



## PYRUVATE

### DETERMINATION OF PYRUVATE IN WHOLE BLOOD

- Enzymatic Method
- Instrument Application Sheets Available
- Use Whole Blood
- Incl. Pyruvate Standard
- Deproteinization procedure with 8% Perchloric Acid
- Also available Lactate/Pyruvate Control, High Level
- Wavelength 340, 334, 365 nm



(Comparable with former Sigma ® method)

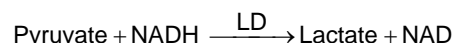
Products	Product no.	Quantity
Pyruvate Reagent Set	2897	40 - 400 tests
Lactate / Pyruvate Control, High Level	2896	10 x 5 ml
Perchloric Acid 8% w/v Deproteinization Reagent	2933	6 x 100 ml

## SUMMARY

### CLINICAL BACKGROUND AND ASSAY PRINCIPLE

Lactate and pyruvate levels provide an index of the severity of circulatory failure. Increased blood pyruvate levels are reported in a number of disorders including: liver disease, congestive heart failure, diabetes mellitus, muscular dystrophy, thiamine deficiency and neoplastic disorders.

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



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

### SAMPLE MATERIAL

It is recommended that specimen collection be carried out in accordance with NCCLS document M29-T2. No known test method can offer complete assurance that human blood samples will not transmit infection. Therefore, all blood derivatives should be considered potentially infectious. Large and variable changes in pyruvate may occur after specimen collection. There appears to be no adequate means of preserving the pyruvate level (including the use of sodium fluoride) except immediate precipitation of blood proteins. Because of the time required to obtain serum or plasma from drawn blood, the pyruvate values observed with plasma are likely to be different from the initial values. Therefore, the use of deproteinized whole blood for pyruvate determination is recommended.

### QUALITY CONTROL

Lyophilized preparation with analytical results for pyruvate, lactate, enzymatic methods:

Products	Product no.	Quantity
Lactate / Pyruvate Control, High Level	2896	10 x 5 ml



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## EXPECTED VALUES

### Fasting Venous Blood

Pyruvate :    0.03 - 0.08 mmol/l  
                  0.3 - 0.7 mg/dl

The expected values stated were taken from the literature. The cited methods used to obtain these values are similar to those described and results should be applicable. Copeland suggests that each laboratory determine its own normal range. Attention should be given to the fact that certain measurements in clinically healthy individuals are influenced by diet, sex, age diurnal variation, physical activity, menstrual cycle, pregnancy and environmental factors.

## 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.
4. Printed in the Netherlands, Pyruvate-summary-280828-1.FEN