Quantification of Triglycerides in serum/plasma using spectrophotometry

A triglyceride (TG, triacylglycerol, TAG, or triacylglyceride) is an ester derived from glycerol and three fatty acids. Triglycerides play an important role as energy sources and transporters of dietary fat. In the human body, high levels of triglycerides in the bloodstream have been linked to atherosclerosis, heart disease and pancreatitis.

The reference interval for triglycerides is < 2.60 mmol/L although values < 1.70 mmol/l is recommended. Elevated values are seen with e.g. familial hypertriglyceridemia, diabetes and liver diseases.

Vitas AM-259 is a simple and direct quantitative colorimetric assay for determining triglycerides in human plasma/serum.

**Method details:**
- **Technique:** Quantitative photometry
- **Sample Matrix:** Plasma, serum
- **Species:** All
- **Anticoagulant:** All
- **Required sample volume:** 50 µL
- **Shipping:** Dry Ice
- **Method Range:** 0.05-5 mmol/L
- **LOD:** 0.01 mmol/L
- **Precision:** 4.4 %
- **Accuracy:** Seronorm™ Lipid

![Calibration curve for the quantification of triglycerides in human serum](image)

Example of an unsaturated fat triglyceride. Left part: glycerol, right part from top to bottom: palmitic acid, oleic acid, alpha-linolenic acid. Chemical formula: C_{55}H_{98}O_{6}

Vitas is a Norwegian GMP certified chemical analysis contract lab, with 20 years experience in providing a high quality, custom chromatographic analytical service based on cutting-edge knowledge and technology.