

# Very Long Chain Fatty Acids (VLCFA)

## Synonyms

VLCFA, peroxisomal function tests

## Clinical Indication

Indicated in the investigation of a number of peroxisomal disorders where there is a defect in the metabolism or processing of long chain fatty acids. Patients may present with a spectrum of disease from life threatening neonatal Addisonian crises and severe hypotonia to progressive neurological deterioration and peripheral neuropathy in adults.

Plasma very long chain fatty acids (especially C26:0) are elevated in peroxisomal biogenesis or metabolism disorders such as X-linked adrenoleukodystrophy, adrenomyeloneuropathy, Refsum disease and Zellweger Syndrome.

Phytanic acid may also be raised in Refsum's disease.

## Part of Profile / See Also

C22, C24, C26, C24/C22 and C26/C22 ratios, phytanate and pristanate

## Request Form

Combined Pathology manual blood form or ICE request

## Availability / Frequency of Analysis

Referred test: Analysed by GOS (8692) if specific criteria met.

## Turnaround Time

Approximately 3 weeks

## Patient Preparation

It is important fasting samples are collected in children over 18 months old.

## Sample Requirements

### Specimen Type

Plasma

### Volume


Minimum volume 0.2 mL

### Container



Green top (li-heparin) tube.

Or  Paediatric green (li-Heparin) tube

Or  Paediatric orange (Lithium Heparin) tube

**EDTA samples also acceptable**

**Samples should be transported to laboratory immediately.**

## Reference Range & Units

Supplied on report

## Interferences

Haemolysed samples are not suitable for analysis

## Interpretation & Clinical Decision Value (if applicable)

Clinical interpretation provided on report

## References

<https://www.uptodate.com/contents/peroxisomal-disorders>  
<https://www.gosh.nhs.uk/wards-and-departments/departments/laboratory-medicine/laboratory-database/very-long-chain-fatty-acids-includes-phytanate-pristanate/>

## Test code

VLCF

## Lab Handling

Sample must be processed and frozen immediately. Prepare one aliquot of lithium heparin (or EDTA) plasma (at least 500uL) and store in the frozen referrals rack at -20C. Samples are sent frozen by GSG courier.



8692

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