



Inflammatory Panel

# Product Sheet Acid Phosphatase (ACP)

BioSystems

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## What is Acid Phosphatase (ACP)?

**Acid phosphatase (ACP)** is an enzyme which catalyzes the hydrolysis of organic phosphate monoesters at acidic pH. It is present in the lysosomes of cells. There are different types of ACP isoenzymes depending on their tissue origin or the cells where they are expressed. Some types are lysosomal acid phosphatase, present in most cells, erythrocytic, liver, spleen and lung macrophages, osteoclastic and prostate, the latter being its main source. In addition to differing in origin and other molecular characteristics, certain isoenzymes are resistant to some inhibitors such as L (+) tartrate and fluoride, while others do not have this resistance, such as prostate ACP.

## Why measure ACP?

Reagent for the quantitative measurement of acid phosphatase concentration in human serum to monitor prostatic impairments in the general population. The reagent can be used manually or in BioSystems analysers (indicated in the corresponding format and IFU). For in vitro professional use only in the clinical laboratory. Determination of ACP concentration in serum is mostly used in the assessment of the prostatic enzyme and its association with pathologies as prostatic hypertrophy, prostate infarction and prostatitis. Based on clinical guidelines and textbooks, and when used in conjunction with other diagnostic technologies and options, this medical information is useful for the assessment of ACP variations. Clinical diagnosis should not be made on the findings of a single test result, but should integrate both clinical and laboratory data.

## Reference values and pathologies

### Normal values in serum:

- Total ACP, up to 10 U/L = 167 nkat/L
- Prostatic ACP, up to 3.5 U/L = 58 nkat/L

*This range is given for orientation only; each laboratory should establish its own reference range.*

**Decreased levels:** total lysosomal ACP deficiency

### Increased levels:

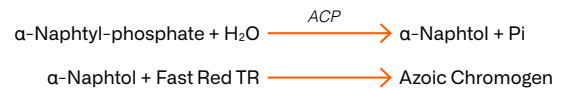
Total ACP:

- Hematological diseases: idiopathic thrombocytopenia and myelocytic leukemia
- Bone diseases: Paget's disease and bone carcinoma
- Liver diseases: hepatitis and obstructive jaundice
- Niemann-Pick disease and Gaucher's disease
- Primary or secondary hyperparathyroidism

Prostatic ACP:

- Prostate carcinoma
- Hypertrophy
- Prostatitis

## Method



## Performance characteristics

<b>Method:</b>	Naphtyl Phosphate/Pentenediol
<b>Analysis mode:</b>	Kinetic Monoreagent
<b>Detection limit:</b>	0.8 U/L
<b>Linearity limit:</b>	150 U/L
<b>Wavelength:</b>	405 nm
<b>On board stability:</b>	2 months
<b>Repeatability:</b>	1.1% at 93.2 U/L
<b>Reproducibility:</b>	1.9% at 93.2 U/L
<b>Sample type:</b>	Serum and plasma with heparin. Do not use EDTA as anticoagulant, it inhibits FAC
<b>Interferences:</b>	Lipemia (triglycerides <5 g/L) does not interfere. Bilirubin (>2.5 mg/dL) interferes. Other drugs and substances can interfere

**Note:** metrological data for spectrophotometer or photometer with cell holder thermostatable at 37°C and able to read at 405 nm.

## Reagents

Product	Code	Kit format	Format
Manual	11548	4 x 10 mL (total ACP) 2 x 10 mL (non-pros. ACP)	Lyophilized
Biochemistry Calibrator (Bovine/Human)	18011/ 18044	5 x 5 mL	Lyophilized
Biochemistry Control Level I (Bovine/Human)	18009/ 18042	5 x 5 mL	Lyophilized
Biochemistry Control Level II (Bovine/Human)	18010/ 18043	5 x 5 mL	Lyophilized

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