



PYRUVATE - AUT

DETERMINATION OF PYRUVATE IN EDTA BLOOD

Enzymatic method

Suitable for all analyzers – 150 tests

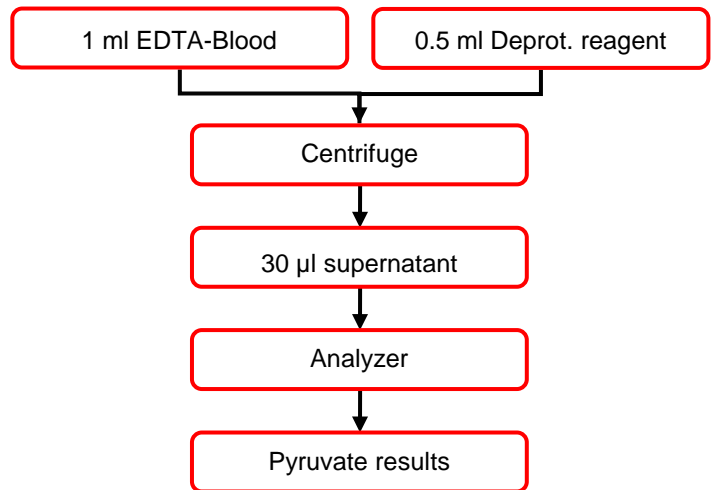
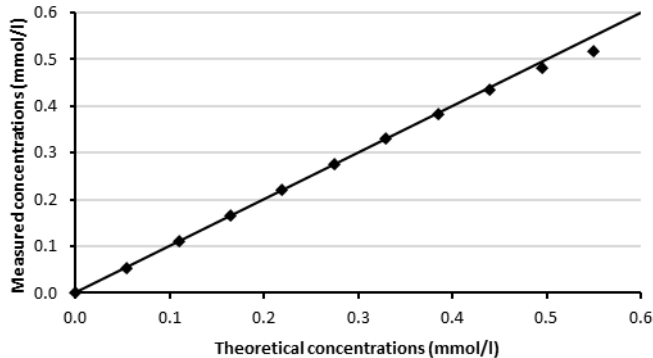
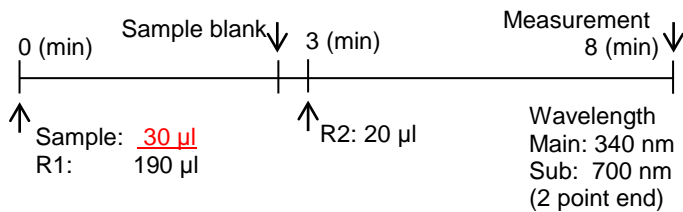
Product insert with instructions for automated and manual procedures

Stability > 2 years after production

Lactate /Pyruvate controls available

Suitable for all analyzers

Settings for automatic analyzers



Linearity: 0.45 mmol/l

Mean CV's: 1.60%

Mean recovery: 99%

Correlation compared to our manual Pyruvate reagent set (2897): 0.993

Product name	Product no.	Quantity
Pyruvate - AUT Reagent Set	3040	30 -150 tests
β-HBA / Lactate / Pyruvate Control - AUT, Low-Normal Level	3112	10 x 1 ml
β-HBA / Lactate / Pyruvate Control - AUT, High Level	3113	10 x 1 ml
β-HBA / Lactate / Pyruvate Control - AUT, Extra High Level	3114	10 x 1 ml



**PYRUVATE AUTOMATED – ENZYMATIC METHOD****DETERMINATION OF PYRUVATE IN EDTA BLOOD**

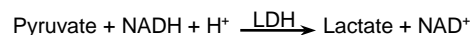
- Enzymatic method
- Suitable for all analyzers – 150 tests
- Product insert with instructions for automated and manual procedures
- Stability > 2 years after production
- Lactate /Pyruvate controls available
- Wavelength 340 nm



Products	Product no.	Quantity
Pyruvate AUT Reagent Set	3040	30 - 150 tests
β-HBA/Lactate/Pyruvate Control - AUT, Low-Normal Level	3112	10 x 1 ml
β-HBA/Lactate/Pyruvate Control - AUT, High Level	3113	10 x 1 ml
β-HBA/Lactate/Pyruvate Control - AUT, Extra High Level	3114	10 x 1 ml

SUMMARY**PRINCIPLE**

The procedure utilizes the enzyme, lactate dehydrogenase, which catalyses the following reaction:



In the presence of excess NADH, substantially all pyruvate is converted to lactate. The reduction of absorbance at 340 nm due to the oxidation of NADH to NAD⁺ becomes a measure of the amount of pyruvate originally present.

SAMPLE MATERIAL

Deproteinized EDTA whole blood. EDTA-plasma, serum and heparin blood samples cannot be used.

LINEARITY

Up to 0.45 mmol/l

EXPECTED VALUES

Fasting venous EDTA blood:

0.03 – 0.08 mmol/l

0.3 – 0.7 mg/dl

QUALITY CONTROL

Products	Product no.	Quantity
β-HBA/Lactate/Pyruvate Control - AUT, Low-Normal Level	3112	10 x 1 ml
β-HBA/Lactate/Pyruvate Control - AUT, High Level	3113	10 x 1 ml
β-HBA/Lactate/Pyruvate Control - AUT, Extra High Level	3114	10 x 1 ml

QUANTITY OF DETERMINATIONS

Procedure

- Automated : 150 tests
- Manual : 30 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.



CONCENTRATION MEASUREMENTS

The concentrations of a low, normal and high sample were measured with an automatic analyzer in order to verify acceptable absorbances.

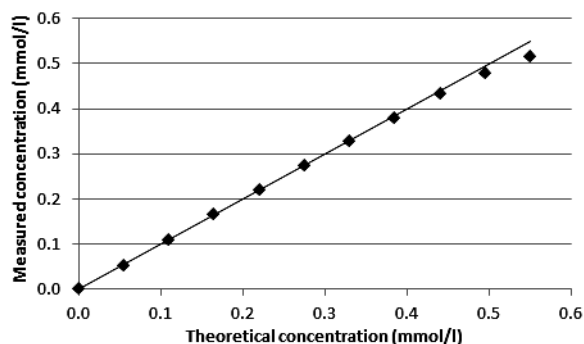
Pyruvate measurements

	Low	Normal	High
Δ Absorbance	-0.0350	-0.0500	-0.1020
Concentration (mmol/l)	0.059	0.095	0.245

LINEARITY

The Pyruvate AUT assay is linear up to 0.45 mmol/l.

Linearity measurements with an automatic analyzer



PRECISION

The precision is determined by measuring Lactate/Pyruvate Control High Level and a deproteinized human blood sample 10 times a day (repeatability) for 5 consecutive days (reproducibility), using an automatic analyzer.

Repeatability:

	Sample (mmol/l)	Control (mmol/l)
Mean	0.157	0.267
Standard deviation	0.002	0.003
Variation coefficient (%)	1.274	1.124

Reproducibility:

	Sample (mmol/l)	Control (mmol/l)
Mean	0.157	0.261
Standard deviation	0.003	0.007
Variation coefficient (%)	1.911	2.682

TEST CONDITIONS

All tests were performed under the following conditions:

Temperature	: 37 °C
Wavelength	: 340 nm
Light path	: 0.7 cm
Blank	: Distilled or deionized water
Sample	: Deproteinized EDTA blood

SENSITIVITY

The sensitivity (limit of detection) was determined by measuring deproteinized human control material (Pyruvate concentration = 0 mmol/l) 20 times.

Sensitivity = 3 x standard deviation = 0.009 mmol/l

RECOVERY

The recovery is determined by measuring the Pyruvate concentration in spiked deproteinized human blood 10 times using an automatic analyzer.

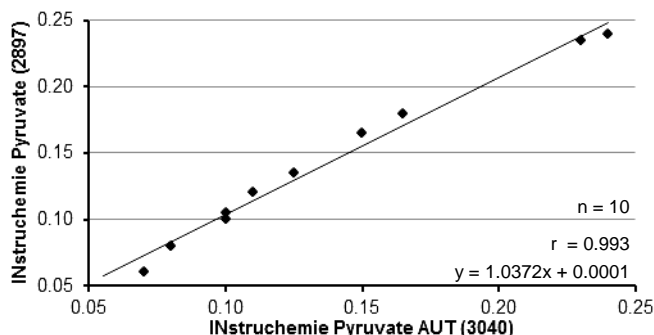
Recovery:

Added Pyruvate (mmol/l)	Measured (mmol/l)	Recovery (%)
0.055	0.055	100.0
0.165	0.163	98.8
0.330	0.324	98.2

CORRELATION

Pearsons' correlation is determined by measuring the Pyruvate concentration in multiple deproteinized human samples with INstruChemie Pyruvate AUT (3040) and INstruChemie Pyruvate (2897).

Correlation measured with an automatic analyzer (mmol/l)



Printed in the Netherlands, August 2018, Edition 5.0



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