



## PYRUVATE KINASE

### Enzymatic method

Erythrocytes, serum or heparinized plasma

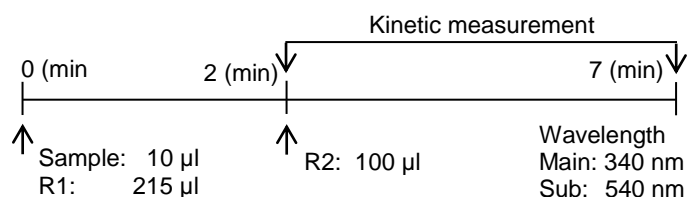
25 - 300 determinations per set

PK/G6PDH calibrator available

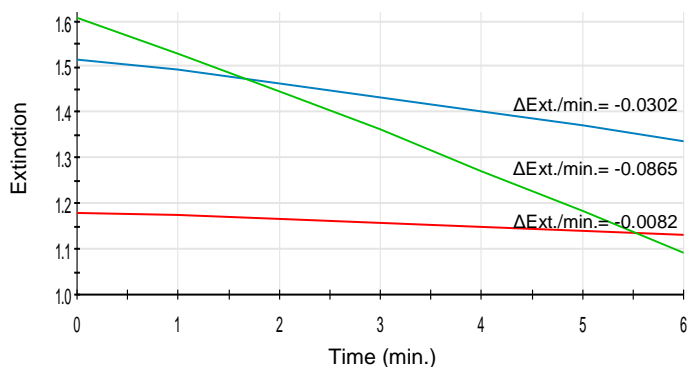
Controls covering the entire measuring range

**PK & G-6-PDH in  
1 sample**

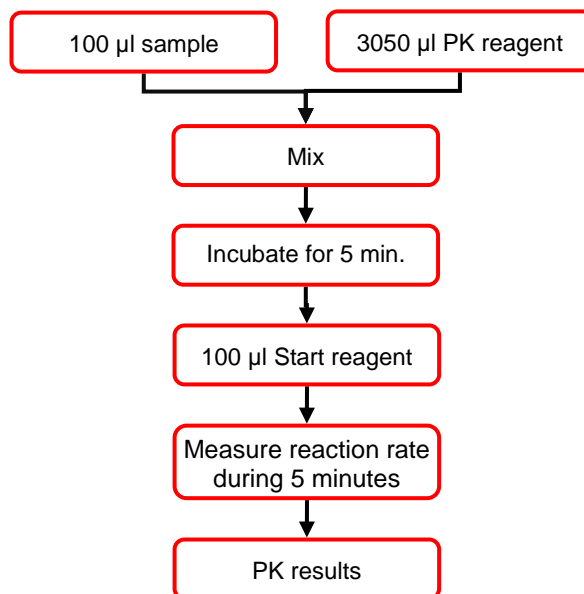
#### Settings for automatic analyzers



#### PK kinetic measurements



#### Manual procedure



**Linearity: 6000 U/l**

**Mean CV's: 2.23%**

**Mean recovery: 99.8%**

**Correlation compared to other manufacturers: 0.984**

Product name	Product no.	Quantity
Pyruvate Kinase Reagent Set	2926	25 -300 tests
PK/G-6-PDH Calibrator	2971	1 x 500 µl
Pyruvate Kinase Control Deficient Level	2931	1 x 1 ml
Pyruvate Kinase Control Normal Level	2932	1 x 1 ml
Pyruvate Kinase Control High Level	2964	1 x 1 ml
PK/G-6-PDH Digitonin Hemolyzing Reagent	3028	1 x 60 ml





# iNstruChemie PYRUVATE KINASE

## PYRUVATE KINASE

### DETERMINATION OF PYRUVATE KINASE (EC 2.7.1.40) IN SERUM / HEPARINIZED PLASMA OR HAEMOLYSATE

- Enzymatic Method
- For Manual and/or Automated Procedures
- Instrument Application Sheets Available
- Use erythrocytes, serum/heparinized plasma
- Also available: PK Control, Deficient, Normal, High Level
- Wavelength 340, 334, 365 nm
- After preparing Haemolysate determine:  
G-6-PDH and PK in one sample



Products	Product no.	Quantity
<b>Pyruvate Kinase Reagent Set</b>	2926	25 - 300 tests
<b>PK/G-6-PDH Calibrator</b>	2971	1 x 500 µl
<b>Pyruvate Kinase Control</b> Deficient Level	2931	1 x 1 ml
<b>Pyruvate Kinase Control</b> Normal Level	2932	1 x 1 ml
<b>Pyruvate Kinase Control</b> HighLevel	2964	1 x 1 ml
<b>PK/G-6-PDH Digitonin Hemolyzing Reagent</b>	3028	1 x 60 ml

## SUMMARY

### ASSAY PRINCIPLE



### SAMPLE MATERIAL

- Whole Blood, collected with EDTA, heparine or CPD (HAEMOLYSATE METHOD)
- Serum or heparinized plasma

### LINEARITY

Up to 6000 Units/liter (HAEMOLYSATE METHOD)

### EXPECTED VALUES

- Haemolysate : 7.4 – 16.4 Units/gram Hb (37 °C)
- Serum or heparinized plasma : < 50 Units/liter (37 °C)

### QUALITY CONTROL

Products	Product no.	Quantity
<b>Pyruvate Kinase Control</b> Deficient Level	2931	1 x 1 ml
<b>Pyruvate Kinase Control</b> Normal Level	2932	1 x 1 ml
<b>Pyruvate Kinase Control</b> High Level	2964	1 x 1 ml

### QUANTITY OF DETERMINATIONS

Procedure

- Manual : 25 tests
- Automated : 300 tests

### NOTES

1. For in vitro diagnostic use only.
2. For professional use only.
3. Always contact INstruChemie for the complete product insert and latest edition.

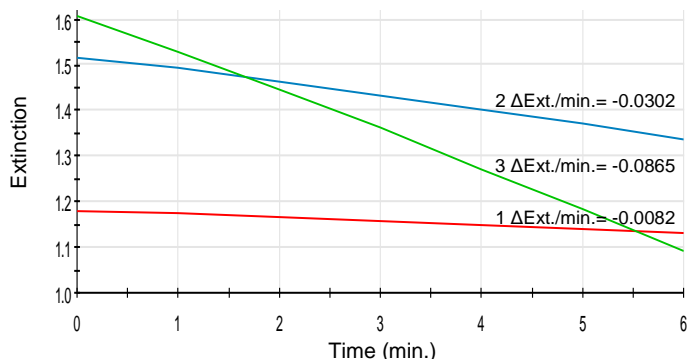


# instru**chemie** PYRUVATE KINASE

## ACTIVITY MEASUREMENT

The activities of a low (1), normal (2) and high (3) human haemolysate were measured with a spectrophotometer.

### PK kinetic measurements



## TEST CONDITIONS

All tests were conducted under the following conditions:

Temperature : 37 °C  
 Wavelength : 340 nm  
 Light path : Analyzer: 0.7 cm / Manual: 1.0 cm  
 Blank : Reagent blank  
 Sample : haemolysate

## SENSITIVITY

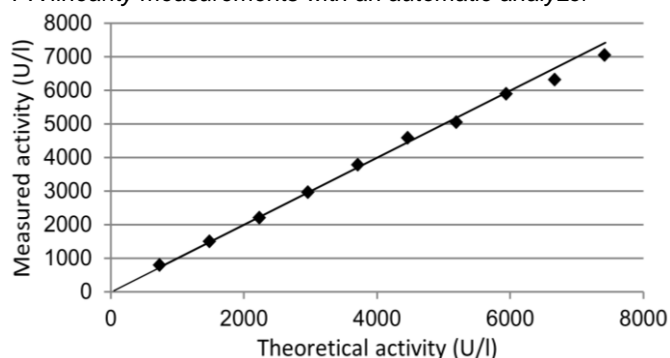
The sensitivity (limit of detection) was determined by measuring human control material (PK activity = 0 U/l) 20 times.

Sensitivity = 3 x standard deviation = 3 x 7 = 21 U/l

## LINEARITY

The PK assay is linear up to 6000 U/l.

### PK linearity measurements with an automatic analyzer



## RECOVERY

The recovery is determined by measuring the PK activity in multiple control materials 10 times using an automatic analyzer.

Recovery:	Deficient level	Normal level	High level
Measured (U/l)	501	1587	3714
Activity (U/l)	500	1599	3714
Recovery (%)	100.2	99.2	100.0

## PRECISION

The precision is determined by measuring a human haemolysate and PK Control Normal Level 10 times a day (repeatability) for 8 consecutive days (reproducibility), using an automatic analyzer.

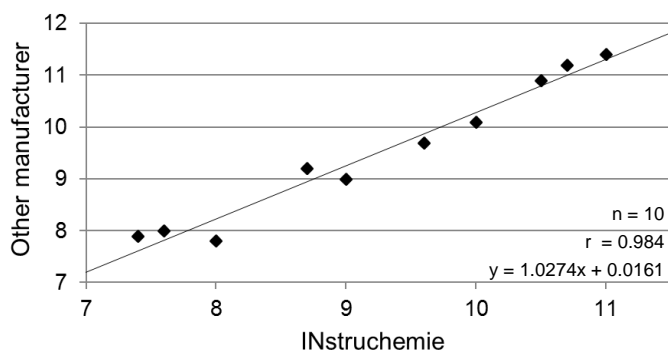
Repeatability:	Control (U/l)	Sample (U/g Hb)
Mean	1599	17.8
Standard deviation	29.62	0.42
Variation coefficient	1.85	2.36

Reproducibility:	Control (U/l)	Sample (U/g Hb)
Mean	1598	17.8
Standard deviation	23.32	0.58
Variation coefficient	1.46	3.26

## CORRELATION

Pearsons' correlation is determined by measuring the PK activity in multiple human haemolysates with reagent of INstru**chemie** and reagent from another manufacturer.

### Correlation measured with an automatic analyzer (U/g Hb)



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# INstruChemie PYRUVATE KINASE

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<b>Reference</b>	2150805-1.FEN

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