

# ALKALINE PHOSPHATASE (ALP)

Continuous-spectrophotometric  
DEA BUFFER

## Instrument: SELECTRA I

### 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 690 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 alcalina	Calibrador	-
Nombre abrev.	FAL	Repetir	-
Modo, Linealidad lim.	Cinética 10 %	Número	-
Retardo	51 seg.	Concentración	-
Long. Onda	405 nm	Lím. Inferior	-
Unidades	U/l	Lím. Superior	-
Decimales	0	Factor	2764.00
Vol. muestra	5 ul	Ref. Hombre inf.	90 U/l
Vol. muestr. rerun	2 ul	Ref. Hombre sup.	280 U/l
Vol. reactivo	250 ul	Ref. Mujer inf.	90 U/l
Vol. react. rerun	253 ul	Ref. Mujer sup.	280 U/l
Absorb. infer.	0.000 Abs.	Ref. Ped. inf.	-
Absorb. super.	3.000 Abs.	Ref. Ped sup.	-
Desv. Abs. react.	3.000 Abs.	Control 1	
Lím. Infer. abs. react.	0.000 Abs.	Control 2	
Lím. Super. abs. react.	0.600 Abs.	Control 3	
Blanco reactivo	Si	TEMPERATURA	37 °C
Blanco muestra	No		

# ALANINE AMINOTRANSFERASE (ALT)

Continuous-spectrophotometric  
IFCC

## Instrument: SELECTRA I

### 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 500 U/L.

### Instrument settings

Nombre	ALT/GPT	Calibrador	-
Nombre abrev.	ALT	Repetir	-
Modo, Linealidad lim.	Cinética 10 %	Número	-
Retardo	70 seg.	Concentración	-
Long. onda	340 nm	Lím. inferior	-
Unidades	U/l	Lím. superior	-
Decimales	0	Factor	-1746.0
Vol. muestra	23 ul	Ref. hombre inf.	2 U/l
Vol. muestr. rerun	5 ul	Ref. hombre sup.	41 U/l
Vol. reactivo	230 ul	Ref. mujer inf.	2 U/l
Vol. react. rerun	248 ul	Ref. mujer sup.	41 U/l
Absorb. infer.	0.600 Abs.	Ref. ped. inf.	-
Absorb. super.	3.000 Abs.	Ref. ped sup.	-
Desv. Abs. react.	3.000 Abs.	Control 1	
Lím. infer. abs. react.	1.000 Abs.	Control 2	
Lím. super. abs. react.	3.000 Abs.	Control 3	
Blanco reactivo	Si	TEMPERATURA	37 °C
Blanco muestra	No		

## $\alpha$ -AMYLASE

Continuous-spectrophotometric  
DIRECT SUBSTRATE

### Instrument: **SELECTRA I**

#### Principle of the method

$\alpha$ -Amylase catalyzes the hydrolysis of 2-chloro-4-nitrophenyl-maltotrioside (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.

$\alpha$ -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	Calibrador	-
Nombre abrev.	AMY	Repetir	-
Modo, Linealidad lim.	Cinética 10 %	Número	-
Retardo	32 seg.	Concentración	-
Long. Onda	405 nm	Lím. Inferior	-
Unidades	U/l	Lím. Superior	-
Decimales	0	Factor	3292.00
Vol. muestra	5 ul	Ref. Hombre inf.	0 U/l
Vol. muestr. rerun	2 ul	Ref. Hombre sup.	60 U/l
Vol. reactivo	250 ul	Ref. Mujer inf.	0 U/l
Vol. react. rerun	253 ul	Ref. Mujer sup.	60 U/l
Absorb. infer.	0.000 Abs.	Ref. Ped. inf.	-
Absorb. super.	3.000 Abs.	Ref. Ped sup.	-
Desv. Abs. react.	3.000 Abs.	Control 1	
Lím. Infer. abs. react.	-0.100 Abs.	Control 2	
Lím. Super. abs. react.	0.500 Abs.	Control 3	
Blanco reactivo	Si	TEMPERATURA	37 °C
Blanco muestra	No		

# CALCIUM

Spectrophotometric  
METHYLTHYMOL BLUE

## Instrument: SELECTRA I

### 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	Calibrador	CALCIO
Nombre abrev.	CAL	Repetir	3
Modo, Linealidad lim.	Punto final	Número	1
Retardo	11.5 min	Concentración	*
Long. onda	620 nm	Lím. inferior	*
Unidades	mg/dl	Lím. superior	*
Decimales	1	Factor	**
Vol. muestra	3 ul	Ref. hombre inf.	9.0 mg/dl
Vol. muestr. rerun	2 ul	Ref. hombre sup.	10.7 mg/dl
Vol. reactivo	300 ul	Ref. mujer inf.	9.0 mg/dl
Vol. react. rerun	301 ul	Ref. mujer sup.	10.7 mg/dl
Conc. infer.	4.000 mg/dl.	Ref. ped. inf.	-
Conc. super.	15.000 mg/dl.	Ref. ped sup.	-
Lím. infer. abs. react.	-0.100 Abs.	Control 1	
Lím. super. abs. react.	0.600 Abs.	Control 2	
Blanco reactivo	Si	Control 3	
Blanco muestra	NO	TEMPERATURA	37 °C

\*A introducir por el operador.

\*\*Se introduce automáticamente luego de la primer calibración

# CHOLESTEROL

Enzymatic-spectrophotometric  
CHOLESTEROL OXIDASE/PEROXIDASE

## Instrument: **SELECTRA I**

### 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	Calibrador	COLESTEROL
Nombre abrev.	COL	Repetir	3
Modo, Linealidad lim.	Punto final	Número	1
Retardo	11.5 min	Concentración	*
Long. Onda	505 nm	Lím. Inferior	*
Unidades	mg/dl	Lím. Superior	*
Decimales	0	Factor	**
Vol. muestra	3 ul	Ref. Hombre inf.	123 mg/dl
Vol. muestr. rerun	2 ul	Ref. Hombre sup.	270 mg/dl
Vol. reactivo	250 ul	Ref. Mujer inf.	123 mg/dl
Vol. react. rerun	251 ul	Ref. Mujer sup.	243 mg/dl
Conc. Infer.	0.000 mg/dl.	Ref. Ped. inf.	-
Conc. Super.	500.00 mg/dl.	Ref. Ped sup.	-
Lím. Infer. abs. react.	-0.100 Abs.	Control 1	
Lím. Super. abs. react.	0.300 Abs.	Control 2	
Blanco reactivo	Si	Control 3	
Blanco muestra	NO	TEMPERATURA	37 °C

# CREATINE KINASE (CK)

Continuous-spectrophotometric  
IFCC

## Instrument: **SELECTRA I**

### 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 vial 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-NAC	Calibrador	-
Nombre abrev.	CK	Repetir	-
Modo, Linealidad lim.	Cinética 10 %	Número	-
Retardo	129 seg.	Concentración	-
Long. onda	340 nm	Lím. inferior	-
Unidades	U/l	Lím. superior	-
Decimales	0	Factor	4127.00
Vol. muestra	10 ul	Ref. hombre inf.	24 U/l
Vol. muestr. rerun	2 ul	Ref. hombre sup.	195 U/l
Vol. reactivo	250 ul	Ref. mujer inf.	24 U/l
Vol. react. rerun	258 ul	Ref. mujer sup.	170 U/l
Absorb. infer.	0.000 Abs.	Ref. ped. inf.	-
Absorb. super.	3.000 Abs.	Ref. ped sup.	-
Desv. Abs. react.	3.000 Abs.	Control 1	
Lím. infer. abs. react.	-0.100 Abs.	Control 2	
Lím. super. abs. react.	0.800 Abs.	Control 3	
Blanco reactivo	Si	TEMPERATURA	37 °C
Blanco muestra	No		

# CREATININE

Kinetic-spectrophotometric  
ALKALINE PICRATE

## Instrument: SELECTRA I

### 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	Calibrador	CREATININA
Nombre abrev.	CRE	Repetir	3
Modo, Linealidad lim.	Dos puntos	Número	1
1er punto	32 seg	Concentración	*
2do punto	90 seg	Lím. inferior	*
Long. onda	505 nm	Lím. superior	*
Unidades	mg/dl	Factor	**
Decimales	2	Ref. hombre inf.	0.60 mg/dl
Vol. muestra	25 ul	Ref. hombre sup.	1.10 mg/dl
Vol. muestr. rerun	5 ul	Ref. mujer inf.	0.60 mg/dl
Vol. reactivo	250 ul	Ref. mujer sup.	1.10 mg/dl
Vol. react. rerun	270 ul	Ref. ped. inf.	-
Conc. infer.	0.300 mg/dl.	Ref. ped sup.	-
Conc. super.	20.000 mg/dl.	Control 1	
Desv. Abs. React	3.000 Abs	Control 2	
Lím. infer. abs. react.	-0.100 Abs.	Control 3	
Lím. super. abs. react.	0.500 Abs.	TEMPERATURA	37 °C
Blanco reactivo	Si		
Blanco muestra	NO		

\*A introducir por el operador.

\*\*Se introduce automáticamente luego de la primer calibración

# PHOSPHORUS

Spectrophotometric  
PHOSPHOMOLYBDATE/UV

## Instrument: SELECTRA I

### 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

Working Reagent: Mix 35 mL Reagent A + 15 mL Reagent B. Mix thoroughly. Stable for 12 months at 15-30°C.

### Performance characteristics

- Interferences: Do not use hemolyzed sera.
- Linearity: Up to 20 mg/dL.

### Instrument settings

Nombre	FÓSFORO	Calibrador	FOSFORO
Nombre abrev.	FOS	Repetir	3
Modo, Linealidad lim.	Punto final	Número	1
Retardo	11.5 min	Concentración	*
Long. Onda	340 nm	Lím. Inferior	*
Unidades	mg/dl	Lím. Superior	*
Decimales	1	Factor	**
Vol. muestra	3 ul	Ref. Hombre inf.	2.7 mg/dl
Vol. muestr. rerun	2 ul	Ref. Hombre sup.	4.5 mg/dl
Vol. reactivo	300 ul	Ref. Mujer inf.	2.7 mg/dl
Vol. react. rerun	301 ul	Ref. Mujer sup.	4.5 mg/dl
Conc. Infer.	0.500 mg/dl.	Ref. Ped. inf.	-
Conc. Super.	20.000 mg/dl.	Ref. Ped sup.	-
Lím. Infer. abs. react.	-0.100 Abs.	Control 1	
Lím. Super. abs. react.	0.500 Abs.	Control 2	
Blanco reactivo	Si	Control 3	
Blanco muestra	NO	TEMPERATURA	37 °C

\*A introducir por el operador.

\*\*Se introduce automáticamente luego de la primer calibración

# FRUCTOSAMINE

Kinetic-spectrophotometric  
NBT

## Instrument: SELECTRA I

### 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	Calibrador	FRUCT BIO
Nombre abrev.	FRUC	Repetir	3
Modo, Linealidad lim.	Dos Puntos	Número	1
1er punto	285 seg	Concentración	*
2do punto	422 seg	Lím. inferior	*
Long. onda	546 nm	Lím. superior	*
Unidades	µmol/l	Factor	**
Decimales	0	Ref. hombre inf.	0 µmol/l
Vol. muestra	30 ul	Ref. hombre sup.	285 µmol/l
Vol. muestr. rerun	15 ul	Ref. mujer inf.	0 µmol/l
Vol. reactivo	250 ul	Ref. mujer sup.	285 µmol/l
Vol. react. rerun	265 ul	Ref. ped. inf.	0
Conc. infer.	0.000 µmol/l	Ref. ped sup.	0
Conc. super.	7.000 µmol/l	Control 1	
Desv. Abs. React	3.000 Abs	Control 2	
Lím. infer. abs. react.	-0.100 Abs	Control 3	
Lím. super. abs. react.	0.800 Abs	TEMPERATURA	37 °C
Blanco reactivo	SI (-0.000)		
Blanco muestra	NO		

\*A introducir por el operador.

\*\*Se introduce automáticamente luego de la primer calibración

# GAMMA-GLUTAMYLTRANSFERASE ( $\gamma$ -GT)

Continuous-spectrophotometric  
IFCC

## Instrument: SELECTRA I

### Principle of the method

Gamma-glutamyltransferase ( $\gamma$ -GT) catalyzes the transfer of the  $\gamma$ -glutamyl group from  $\gamma$ -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	GGTP	Calibrador	-
Nombre abrev.	GGT	Repetir	-
Modo, Linealidad lim.	Cinética 10 %	Número	-
Retardo	32 seg.	Concentración	-
Long. onda	405 nm	Lím. inferior	-
Unidades	U/l	Lím. superior	-
Decimales	0	Factor	1111.00
Vol. muestra	25 ul	Ref. hombre inf.	15 U/l
Vol. muestr. rerun	5 ul	Ref. hombre sup.	60 U/l
Vol. reactivo	250 ul	Ref. mujer inf.	10 U/l
Vol. react. rerun	270 ul	Ref. mujer sup.	40 U/l
Absorb. infer.	0.000 Abs.	Ref. ped. inf.	-
Absorb. super.	3.000 Abs.	Ref. ped sup.	-
Desv. Abs. react.	3.000 Abs.	Control 1	
Lím. infer. abs. react.	-0.100 Abs.	Control 2	
Lím. super. abs. react.	1.000 Abs.	Control 3	
Blanco reactivo	Si	TEMPERATURA	37 °C
Blanco muestra	No		

# GLUCOSE

Enzymatic-spectrophotometric  
GLUCOSE OXIDASE/PEROXIDASE

## Instrument: **SELECTRA I**

### 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	Calibrador	*
Nombre abrev.	GLU	Repetir	*
Modo, Linealidad lim.	Punto final	Número	*
Retardo	11.5 min	Concentración	*
Long. Onda	505 nm	Lím. Inferior	*
Unidades	mg/dl	Lím. Superior	*
Decimales	0	Factor	**
Vol. muestra	3 $\mu$ L	Ref. Hombre inf.	70 mg/dl
Vol. muestr. rerun	2 $\mu$ L	Ref. Hombre sup.	110 mg/dl
Vol. reactivo	300 $\mu$ L	Ref. Mujer inf.	70 mg/dl
Vol. react. rerun	301 $\mu$ L	Ref. Mujer sup.	110 mg/dl
Conc. Infer.	10.000 mg/dl.	Ref. Ped. inf.	
Conc. Super.	500.000 mg/dl.	Ref. Ped sup.	
Lím. Infer. abs. react.	-0.100 Abs.	Control 1	
Lím. Super. abs. react.	0.300 Abs.	Control 2	
Blanco reactivo	Si	Control 3	
Blanco muestra	NO	TEMPERATURA	37 °C

\*A introducir por el operador.

\*\*Se introduce automáticamente luego de la primer calibración.

# ASPARTATE AMINOTRANSFERASE (AST)

Continuous-spectrophotometric  
IFCC

## Instrument: **SELECTRA I**

### 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 500 U/L.

### Instrument settings

Nombre	AST/GOT	Calibrador	-
Nombre abrev.	AST	Repetir	-
Modo, Linealidad lim.	Cinética 10 %	Número	-
Retardo	70 seg.	Concentración	-
Long. onda	340 nm	Lím. inferior	-
Unidades	U/l	Lím. superior	-
Decimales	0	Factor	-1746.0
Vol. muestra	23 ul	Ref. hombre inf.	2 U/l
Vol. muestr. rerun	5 ul	Ref. hombre sup.	42 U/l
Vol. reactivo	230 ul	Ref. mujer inf.	2 U/l
Vol. react. rerun	248 ul	Ref. mujer sup.	42 U/l
Absorb. infer.	0.600 Abs.	Ref. ped. inf.	-
Absorb. super.	3.000 Abs.	Ref. ped sup.	-
Desv. Abs. react.	3.000 Abs.	Control 1	
Lím. infer. abs. react.	1.000 Abs.	Control 2	
Lím. super. abs. react.	3.000 Abs.	Control 3	
Blanco reactivo	Si	TEMPERATURA	37 °C
Blanco muestra	No		

# IRON

Spectrophotometric  
FERROZINE

## Instrument: SELECTRA I

### 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

Working Reagent: Transfer the contents of one Reagent B vial into a Reagent A bottle. Mix thoroughly.

Stable for 6 months at 2-8°C.

### Performance characteristics

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

### Instrument settings

Nombre	HIERRO	Calibrador	HIERRO
Nombre abrev.	FE	Repetir	3
Modo, Linealidad lim.	Punto final	Número	1
Retardo	11.5 min	Concentración	*
Long. onda	578 nm	Lím. inferior	*
Unidades	ug/dl	Lím. superior	*
Decimales	0	Factor	**
Vol. muestra	30 ul	Ref. hombre inf.	70 U/l
Vol. muestr. rerun	15 ul	Ref. hombre sup.	155 U/l
Vol. reactivo	250 ul	Ref. mujer inf.	55 U/l
Vol. react. rerun	265 ul	Ref. mujer sup.	140 U/l
Conc. infer.	0.000 ug/dl.	Ref. ped. inf.	-
Absorb. super.	1.000 ug/dl.	Ref. ped sup.	-
Lím. infer. abs. react.	-0.100 Abs.	Control 1	
Lím. super. abs. react.	0.300 Abs.	Control 2	
Blanco reactivo	Si	Control 3	
Blanco muestra	SI	TEMPERATURA	37 °C

\*A introducir por el operador.

\*\*Se introduce automáticamente luego de la primer calibración.

# LACTATE DEHYDROGENASE (LD/LDH)

Continuous-spectrophotometric  
PYRUVATE

## Instrument: **SELECTRA I**

### Principle of the method

Lactate dehydrogenase (LD or LDH) catalyzes the reduction of pyruvate by NADH, to form lactate and NAD<sup>+</sup>. 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 1500 U/L.

### Instrument settings

Nombre	LDH	Calibrador	-
Nombre abrev.	LDH	Repetir	-
Modo, Linealidad lim.	Cinética 10 %	Número	-
Retardo	32 seg	Concentración	-
Long. onda	340 nm	Lím. inferior	-
Unidades	U/l	Lím. superior	-
Decimales	0	Factor	-8095.00
Vol. muestra	5 ul	Ref. hombre inf.	207 U/l
Vol. muestr. rerun	2 ul	Ref. hombre sup.	414 U/l
Vol. reactivo	250 ul	Ref. mujer inf.	207 U/l
Vol. react. rerun	253 ul	Ref. mujer sup.	414 U/l
Absorb. infer.	0.400 Abs	Ref. ped. inf.	-
Absorb. super.	3.000 Abs.	Ref. ped sup.	-
Desv. Abs. react.	3.000 Abs.	Control 1	
Lím. infer. abs. react.	1.000 Abs.	Control 2	
Lím. super. abs. react.	2.000 Abs.	Control 3	
Blanco reactivo	Si	TEMPERATURA 37 °C	37 °C
Blanco muestra	No		

# MAGNESIUM

Spectrophotometric  
CALMAGITE

## Instrument: SELECTRA I

### Principle of the method

Magnesium in the sample reacts with calmagite in alkaline medium forming a coloured complex that can be measured by spectrophotometry. EGTA is included in the reagent to remove calcium interference.

### 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 (1.5 g/L), calcium (20 mg/dL) and bilirubin (20 mg/dL) do not interfere.
- Linearity: Up to 4 mg/dL.

### Instrument settings

Nombre	MAGNESIO	Calibrador	MAGNESIO
Nombre abrev.	MAG	Repetir	3
Modo, Linealidad lim.	Punto final	Número	1
Retardo	11.5 min	Concentración	*
Long. onda	546 nm	Lím. inferior	*
Unidades	mg/dl	Lím. superior	*
Decimales	1	Factor	**
Vol. muestra	3 ul	Ref. hombre inf.	1.8 mg/dl
Vol. muestr. rerun	2 ul	Ref. hombre sup.	2.1 mg/dl
Vol. reactivo	300 ul	Ref. mujer inf.	1.8 mg/dl
Vol. react. rerun	301 ul	Ref. mujer sup.	2.1 mg/dl
Conc. infer.	0.500 mg/dl.	Ref. ped. inf.	-
Conc. super.	4.000 mg/dl.	Ref. ped sup.	-
Lím. infer. abs. react.	-0.100 Abs.	Control 1	
Lím. super. abs. react.	0.900 Abs.	Control 2	
Blanco reactivo	Si	Control 3	
Blanco muestra	NO	TEMPERATURA	37 °C

\*A introducir por el operador.

\*\*Se introduce automáticamente luego de la primer calibración

# PROTEIN

Spectrophotometric  
BIURET

## Instrument: SELECTRA I

### 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	PROTEINAS	Calibrador	*
Nombre abrev.	PRO	Repetir	*
Modo, Linealidad lim.	Punto Final	Número	*
Retardo	11.5 min	Concentración	*
Long. onda	546 nm	Lím. inferior	*
Unidades	g/dl	Lím. superior	*
Decimales	1	Factor	**
Vol. muestra	5 µL	Ref. hombre inf.	6.0 g/dl
Vol. muestr. Rerun	3 µL	Ref. hombre sup.	8.0 g/dl
Vol. reactivo	250 µL	Ref. mujer inf.	6.0 g/dl
Vol. react. rerun	252 µL	Ref. mujer sup.	8.0 g/dl
Conc. infer.	0.000 g/dl	Ref. ped. inf.	
Conc. super.	10.000 g/dl	Ref. ped sup.	
Lím. infer. abs. react.	-0.100 Abs	Control 1	
Lím. Super. abs. react.	0.500 Abs	Control 2	
Blanco reactivo	SI	Control 3	
Blanco muestra	NO	TEMPERATURA	37 °C

\*A introducir por el operador.

\*\*Se introduce automáticamente luego de la primer calibración

## UREA/BUN

Enzymatic-spectrophotometric  
ULTRAVIOLET

### Instrument: **SELECTRA I**

#### 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	Calibrador	UREA
Nombre abrev.	URE	Repetir	3
Modo, Linealidad lim.	Dos puntos	Número	1
1er punto	51 seg	Concentración	*
2o punto	110 seg	Lím. Inferior	*
Long. Onda	340 nm	Lím. Superior	*
Unidades	mg/dl	Factor	**
Decimales	0	Ref. hombre inf.	10 mg/dl
Vol. Muestra	3 ul	Ref. hombre sup.	50 mg/dl
Vol. Muest. rerun	2 ul	Ref. mujer inf.	10 mg/dl
Vol. Reactivo	399 ul	Ref. mujer sup.	50 mg/dl
Vol. React. rerun	400 ul	Ref. ped. inf.	-
Conc. Infer.	5.000 mg/dl.	Ref. ped sup.	-
Conc. Super.	250.00 mg/dl.	Control 1	
Desv.abs.react.	3.000 Abs	Control 2	
Lím. Infer. abs. react.	1.250 Abs.	Control 3	
Lím. Super. abs. react.	3.000 Abs.	TEMPERATURA	37 °C
Blanco reactivo	Si		
Blanco muestra	NO		

\*A introducir por el operador.

\*\*Se introduce automáticamente luego de la primer calibración.

## URIC ACID

Enzymatic-spectrophotometric  
URICASE/PEROXIDASE

### Instrument: **SELECTRA I**

#### 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	Calibrador	AC.URICO
Nombre abrev.	URI	Repetir	3
Modo, Linealidad lim.	Punto final	Número	1
Retardo	11.5 min	Concentración	*
Long. onda	546 nm	Lím. inferior	*
Unidades	mg/dl	Lím. superior	*
Decimales	1	Factor	**
Vol. muestra	5 ul	Ref. hombre inf.	3.4 mg/dl
Vol. muestr. rerun	3 ul	Ref. hombre sup.	7.0 mg/dl
Vol. reactivo	250 ul	Ref. mujer inf.	2.4 mg/dl
Vol. react. rerun	252 ul	Ref. mujer sup.	5.7 mg/dl
Conc. infer.	0.000 mg/dl.	Ref. ped. inf.	-
Conc. super.	25.000 mg/dl.	Ref. ped sup.	-
Lím. infer. abs. react.	-0.100 Abs.	Control 1	
Lím. super. abs. react.	0.300 Abs.	Control 2	
Blanco reactivo	Si	Control 3	
Blanco muestra	NO	TEMPERATURA	37 °C

\*A introducir por el operador.

\*\*Se introduce automáticamente luego de la primer calibración.