

Vitamin B1 (thiamine, thiamine pyrophosphate (TPP)) acts as coenzyme in the carbohydrate metabolism and is essential for the normal functioning of the organism. Deficiency mainly occurs in undernourished people, alcoholics or in special clinical situations (e.g. hemodialysis). A fully developed deficiency syndrome is called "Beriberi". With this RECIPE test kit, vitamin B1 is determined as TPP. The kit can be combined in a convenient manner with the test kits for vitamin B2 and B6 (see combi kit, pages 68 - 69).



→ Excellent sensitivity:
0.5 µg/l

→ Injection interval: 4 min

→ Combinable with B2 and B6 test kits

Vitamin Status

Vitamin B1 in Whole Blood

Test Data

Determination as TPP

Linearity: 1 - 200 µg/l
Recovery: 95 - 100 %
LOD: 0.5 µg/l
LLOQ: 1 µg/l
Intraassay precision: 2.7 %
Interassay precision: 4.2 %

HPLC Parameters

Pump: isocratic pump,
flow rate: 1.0 ml/min
Pump (Reagent N): flow rate: 0.1 ml/min
Injection volume: 50 µl
Injection interval: 4 min
Fluorescence
detector: 376 nm (exc.), 435 nm (em.)
HPLC-Thermostat: 35 °C

Sample Preparation

Extraction:

300 µl whole blood

500 µl Reagent A

1. centrifuge ↓ 2. take off 400 µl supernatant

Stabilisation:

Add 50 µl Reagent S

Oxidation:

450 µl sample

50 µl Reagent C

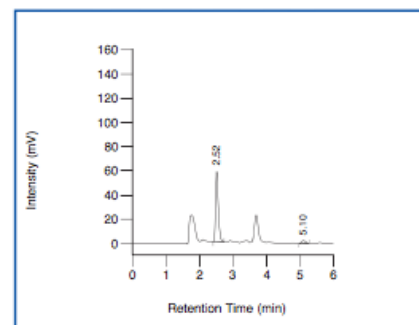
100 µl Reagent D

HPLC Analysis:

↓ add 100 µl Reagent E

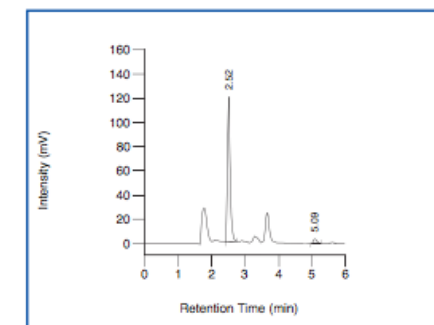
Inject 50 µl of the supernatant

ClinChek® Whole Blood Control, Level I



TPP: 2.52 min, Thiamine: 5.10 min

ClinChek® Whole Blood Control, Level II



TPP: 2.52 min, Thiamine: 5.09 min

Ordering Information

Order No.	Description	Quantity
24000	ClinRep® Complete Kit for Vitamin B1 in Whole Blood for 100 assays	1 pce.
Kit Components (order no. 24000):		
24010	Mobile Phase	1000 ml
24014	Test Solution	3 ml
24513	Whole Blood Calibrator, lyophil.	5 x 2 ml
24020	Sample Preparation Vials	2 x 24020 (2 x 100 pcs.)
24021	Reagent A	50 ml
24023	Reagent C	5 ml
24024	Reagent D	10 ml
24025	Reagent E	10 ml
24626	Reagent N	250 ml
24027	Reagent S	5 ml
	Manual	1 pce.
	Quick Reference	1 pce.
Start Accessories:		
27030	Analytical Column with test chromatogram	1 pce.
27032	Guard Column Holder incl. 1 Guard Column	1 pce.
Accessories:		
27033	Guard Column	5 pcs.
FK2000	ClinLab® Peristaltic pump	1 pce.
FK2001	Replacement tubing for peristaltic pump	2 pcs.
FK5121	T-Union (PEEK), 1/16"	1 pce.
FK5810	PEEK-tubing (connection of prefilter and column)	1 pce.
FK5820	Stainless steel prefilter holder	1 pce.
FK5821	Replacement filter for stainless steel prefilter holder	10 pcs.
ClinChek® Controls:		
8874	Whole Blood Control, lyophil., Level I	10 x 2 ml
8875	Whole Blood Control, lyophil., Level II	10 x 2 ml
8876	Whole Blood Control, lyophil., Level I, II	2 x 5 x 2 ml