

## 08 LDL Isolation Protocol TCD

SopID: 08 - TCD

NuGO approved 2008

Metabolomics

Key words: Lipoproteins, LDL, cholesterol

When citing this SOP you should acknowledge both NuGO and the appropriate NuGO partner institution that has made the SOP available. Please use a form of words such as: We used the NuGO Standard Operating Procedure (SOP) number 08 produced by the Nutrigenomics Research Group, Institute of Molecular Medicine, Trinity College Dublin, Ireland

LIPGENE Consortium (Supported by the European Commission, Framework Programme 6:contract number FOOD-CT-2003-505944). Details of the SOP are available via the web link:

<http://www.nugo.org/frames.asp?actionID=28250&action=loginFromPP>

### Backgrounds

--to be edited--

### Overview

Serum LDL cholesterol is separated using LDL cholesterol reagent, in which LDL is precipitated by heparin at their isoelectric point (pH 5.04). After centrifugation HDL and VLDL remain in the supernatant. Cholesterol concentration is determined by enzymatic methods.

### Materials

Amount	Name	Supplier	Catalogue Number	Further information
	LDL cholesterol reagent	Randox	CH1350	

### Sub Procedures

**1) Add serum to reagent**

Add 100ul serum to 1ml of LDL reagent. Vortex well (approx. 30-60 seconds).

**2) Incubate**

Incubate at room temperature (15 - 25°C) for 10 minutes.

**3) Centrifuge**

Centrifuge for 15 minutes at 2500g.

**4) Remove supernatant**

Remove the supernatant (approx. 1ml) ensuring that the pellet formed at the bottom of the tube is not disturbed. Mix the supernatant to ensure that the sample is homogenous.

**5) Aliquot the supernatants (0.5ml).**

**6) Freeze at -20°C.**

### Safety

Users must comply with COSHH and local safety regulations.

### Results Analysis

LDL cholesterol = Total cholesterol – cholesterol in the supernatant.