

# Retinol

## General:

Vitamin A belongs to fat-soluble vitamins and results from the pro-vitamin  $\beta$ -carotin. It is synthesized in the liver and stored to 95–99 %.

Physiology: Vitamin A is a protecting substance for the complete ectoderm. Important for skin, eyes, mucous membranes of the respiratory, gastrointestinal and urogenital tract.

Occurrence: carrots, peas, string beans, asparagus, bananas, milk and dairy products, butter, egg yolk, liver, kidneys, fish oil.

## Clinical symptoms:

Eye: night blindness (deficiency of the rhodopsin synthesis), hemeralopia, reduced tear formation ("dry eye") as the first symptoms of a vitamin A defect, ceratoconjunctivitis sicca, Biot's spots, in the extreme case keratomalacia;

Skin: Hyperkeratosis with stratum corneum thickening, formation of little keratin clots in the follicle ostiae and sweat gland ductuli (phrynoderma), at the same time squamous epithelium metaplasia at non cornifying mucous membranes, xerostomia, dysphagia, bluishly changed lips, chronic vitamin A defect leads to a higher incidence of carcinoma (antineoplastic effect of the retinoids).

Hypervitaminosis: Main symptoms: Nausea, headache, diffuse desquamation, rise of the transaminases and lipids.

Indication: Differential diagnosis of hyperkeratosis, night blindness

Material: 1 ml serum

Prenalytics: light protected dispatch is highly recommended !

TAT: 5-7 days\*

Method: HPLC

Units:  $\mu\text{g/l}$

Ref.- range: 250 – 1100

For complete list of laboratory test offered at Freiburg Medical Laboratory, please visit <http://www.fml-dubai.com/parameter-listings/>