

Vitamin B2

Vitamin B2 (riboflavin) is a water soluble vitamin. It is found in vegetables. It is absorbed in the intestine by a saturable transport system. Little is stored in the body and it is excreted in the urine.

It is important as coenzymes flavinmononucleotide (FMN) and flavinadenine dinucleotide (FAD) which have the ability to transport protons in the respiratory chain and other redox reactions.

In blood ~95% occurs as FAD whilst riboflavin is the inactive form.

Deficiency of the vitamin impairs metabolism of carbohydrates, fatty acids, amino acids and some other vitamins such as vitamin B6.

Deficiency

Clinical vitamin B2 deficiency is very rare but it can manifest as

Anogenital inflammation
Atherosclerotic vascular changes
Angular stomatitis
Cheliosis
Glossitis
Magenta tongue

Seborrheic dermatitis and vascularisation of the cornea are also described.

More likely is deficiency of vitamin B2 in combination with other water soluble vitamins eg in alcoholics.

Toxicity

Toxicity is not usually encountered.

Other methods to determine riboflavin levels include measurement of red blood cell glutathione reductase.

Reference ranges

Adult = 220-750 nmol/L

The assay measures FAD in whole blood. Plasma riboflavin is subject to the acute phase response whereas whole blood FAD is largely unaffected.

Specimen type

EDTA or lithium heparin WHOLE BLOOD
Minimum volume 50 uL

Storage

Freeze asap after collection

Transport

First class post, ambient temperature

Address for specimens

Department of Clinical Biochemistry
Rotherham Hospital
Moorgate Road
Rotherham, S60 2UD

Cost (excluding VAT)

£23.99

Method / Turnaround

HPLC assay, assayed by arrangement
CONTACT LABORATORY

External QA

Instand e.V

Contact person

Mr Robert Ellis (Consultant Clinical Scientist)
robert.ellis@rothgen.nhs.uk
Tel 01709 820000 (Hospital)
Tel 01709 304103 (Direct Line)

