

# VITAMINS DETERMINATION

**Vitamins are substances that your body needs to grow and develop normally. There are 13 vitamins your body needs. Each vitamin has specific jobs. If you have low levels of certain vitamins, you may develop a deficiency disease. Some vitamins may help prevent medical problems. The best way to get enough vitamins is to eat a balanced diet with a variety of foods.**

Our laboratories offer determination of needed vitamins in range and specifications mentioned in this leaflet. All analyses are performed accredited.

Vitamins determination is performed accredited, according to ČSN EN ISO/IEC 17025.

## VITAMINS SOLUBLE IN FAT

- Vitamin A (retinol)
- Vitamin E (α-tocopherol)
- Vitamin D - D2 (ergocalciferol),
- D3 (cholecalciferol)
- β-carotene
- Vitamin K1

## ACCREDITED MATRIXES:

### For vitamins A, D and E:

- fat
- fatty and non-fatty food
- food supplements

### For β-carotene:

- food
- food supplements
- feed

### For vitamin K:

- food supplements

## TECHNICAL SPECIFICATIONS:

Parameter	Unit	Limit	Accreditation	Min. sample amount	Storage conditions
Vitamin A (retinol)*	mg/kg mg/l	0,5 0,5	Yes	50 g 100 ml	Keep in dark place
Vitamin E (α-tocopherol)*	mg/kg mg/l	0,5 0,5	Yes Yes	50 g 100 ml	
β-carotene	mg/100g	0,1	Yes	100g	
Vitamin K1	µg/kg	-	Yes	100g	

\*The method according to the ČSN EN 12823-1, ČSN EN 12823-2 and ČSN 12822

Parametr	Unit	Limit	Limit low	Accreditation	Min. sample amount	Storage conditions
Vitamin D2 (ergokalciferol)	µg/kg µg/l	40 40	12,5 12,5	Yes	50 g 100 ml	Keep in dark place
Vitamin D3 (cholecalciferol)	µg/kg µg/l	40 40	12,5 12,5	Yes	50 g 100 ml	

The method according to the ČSN EN 12821

## VITAMINS SOLUBLE IN WATER

- Vitamin C (ascorbic acid)
- Vitamin B1 (thiamin hydrochloride)
- Vitamin B2 (riboflavin)
- Vitamin B3 (niacin)
- Vitamin B5 (panthotenic acid)
- Vitamin B6 (pyridoxin hydrochloride)
- Vitamin B7 (biotin)
- Vitamin B9 (folic acid)
- Vitamin B12 (cyanocobalmin)

## ACCREDITED MATRIXES:

### For vitamin C

- drinks
- candies
- food, supplements
- fruit, vegetable

### For vitamin B1, B2 and B6

- fat
- fatty and non-fatty food
- food supplements
- feed

### For vitamin B5 and B12

- food
- pharmaceutical products
- feed

### For vitamin B3 and B9

- food
- food supplements
- feed

### For vitamin B7

- milk, dairy products
- soft drinks
- cereals
- feed
- food supplements



## TECHNICAL SPECIFICATIONS:

Parameter	Unit	Limit	Accreditation	Min. sample amount	Storage conditions
Vitamin C	mg/kg mg/l	8 5	Yes	50g 50ml	Keep in dark place
Vitamin B1	mg/kg mg/l	0,1 0,1	Yes	50g 50ml	
Vitamin B2	mg/kg mg/l	0,1 0,1	Yes	50g 50ml	
Vitamin B3	mg/100g	-	Yes	100g	
Vitamin B5	mg/100g	0,014	Yes	100g	
Vitamin B6	mg/kg mg/l	0,2 0,2	Yes	50g 50ml	
Vitamin B7	µg/kg	0,5-10	Yes	100g	
Vitamin B9	µg/kg	10-1000	Yes	50g	
Vitamin B12	µg/100g	0,03	Yes	100g	

For more details please contact us.