

# ELECTROPHORETIC KIT (EXPRIME 72)

## Qualitative and quantitative determination of serum proteins (5 fractions) on EXPRIME 72 instrument

### TEST SUMMARY

The proteins in the samples are separated in the appropriately buffered by electrophoretic migration.

The result is achieved by depositing a serum sample on a appropriate support of cellulose acetate with hard plastic material and application of electric current to a preset time.

The protein fractions are positioned, individually, in different areas of the strip according to their specific electrical charge.

Once correctly completed electrophoretic "migration", the strip should be treated with a reagent capable of highlighting the protein fractions, and in this case you use dye Red Ponceau S. At the end of the staining process is necessary to remove excess dye to make visible only the bands of protein fractions, this is achieved by treating the strip with an appropriate destaining. The strip is read by an optical scanner system. The values are expressed as a percentage of the different fractions, with the chart of the separation.

### SAMPLES

Serum not hemolyzed collected according to NCCLS H11-A3 document.

Stability 2 weeks at 2-8°C or 4 days at 15-25°C.

### REAGENTS

Buffer:	Tris Hippurate buffer.
Staining R.P.:	Ponceau S 0.2% (p.v).
Destaining:	Citric Acid 1 M/l, preservatives and stabilizers
Electrophoretic stripes:	cellulose acetate 76 x 60 mm.

### MATERIAL REQUIRED BUT NOT SUPPLIED

EXPRIME 72 instrument, Normal laboratory equipment  
Distilled water. 5 liters tank or fit plastic containers for reagents dilution.

### PRECAUTIONS

Reagent may contain not reactive and conservative components. It is opportune to avoid contacts with the skin and do not swallow.

Perform the test according to the general "Good Laboratory Practice" (GLP) guidelines.  
Pay attention to hazard symbols and R and S on the labels. Consult the MSDS.

### PREPARATION AND STORAGE OF REAGENTS

The reagents not contaminated when stored at 4-30°C in the dark are stable until the expiration date on the label.

The Staining is supplied ready for use.

Buffer is provided concentrated 10 X.  
Dilute 1:10 with distilled water.  
The diluted buffer is stable 20 days at 15-25°C or 35 days at 2-8°C.

Destaining is provided concentrated 20 X.  
*Destaining can produce a precipitants, that are redissolved by water-bath at max. 50°C.*  
Dilute 1:20 with distilled water.  
The diluted Destaining, not contaminated, is stable until expiry date stated on the label.

### PROCEDURE

#### Loading Reagents

Place the bottle of Staining reagents on the instrument compartment 72 EXPRIME ensuring the inclusion of the loading pipe marked with the word "STAIN".  
The contents of the vial is sufficient for the correct color of 25 cellulose acetate membranes.

Fill the room electrophoresis instrument until to indicated level (approx. 150 ml), with Buffer diluted previously prepared.

Replace the buffer diluted every 25 tests, or in case of any mold.

Insert into the slots of the electrophoresis chamber, the Felts included in the kit, previously immersed in buffer for 1 minute.

Insert the intake hose necessary to Destaining into the tank containing the reagent previously diluted. Make sure, when using the level of the tank never falls below 500 ml. Also make a 5 litres tank containing distilled water "CLEAN" required for cleaning tool and 1 empty tank necessary to drain "WASTE".  
Assemble the electrophoretic strip on the appropriate frame, avoid handling the surface.

**WARNING: It is recommended to verify the correct and complete tightening of carrier strips**

Put the frame in the strips rack framed of the instrument, starting from position 1.  
Place the filter paper into the slots. For instruments equipped with automatic loading and unloading of reagents fill the pan with the respective reagents diluted.

For details, see the user manual of the instrument.

### Loading Samples

Pipet 25-30 µl of fresh serum not hemolyzed each well of the base sample holder, ensuring a homogeneous distribution and without bubbles.

### Operations / Parameters

Constant current	10 mA
Optics Compensation	50
IMBIBITION	120 second
DRYING 1	90 second
MIGRATION	720 second
STAINING	150 second
DESTAINING 1	420 second
DESTAINING 2	300 second
DRYING 2	15 second
DEPOSITION TIME	20 second

### EXPECTED VALUES

Albumin	3,6 – 4,9 g/dl	55 – 64%
$\alpha_1$	0,2 – 0,4 g/dl	2,2 – 4,5%
$\alpha_2$	0,4 – 0,8 g/dl	7 – 9%
$\beta$	0,6 – 1,0 g/dl	9 – 13%
$\gamma$	0,9 – 1,4 g/dl	14 – 18%

Every laboratory should establish own reference intervals in accordance with own population.

### NOTES

- Use only throwaway materials for to avoid contaminations.
- If the results are incompatible with clinical presentation, they have to be evaluated within a total clinical study.
- Only for IVD use.

### CALIBRATION / QUALITY CONTROL

It is suggested to perform an internal quality control with Control Serum of serum proteins.

### TEST PERFORMANCE

All the performance of this reagent were established on the instrument EXPRIME 72 using reagents.

### Methods comparison

46 samples of normal and pathological sera were analyzed by electrophoretic LTA KIT EXPRIME on 72 and the results were compared with those obtained with a similar system commercially available.  
The LTA has confirmed KIT electrophoretic paths equivalent to those of the reference system with a 100% agreement.

### Interferences

In Hemolyzed serum, free hemoglobin bound by Haptoglobin interferes with the assay of Fraction Alpha 2. Are described in the literature various drugs and other substances that may interfere with the determination.

### Precision

intra serie (n = 10) Sample 1	Mean (%)	SD	CV%
Albumin	65.8	1.260	1.92
$\alpha_1$	2.52	0.320	12.93
$\alpha_2$	8.66	0.464	5.37
$\beta$	10.14	0.422	4.16
$\gamma$	12.88	0.421	3.27

Intra serie (n = 10) Sample 2	Mean (%)	SD	CV%
Albumin	52.5	1.162	2.22
$\alpha_1$	2.23	0.157	7.03
$\alpha_2$	10.06	0.805	8.01
$\beta$	10.79	0.417	3.87
$\gamma$	24.42	0.717	2.94

### WASTE DISPOSAL

Product is intended for professional laboratories. Waste products must be handled as per relevant security cards and local regulations.

### PACKAGING

CODE EF10100	(400 TESTS)
Buffer	1 x 100 ml (liquid)
Destaining	2 x 250 ml (liquid)
Staining	2 x 100 ml (liquid)
Electrophoretic stripes	2 x 25 pc.
Imbibition set	4 pc.
Paper set	10 pc.
CODE EF10110	(200 TESTS)
Buffer	1 x 50 ml (liquid)
Destaining	1 x 250 ml (liquid)
Staining	1 x 100 ml (liquid)
Electrophoretic stripes	1 x 25 pc.
Imbibition set	2 pc.
Paper set	5 pc.

### REFERENCES

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### MANUFACTURER

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### SYMBOLS

<b>IVD</b>	Only for IVD use
<b>LOT</b>	Lot of manufacturing
<b>REF</b>	Code number
	Storage temperature interval
	Expiration date
	Warning, read enclosed documents
	Read the directions
	Biological risk

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