulfanilic acid forming a coloured complex that can be measured by spectrophotometry. The terms "direct" and "total" refer to the reaction characteristics of serum bilirubin in the absence or presence of solubilizing (accelerating) reagents, and are only approximately equivalent to the conjugated and unconjugated fractions.

Samples

Serum.

Stable for 2 days at 2-8 °C and protected from light.

Reagent preparation

Reagent 1: Use the Reagent A-D.

Reagent 2: Use the Reagent B.

Performance characteristics

- Linearity: Up to 15 mg/dL.

Instrument settings

Nombre:[BILI-DIR]	Número:--	Sigla:[BID]	Nomenclador: []
TIPO-[3]	REFERENCIA-[2]	Longitud de Onda:[530] nm	
Cinética (1/4)	Factor (1)	Ref.Bicromática:[750] nm	
P. Final (2)	Testigo(2)	Unidades:[mg/L]	
Color (3)			
Tiempos (5)			
MUESTRAS de CONTROL			
Vol.Muestra:[35] ul	C1	Desde []	Hasta []
1er.Reactivo:[350] ul	C2	Desde []	Hasta []
2o.Reactivo: [16] ul	C3	Desde []	Hasta []
1a.Incubación:[.5] min	C4	Desde []	Hasta []
2a.Incubación:[2.0] min	C5	Desde []	Hasta []
Límite Inferior(h):[0.01]	Límite Superior(h):[0.9]		
Límite Inferior(m):[0.01]	Límite Superior(m):[0.9]		
L.lineal:[20]	L.bl/sustrato:[0.200]	Consumo/min:[]	
Testigo:[]	Factor:[]	Cálculo:[1]	

Observaciones:[Biosystems] OK<>

TOTAL BILIRUBIN

Spectrophotometric
DIAZOTIZED SULFANILIC

Instrument: METROLAB

Principle of the method

Total bilirubin in the sample reacts with diazotized sulfanilic in acid medium forming a coloured complex that can be measured by spectrophotometry. Both direct (conjugated with glucuronate) and indirect (unconjugated) bilirubin couple with diazo in the presence of cetrimide. The terms "direct" and "total" refer to the reaction characteristics of serum bilirubin in the absence or presence of solubilizing (accelerating) reagents, and are only approximately equivalent to the conjugated and unconjugated fractions.

Samples

Serum.
Stable for 20 days at 2-8 °C and protected from light.

Reagent preparation

Reagent 1: Use the Reagent A-T.
Reagent 2: Use the Reagent B.

Performance characteristics

- Linearity: Up to 15 mg/dL.

Instrument settings

Nombre:[BILI-TOTAL]	Número:--	Sigla:[BIT]	Nomenclador: []
TIPO-[3]	REFERENCIA-[2]	Longitud de Onda:[530] nm	
Cinética (1/4)	Factor (1)	Ref.Bicromática:[750] nm	
P. Final (2)	Testigo(2)		
Color (3)		Unidades:[mg/L]	
Tiempos (5)			
MUESTRAS de CONTROL			
Vol.Muestra:[35] ul	C1	Desde []	Hasta []
1er.Reactivo:[350] ul	C2	Desde []	Hasta []
2o.Reactivo: [16] ul	C3	Desde []	Hasta []
1a.Incubación:[.5] min	C4	Desde []	Hasta []
2a.Incubación:[2.0] min	C5	Desde []	Hasta []
Límite Inferior(h):[0.01]	Límite Superior(h):[1.0]		
Límite Inferior(m):[0.01]	Límite Superior(m):[1.0]		
L.lineal:[18]	L.bl/sustrato:[0.300]	Consumo/min:[]	
Testigo:[]	Factor:[]	Cálculo:[]	

Observaciones:[Biosystems] OK<>
Diluir el nitrito con H2O al ¼
Factor aprox 14-17

Instrument: METROLAB 2100

Principle of the method

Calcium in the sample reacts with arsenazo III forming a coloured complex that can be measured by spectrophotometry.

Samples

Serum, heparinized plasma, urine.

Calcium in serum or plasma is stable for 10 days at 2-8 °C.

Anticoagulants other than heparin should not be used.

Reagent preparation

Reagent is ready to be used.

Performance characteristics

- Linearity: Up to 18 mg/dL.
- Interferences: Hemoglobin (1.5 g/L), bilirubin (20 mg/dL), magnesium (10 mg/dL) and phosphate (20 mg/dL) do not interfere.

Instrument settings

Nombre:[**CALCIO AR**] Número: 91 Sigla:[CA1] Nomenclador: []

TIPO-[3] REFERENCIA-[1] Longitud de Onda:[650] nm
 Cinética (1/4) Factor (1) Ref.Bicromática:[000] nm
 P. Final (2) Testigo(2)
 Color (3) Unidades:[mg/dl]
 Tiempos (5)

MUESTRAS de CONTROL

Vol.Muestra:[6] ul	C1	Desde []	Hasta []
1er.Reactivo:[400] ul	C2	Desde []	Hasta []
2o.Reactivo: [0] ul	C3	Desde []	Hasta []
1a.Incubación:[2] min	C4	Desde []	Hasta []
2a.Incubación:[] min	C5	Desde []	Hasta []

Límite Inferior(h):[9.0] Límite Superior(h):[10.7]
 Límite Inferior(m):[9.0] Límite Superior(m):[10.7]
 L.lineal:[15] L.bl/sustrato:[4.200] Consumo/min:[]

Testigo:[10.0] Factor:[] Cálculo:[1]

Observaciones:[**CALCIO ARSENAZO III**] OK<>

CALCIUM

Spectrophotometric
METHYLTHYMOL BLUE

Instrument: METROLAB 2100

Principle of the method

Calcium in the sample reacts with methylthymol blue in alkaline medium forming a coloured complex that can be measured by spectrophotometry. Hydroxyquinoline is included in the reagent to remove magnesium interference.

Samples

Serum, heparinized plasma, urine.
Calcium in serum or plasma is stable for 10 days at 2-8 °C.
Anticoagulants other than heparin should not be used.

Reagent preparation

Working Reagent: Mix equal volumes of Reagent A and Reagent B. Mix thoroughly.
Stable for 2 days at 2-8°C.

Performance characteristics

- Linearity: Up to 15 mg/dL.
- Interferences: Hemoglobin (1.5 g/L), bilirubin (20 mg/dL), magnesium (10 mg/dL) and phosphate (20 mg/dL) do not interfere.

Instrument settings

Nombre:[**CALCIO**] Número:-- Sigla:[**CAL**] Nomenclador: []

TIPO-[3] REFERENCIA-[2] Longitud de Onda:[610] nm
 Cinética (1/4) Factor (1) Ref.Bicromática: [000] nm
 P. Final (2) Testigo(2)
 Color (3) Unidades:[mg/dl]
 Tiempos (5)

MUESTRAS de CONTROL

Vol.Muestra:[8] ul	C1	Desde []	Hasta []
1er.Reactivo:[200] ul	C2	Desde []	Hasta []
2o.Reactivo: [200] ul	C3	Desde []	Hasta []
1a.Incubación:[0.5] min	C4	Desde []	Hasta []
2a.Incubación:[2.0] min	C5	Desde []	Hasta []

Límite Inferior(h):[9] Límite Superior(h):[10.7]
 Límite Inferior(m):[] Límite Superior(m):[]
 L.lineal:[15] L.bl/sustrato:[0.300] Consumo/min:[]

Testigo:[10] Factor:[1.0] Cálculo:[2]

Observaciones:[BioSystems color 11527] OK< >

CHOLESTEROL

Enzymatic-spectrophotometric
CHOLESTEROL OXIDASE/PEROXIDASE

Instrument: METROLAB 2100

Principle of the method

Free and esterified cholesterol in the sample originates, by means of some coupled reactions, a coloured complex that can be measured by spectrophotometry.

Samples

Serum or plasma.
Stable for 7 days at 2-8°C.
Heparin, EDTA, oxalate and fluoride may be used as anticoagulants.

Reagent preparation

Reagent is ready to be used

Performance characteristics

- Interferences: Hemoglobin (3 g/L), ascorbic acid (0.3 mmol/L) and bilirubin (0.25 mmol/L) interfere. Lipemia does not affect results.
- Linearity: Up to 1000 mg/dL.

Instrument settings

Nombre:[COLESTEROL] Número:-- Sigla:[COL] Nomenclador: []

TIPO-[3] REFERENCIA-[2] Longitud de Onda:[500] nm

Cinética (1/4) Factor (1) Ref.Bicromática:[700] nm

P. Final (2) Testigo(2) Unidades:[mg/dl]

Color (3) Tiempos (5)

MUESTRAS de CONTROL

Vol.Muestra:[4] ul C1 Desde [] Hasta []

1er.Reactivo:[400] ul C2 Desde [] Hasta []

2o.Reactivo: [0] ul C3 Desde [] Hasta []

1a.Incubación:[5] min C4 Desde [] Hasta []

2a.Incubación:[] min C5 Desde [] Hasta []

Límite Inferior(h):[123] Límite Superior(h):[270]

Límite Inferior(m):[123] Límite Superior(m):[243]

L.lineal:[450] L.bl/sustrato:[0.200] Consumo/min:[]

Testigo:[200] Factor:[1.0] Cálculo:[2]

Observaciones:[BioSystems enzimático] OK<>

CREATINE KINASE (CK)

Continuous-spectrophotometric
IFCC

Instrument: METROLAB 2100

Principle of the method

Creatine kinase (CK) catalyzes the phosphorylation of ADP, in the presence of creatine phosphate, to form ATP and creatine. The catalytic concentration is determined from the rate of NADPH formation, measured at 340 nm, by means of the hexokinase (HK) and glucose-6-phosphate coupled reactions.

Samples

Serum.

Creatine kinase in serum is stable for 7 days at 2-8°C.

Reagent preparation

Working Reagent: Empty the contents of a Reagent B bottle into a Reagent A bottle. Swirl gently.

Stable for 15 days at 2-8°C.

Performance characteristics

- Linearity: up to 900 U/L.

Instrument settings

Nombre:[**CK-BIOS**] Número:-- Sigla:[CKB] Nomenclador: []

TIPO-[1] REFERENCIA-[1] Longitud de Onda:[340] nm
 Cinética (1/4) Factor (1) Ref.Bicromática:[000] nm
 P. Final (2) Testigo(2)
 Color (3) Unidades:[U/l]
 Tiempos (5)

MUESTRAS de CONTROL

Vol.Muestra:[15] ul	C1	Desde []	Hasta []
1er.Reactivo:[400] ul	C2	Desde []	Hasta []
2o.Reactivo: [0] ul	C3	Desde []	Hasta []
1a.Incubación:[3] min	C4	Desde []	Hasta []
2a.Incubación:[] min	C5	Desde []	Hasta []

Límite Inferior(h):[24] Límite Superior(h):[195]
 Límite Inferior(m):[] Límite Superior(m):[]
 L.lineal:[740] L.bl/sustrato:[0.200] Consumo/min:[0.220]

Testigo:[] Factor:[4127.0] Cálculo:[1]

Observaciones:[CPK Biosystem cinetico] OK<>

CREATINE KINASE-MB (CK-MB)

Immuno-inhibition

Instrument: METROLAB 2100

Principle of the method

A specific antibody inhibits CK-M subunits but it does not affect to the CK-B subunits. CK-B catalytic concentration, which corresponds to half of CK-MB concentration, is determined from the rate of NADPH formation, measured at 340 nm, by means of the hexokinase (HK) and glucose-6-phosphate dehydrogenase (G6P-DH) coupled reactions.

Samples

Serum.

CK-MB in serum is stable for 7 days at 2-8°C.

Reagent preparation

Working Reagent: Reconstitute the contents of a Reagent B vial with 2.5 mL of Reagent A. Swirl gently.

Stable for 15 days at 2-8°C.

Performance characteristics

- Linearity: up to 330 U/L.

Instrument settings

Nombre:[**CK-MB**] Número:-- Sigla:[CKMB] Nomenclador: []

TIPO-[4] REFERENCIA-[1] Longitud de Onda:[340] nm

Cinética (1/4) Factor (1) Ref.Bicromática:[000] nm

P. Final (2) Testigo(2)

Color (3) Unidades:[U/l]

Tiempos (5)

MUESTRAS de CONTROL

Vol.Muestra: [20] ul C1 Desde [] Hasta []

1er.Reactivo:[400] ul C2 Desde [] Hasta []

2o.Reactivo: [0] ul C3 Desde [] Hasta []

1a.Incubación:[10] min C4 Desde [] Hasta []

2a.Incubación:[5] min C5 Desde [] Hasta []

Límite Inferior(h):[0] Límite Superior(h): [24]

Límite Inferior(m):[0] Límite Superior(m):[24]

L.lineal:[330] L.bl/sustrato:[0.200] Consumo/min:[0.200]

Testigo:[] Factor:[1666] Cálculo:[1]

Observaciones:[CKMB Biosystem cinetico] OK<>

CREATININE

Kinetic-spectrophotometric
ALKALINE PICRATE

Instrument: METROLAB 2100

Principle of the method

Creatinine in the sample reacts with picrate in alkaline medium forming a coloured complex. The complex formation rate is measured in a short period to avoid interferences.

Samples

Serum, plasma, urine.

Creatinine in serum or plasma is stable for 24 hours at 2-8°C.

Heparin, EDTA, oxalate and fluoride may be used as anticoagulants.

Reagent preparation

Working Reagent: Mix equal volumes of Reagent A and Reagent B. Mix thoroughly.

Stable for 2 months at 2-8°C.

Performance characteristics

- Interferences: Hemoglobin (0.1 g/L), bilirubin (10 mg/dL), protein and ketonic bodies do not interfere.
- Linearity: Up to 20 mg/dL (serum or plasma).

Instrument settings

Nombre:[CREATININA] Número:-- Sigla:[CR] Nomenclador: [192]

TIPO-[4] REFERENCIA-[2] Longitud de Onda:[505] nm
 Cinética (1/4) Factor (1) Ref.Bicromática: [] nm
 P. Final (2) Testigo(2)
 Color (3) Unidades:[mg/dl]
 Tiempos (5)

MUESTRAS de CONTROL

Vol.Muestra:[40] ul	C1	Desde []	Hasta []
1er.Reactivo:[200] ul	C2	Desde []	Hasta []
2o.Reactivo: [200] ul	C3	Desde []	Hasta []
1a.Incubación:[0.5] min	C4	Desde []	Hasta []
2a.Incubación:[1.0] min	C5	Desde []	Hasta []

Límite Inferior(h):[0.6] Límite Superior(h):[1.1]
 Límite Inferior(m):[0.5] Límite Superior(m):[0.9]
 L.lineal:[20] L.bl/sustrato:[0.200] Consumo/min:[0.133]

Testigo:[2] Factor:[1] Cálculo:[2]

Observaciones:[CREATININA BIOSYSTEM CINETICA] OK<>

FRUCTOSAMINE

Kinetic-spectrophotometric
NBT

Instrument: METROLAB 2100

Principle of the method

Serum glycated proteins reduce nitroblue tetrazolium (NBT) salts in alkaline medium. The rate of formazan at a given temperature is proportional to the serum glycated proteins

Samples

Serum.
Stable for 1 week at 2-8°C and for 2 months at -20°C.
Hemolysed samples are not suitable for testing.

Reagent preparation

Reagent is ready to be used.

Performance characteristics

- Interferences: Hemoglobin (up to 100 mg/dL), bilirubin (up to 2 mg/dL), uric acid (up to 15 mg/dL) and lipidemia do not interfere with the test.
- Linearity: Up to 7 mmol/L.

Instrument settings

Nombre:[FRUCTOSAMINA] Número:-- Sigla:[FRU] Nomenclador: []

TIPO-[4] REFERENCIA-[2] Longitud de Onda:[530] nm
 Cinética (1/4) Factor (1) Ref.Bicromática: [765] nm
 P. Final (2) Testigo(2)
 Color (3) Unidades:[mM/L]
 Tiempos (5)

MUESTRAS de CONTROL

Vol.Muestra:[40] ul	C1	Desde []	Hasta []
1er.Reactivo:[400] ul	C2	Desde []	Hasta []
2o.Reactivo: [00] ul	C3	Desde []	Hasta []
1a.Incubación:[10] min	C4	Desde []	Hasta []
2a.Incubación:[5] min	C5	Desde []	Hasta []

Límite Inferior(h):[2.0] Límite Superior(h):[2.8]
 Límite Inferior(m):[2.0] Límite Superior(m):[2.8]
 L.lineal:[7.0] L.bl/sustrato:[0.200] Consumo/min:[0.133]

Testigo:[2] Factor:[24.237] Cálculo:[2]

Observaciones:[BioSystems cinético] OK<>

GAMMA-GLUTAMYLTRANSFERASE (γ -GT)

Continuous-spectrophotometric
IFCC

Instrument: **METROLAB 2100**

Principle of the method

Gamma-glutamyltransferase (γ -GT) catalyzes the transfer of the γ -glutamyl group from γ -glutamyl-3-carboxy-4-nitroanilide to glycylglycine, liberating 3-carboxy-4-nitroaniline. The catalytic concentration is determined from the rate of 3-carboxy-4-nitroaniline formation.

Samples

Serum.
Gamma-glutamyltransferase in serum is stable for 5 days at 2-8°C.

Reagent preparation

Working Reagent: Reconstitute the contents of a Reagent B vial with 15 mL (if 10x15 mL size) or 50 mL (if 4x50 mL size) of Reagent A. Swirl gently.
Stable for 2 months at 2-8°C.

Performance characteristics

- Linearity: up to 300 U/L.

Instrument settings

Nombre:[Gamma GT]	Número:--	Sigla:[GGT]	Nomenclador: [412]
TIPO-[1]	REFERENCIA-[1]	Longitud de Onda:[405] nm	
Cinética (1/4)	Factor (1)	Ref.Bicromática:[000] nm	
P. Final (2)	Testigo(2)	Unidades:[U/l]	
Color (3)			
Tiempos (5)			
MUESTRAS de CONTROL			
Vol.Muestra:[40] ul	C1	Desde []	Hasta []
1er.Reactivo:[400] ul	C2	Desde []	Hasta []
2o.Reactivo: [0] ul	C3	Desde []	Hasta []
1a.Incubación:[0.5] min	C4	Desde []	Hasta []
2a.Incubación:[] min	C5	Desde []	Hasta []
Límite Inferior(h):[15]	Límite Superior(h):[60]		
Límite Inferior(m):[40]	Límite Superior(m):[40]		
L.lineal:[300]	L.bl/sustrato:[0.600]	Consumo/min:[0.200]	
Testigo:[]	Factor:[1111.0]	Cálculo:[1]	
Observaciones:[CPK Biosystem cinetico]	OK<>		

GLUCOSE

Enzymatic-spectrophotometric
GLUCOSE OXIDASE/PEROXIDASE

Instrument: METROLAB 2100

Principle of the method

Glucose in the sample originates, by means of some coupled reactions, a coloured complex that can be measured by spectrophotometry.

Samples

Serum or plasma.

Stable for 7 days at 2-8°C.

Heparin, EDTA, oxalate and fluoride may be used as anticoagulants.

Reagent preparation

Reagent is ready to be used

Performance characteristics

- Interferences: Hemoglobin (0.3 g/L), ascorbic acid (10 mg/dL) and bilirubin (15 mg/dL) interfere. Moderate lipemia does not affect the results.
- Linearity: Up to 500 mg/dL.

Instrument settings

Nombre:[GLUCOSA] Número:-- Sigla:[G] Nomenclador: []

TIPO-[3] REFERENCIA-[2] Longitud de Onda:[505] nm
 Cinética (1/4) Factor (1) Ref.Bicromática:[700] nm
 P. Final (2) Testigo(2)
 Color (3) Unidades:[mg/dL]
 Tiempos (5)

MUESTRAS de CONTROL

Vol.Muestra:[4] ul	C1	Desde []	Hasta []
1er.Reactivo:[400] ul	C2	Desde []	Hasta []
2o.Reactivo: [0] ul	C3	Desde []	Hasta []
1a.Incubación:[10] min	C4	Desde []	Hasta []
2a.Incubación:[] min	C5	Desde []	Hasta []

Límite Inferior(h):[76] Límite Superior(h):[110]
 Límite Inferior(m):[76] Límite Superior(m):[110]
 L.lineal:[250] L.bl/sustrato:[0.200] Consumo/min:[]

Testigo:[100] Factor:[1.0] Cálculo:[2]

Observaciones:[GLUCOSA Biosystems] OK<>

IRON

Spectrophotometric
CHROMAZUROL B

Instrument: METROLAB 2100

Principle of the method

Ferric ions in the sample react with chromazurol B and cetyltrimethylammoniumbromide (CTAB) forming a coloured complex that can be measured by spectrophotometry.

Samples

Serum or heparinized plasma.
Stable for 7 days at 2-8°C.

Reagent preparation

Reagent is ready to be used

Performance characteristics

- Interferences: Do not use hemolyzed sera.
- Linearity: Up to 500 µg/dL.

Instrument settings

Nombre:[**HIERRO CROMAZUROL**] Número:-- Sigla:[FE] Nomenclador: [343]

TIPO-[3]	REFERENCIA-[1]	Longitud de Onda:[625] nm
Cinética (1/4)	Factor (1)	Ref.Bicromática:[000] nm
P. Final (2)	Testigo(2)	Unidades:[ug/dl]
Color (3)		
Tiempos (5)		

MUESTRAS de CONTROL

Vol.Muestra: [20] ul	C1	Desde []	Hasta []
1er.Reactivo: [400] ul	C2	Desde []	Hasta []
2o.Reactivo: [0] ul	C3	Desde []] Hasta []
1a.Incubación:[5] min	C4	Desde []	Hasta []
2a.Incubación:[] min	C5	Desde []	Hasta []

Límite Inferior(h): [70] Límite Superior(h): [155]
 Límite Inferior(m): [55] Límite Superior(m): [140]
 L.lineal: [1000] L.bl/sustrato: [0.200] Consumo/min:[]

Testigo:[100] Factor:[1956] Cálculo:[1]

Observaciones:[HIRREO CROMAZUROL BIOSYSTEM] OK<>

Instrument: METROLAB 2100

Principle of the method

Transferrin-bound ferric ions in the sample are released by guanidinium and reduced to ferrous by means of hydroxylamine. Ferrous ions react with ferrozine forming a coloured complex that can be measured by spectrophotometry.

Samples

Serum or heparinized plasma.
Stable for 7 days at 2-8°C.

Reagent preparation

Reagent 1: Use the Reagent A.
Reagent 2: Use the Reagent B.

Performance characteristics

- Interferences: Do not use hemolyzed sera.
- Linearity: Up to 1000 µg/dL.

Instrument settings

Nombre:[**HIERRO BIOS**] Número:-- Sigla:[FE] Nomenclador: [343]

TIPO-[3] REFERENCIA-[2] Longitud de Onda:[560] nm
Cinética (1/4) Factor (1) Ref.Bicromática:[000] nm
P. Final (2) Testigo(2)
Color (3) Unidades:[ug/dl]
Tiempos (5)

MUESTRAS de CONTROL

Vol.Muestra:[75] ul	C1	Desde []	Hasta []
1er.Reactivo:[300] ul	C2	Desde []	Hasta []
2o.Reactivo: [10] ul	C3	Desde []] Hasta []
1a.Incubación:[1] min	C4	Desde []	Hasta []
2a.Incubación:[5] min	C5	Desde []	Hasta []

Límite Inferior(h):[70] Límite Superior(h):[155]
Límite Inferior(m):[55] Límite Superior(m):[140]
L.lineal:[1000] L.bl/sustrato:[0.200] Consumo/min:[]

Testigo:[100] Factor:[1032.0] Cálculo:[1]

Observaciones:[FERREMIA BIOSYSTEM 11509] OK<>

LACTATE DEHYDROGENASE (LD/LDH)

Continuous-spectrophotometric
PYRUVATE

Instrument: **Metrolab 2100**

Principle of the method

Lactate dehydrogenase (LD or LDH) catalyzes the reduction of pyruvate by NADH, to form lactate and NAD⁺. The catalytic concentration is determined from the rate of decrease of NADH, measured at 340 nm.

Samples

Serum or plasma.

Lactate dehydrogenase in serum or plasma is stable for 24 hours at 2-8°C.

Heparin may be used as anticoagulant.

Reagent preparation

Working Reagent: Reconstitute the contents of a Reagent B vial with 3 mL (if 20x3 mL size) or 15 mL (if 10x15 mL size) of Reagent A. Swirl gently.

Stable for 2 months at 2-8°C.

Performance characteristics

- Interferences: Hemolysis interferes due to the high lactate dehydrogenase concentration in red cells.
- Linearity: Up to 1850 U/L.

Instrument settings

Nombre:[LDH-BIOSYS] Número:-- Sigla:[LDB] Nomenclador: []

TIPO-[1] REFERENCIA-[1] Longitud de Onda:[340] nm
Cinética (1/4) Factor (1) Ref.Bicromática:[000] nm
P. Final (2) Testigo(2)

Color (3) Unidades:[U/l]

Tiempos (5)

MUESTRAS de CONTROL

Vol.Muestra:[8] ul C1 Desde [] Hasta []
1er.Reactivo:[400] ul C2 Desde [] Hasta []
2o.Reactivo: [0] ul C3 Desde [] Hasta [] 1a.Incubación:[1.5] min C4
Desde [] Hasta []
2a.Incubación:[] min C5 Desde [] Hasta []

Límite Inferior(h):[207.0] Límite Superior(h):[414.0]
Límite Inferior(m):[] Límite Superior(m):[]
L.lineal:[1250] L.bl/sustrato:[0.200] Consumo/min:[0.200]

Testigo:[] Factor:[8095.0] Cálculo:[1]

Observaciones:[LDH Biosystem cinetico] OK<>

PHOSPHORUS

Spectrophotometric
PHOSPHOMOLYBDATE/UV

Instrument: METROLAB 2100

Principle of the method

Inorganic phosphorus in the sample reacts with molybdate in acid medium forming a phosphomolybdate complex that can be measured by spectrophotometry.

Samples

Serum, plasma, urine.

Phosphorus in serum or plasma is stable for 7 days at 2-8°C. EDTA and fluoride may be used as anticoagulants.

Reagent preparation

Reagent 1: Use the Reagent A.

Reagent 2: Use the Reagent B.

Performance characteristics

- Interferences: Do not use hemolyzed sera.

- Linearity: Up to 20 mg/dL.

Instrument settings

Nombre:[FOSFORO] Número:-- Sigla:[PI] Nomenclador: [362]

TIPO-[3] REFERENCIA-[2] Longitud de Onda:[340] nm
 Cinética (1/4) Factor (1) Ref.Bicromática:[000] nm
 P. Final (2) Testigo(2)
 Color (3) Unidades:[mg/dl]
 Tiempos (5)

MUESTRAS de CONTROL

Vol.Muestra:[4] ul	C1	Desde []	Hasta []
1er.Reactivo:[400] ul	C2	Desde []	Hasta []
2o.Reactivo: [0] ul	C3	Desde []	Hasta []
1a.Incubación:[5.0] min	C4	Desde []	Hasta []
2a.Incubación:[0] min	C5	Desde []	Hasta []

Límite Inferior(h):[2.7] Límite Superior(h):[4.5]
 Límite Inferior(m):[] Límite Superior(m):[]
 L.lineal:[20] L.bl/sustrato:[0.200] Consumo/min:[]

Testigo:[5] Factor:[1.0] Cálculo:[1]

Observaciones:[Fosforo Biosystem] OK<>

PROTEIN
Spectrophotometric
BIURET

Instrument: METROLAB 2100

Principle of the method

Protein in the sample reacts with copper (II) ion in alkaline medium forming a coloured complex that can be measured by spectrophotometry.

Samples

Serum, heparinized plasma.

Stable for 8 days at 2-8°C.

Anticoagulants other than heparin should not be used.

Reagent preparation

Reagent is ready to be used.

Performance characteristics

- Interferences: Hemoglobin (0.2 g/L) and bilirubin (15 mg/dL) interfere. Moderate lipemia does not affect the results.
- Linearity: Up to 150 g/L.

Instrument settings

Nombre:[PROTEINA]	Número:--	Sigla: PRO]	Nomenclador: []
TIPO-[3]	REFERENCIA-[2]	Longitud de Onda:[545] nm	
Cinética (1/4)	Factor (1)	Ref.Bicromática:[000] nm	
P. Final (2)	Testigo(2)	Unidades:g/l]	
Color (3)			
Tiempos (5)			
MUESTRAS de CONTROL			
Vol.Muestra:[8] ul	C1	Desde []	Hasta []
1er.Reactivo:[400] ul	C2	Desde []	Hasta []
2o.Reactivo: [0] ul	C3	Desde []	Hasta []
1a.Incubación:[5] min	C4	Desde []	Hasta []
2a.Incubación:[] min	C5	Desde []	Hasta []
Límite Inferior(h):[65]	Límite Superior(h):[80]		
Límite Inferior(m):[65]	Límite Superior(m):[80]		
L.lineal:[150]	L.bl/sustrato:[0.200]	Consumo/min:[]	
Testigo:[70]	Factor:[1.0]	Cálculo:[2]	
Observaciones:[Biosystems 11553]	OK<>		

TRIGLYCERIDES

Enzymatic-spectrophotometric
GLYCEROL PHOSPHATE OXIDASE/PEROXIDASE

Instrument: METROLAB 2100

Principle of the method

Triglycerides in the sample originates, by means of some coupled reactions, a coloured complex that can be measured by spectrophotometry.

Samples

Serum or plasma.

Stable for 5 days at 2-8°C.

Heparin, EDTA, oxalate and fluoride may be used as anticoagulants.

Reagent preparation

Reagent is ready to be used

Performance characteristics

- Interferences: Hemoglobin (3 g/L), ascorbic acid (0.3 mmol/L) and bilirubin (0.25 mmol/L) interfere. Lipemia does not affect results.
- Linearity: Up to 600 mg/dL.

Instrument settings

Nombre:[**TRIGLICERIDO**] Número:-- Sigla:[TG] Nomenclador: []

TIPO-[3] REFERENCIA-[2] Longitud de Onda:[505] nm
 Cinética (1/4) Factor (1) Ref.Bicromática:[700] nm
 P. Final (2) Testigo(2)
 Color (3) Unidades:[mg/dl]
 Tiempos (5)

MUESTRAS de CONTROL

Vol.Muestra:[4] ul	C1	Desde []	Hasta []
1er.Reactivo:[400] ul	C2	Desde []	Hasta []
2o.Reactivo: [0] ul	C3	Desde []	Hasta []
1a.Incubación:[6] min	C4	Desde []	Hasta []
2a.Incubación:[] min	C5	Desde []	Hasta []

Límite Inferior(h):[60] Límite Superior(h):[150]
 Límite Inferior(m):[60] Límite Superior(m):[150]
 L.lineal:[600] L.bl/sustrato:[0.200] Consumo/min:[]

Testigo:[200] Factor:[1.0] Cálculo:[1]

Observaciones:[BioSystems enzimático] OK<>

UREA/BUN

Enzymatic-spectrophotometric
ULTRAVIOLET

Instrument: METROLAB 2100

Principle of the method

Urea in the sample consumes, by means of some coupled reactions, NADH that can be measured by spectrophotometry.

Samples

Serum, plasma, urine.
Stable for 7 days at 2-8°C.
Heparin is recommended as anticoagulant.

Reagent preparation

Working Reagent: Transfer the contents of one Reagent B vial into a Reagent A bottle. Mix thoroughly.
Stable for 2 months at 2-8°C.

Performance characteristics

- Interferences: Ammonium salts of the anticoagulants interfere.
- Linearity: Up to 300 mg/dL.

Instrument settings

Nombre:[UREA] Número:-- Sigla:[U] Nomenclador: [902]

TIPO-[4] REFERENCIA-[2] Longitud de Onda:[340] nm
 Cinética (1/4) Factor (1) Ref.Bicromática:[000] nm
 P. Final (2) Testigo(2)
 Color (3) Unidades:[mg/dl]
 Tiempos (5)

MUESTRAS de CONTROL

Vol.Muestra:[3] ul	C1	Desde []	Hasta []
1er.Reactivo:[440] ul	C2	Desde []	Hasta []
2o.Reactivo: [0] ul	C3	Desde []	Hasta []
1a.Incubación:[0.5] min	C4	Desde []	Hasta []
2a.Incubación:[1.0] min	C5	Desde []	Hasta []

Límite Inferior(h):[10] Límite Superior(h):[50]
 Límite Inferior(m):[10] Límite Superior(m):[50]
 L.lineal:[200] L.bl/sustrato:[1.999] Consumo/min:[0.133]

Testigo:[50] Factor:[1.0] Cálculo:[2]

Observaciones:[Biosystem cinetico] OK<>

URIC ACID

Enzymatic-spectrophotometric
URICASE/PEROXIDASE

Instrument: METROLAB 2100

Principle of the method

Uric acid in the sample originates, by means of some coupled reactions, a coloured complex that can be measured by spectrophotometry.

Samples

Serum, heparinized plasma.

Magnesium in serum or plasma is stable for 10 days at 2-8°C.

Anticoagulants other than heparin should not be used.

Reagent preparation

Reagent is ready to be used.

Performance characteristics

- Interferences: Hemoglobin (1 g/L), ascorbic acid (0.3 mmol/L) and bilirubin (15 mg/dL) do not interfere. Lipemia may affect the results
- Linearity: Up to 25 mg/dL.

Instrument settings

Nombre:[**ACIDO URICO**] Número:-- Sigla:[AU] Nomenclador: [904]

TIPO-[3] REFERENCIA-[2] Longitud de Onda:[520] nm
 Cinética (1/4) Factor (1) Ref.Bicromática:[000] nm
 P. Final (2) Testigo(2)
 Color (3) Unidades:[mg/dl]
 Tiempos (5)

MUESTRAS de CONTROL

Vol.Muestra:[10] ul	C1	Desde []	Hasta []
1er.Reactivo:[400] ul	C2	Desde []	Hasta []
2o.Reactivo: [0] ul	C3	Desde []	Hasta []
1a.Incubación:[] min	C4	Desde []	Hasta []
2a.Incubación:[5] min	C5	Desde []	Hasta []

Límite Inferior(h):[3.4] Límite Superior(h):[7.0]
 Límite Inferior(m):[2.4] Límite Superior(m):[5.7]
 L.lineal:[25] L.bl/sustrato:[0.200] Consumo/min:[]

Testigo:[6] Factor:[1.0] Cálculo:[2]

Observaciones:[Biosystems 11508] OK<>

ANTI-STREPTOLYSIN O (ASO)

Turbidimetry
LATEX

Instrument: METROLAB 2100

Principle of the method

Anti-streptolysin O (ASO) causes agglutination of the latex particles coated with streptolysin O. The agglutination of the latex particles is proportional to the ASO concentration and can be measured by turbidimetry.

Samples

Serum.

Stable for 7 days at 2-8 °C.

Hemolyzed or lipemic samples are not suitable for testing..

Reagent preparation

Working Reagent: Pour the contents of a Latex vial into a Diluent bottle. Mix thoroughly.

Stable for 20 days at 2-8°C.

Performance characteristics

- Linearity: Up to 800 IU/mL.

Instrument settings

Nombre:[ASO]	Número:--	Sigla:[]	Nomenclador: []
TIPO-[]	REFERENCIA-[]	Longitud de Onda:[540] nm	
Cinética(2)	Factor (5301.577)	Ref.Bicromática:[0] nm	
P. Final ()	Testigo(325)	Unidades:[]	
Color ()			
Tiempos ()			
MUESTRAS de CONTROL			
Vol.Muestra: [4] ul	C1	Desde []	Hasta []
1er.Reactivo: [400] ul	C2	Desde []	Hasta []
2o.Reactivo: [0] ul	C3	Desde []	Hasta []
1a.Incubación: [0.2] min	C4	Desde []	Hasta []
2a.Incubación: [2] min	C5	Desde []	Hasta []
Límite Inferior(h): []	Límite Superior(h): []		
Límite Inferior(m): []	Límite Superior(m): []		
L.lineal: []	L.bl/sustrato: []	Consumo/min:[]	
Testigo:[]	Factor:[]	Cálculo:[]	
Observaciones:[ASO]	OK<>		

Nombre:[**AMILASEMIA**] Número:-- Sigla:[AM] Nomenclador: [22]

TIPO-[1] REFERENCIA-[1] Longitud de Onda:[405] nm
Cinética (1/4) Factor (1) Ref.Bicromática:[000] nm
P. Final (2) Testigo(2)
Color (3) Unidades:[U/L]
Tiempos (5)

MUESTRAS de CONTROL

Vol.Muestra:[8] ul	C1	Desde []	Hasta []
1er.Reactivo:[400] ul	C2	Desde []	Hasta []
2o.Reactivo: [0] ul	C3	Desde []	Hasta []
1a.Incubación:[3.0] min	C4	Desde []	Hasta []
2a.Incubación:[] min	C5	Desde []	Hasta []

Límite Inferior(h):[10] Límite Superior(h):[60]
Límite Inferior(m):[10] Límite Superior(m):[60]
L.lineal:[150.0] L.bl/sustrato:[1.000] Consumo/min:[0.133]

Testigo:[] Factor:[10.440] Cálculo:[1]

Observaciones:[AMILASA BIOSYSTEM] OK<>

Nombre:[**AMILASURIA**] Número:-- Sigla:[AMO] Nomenclador: []

TIPO-[1] REFERENCIA-[1] Longitud de Onda:[405] nm
Cinética (1/4) Factor (1) Ref.Bicromática:[000] nm
P. Final (2) Testigo(2)
Color (3) Unidades:[]
Tiempos (5)

MUESTRAS de CONTROL

Vol.Muestra:[8] ul	C1	Desde []	Hasta []
1er.Reactivo:[400] ul	C2	Desde []	Hasta []
2o.Reactivo: [0] ul	C3	Desde []	Hasta []
1a.Incubación:[10] min	C4	Desde []	Hasta []
2a.Incubación:[] min	C5	Desde []	Hasta []

Límite Inferior(h):[30] Límite Superior(h):[1170]
Límite Inferior(m):[30] Límite Superior(m):[1170]
L.lineal:[0.200] L.bl/sustrato:[0.800] Consumo/min:[0.133]

Testigo:[] Factor:[20675.] Cálculo:[1]

Observaciones:[AMILASA BIOSYSTEM EN ORINA] OK<>