

(HDL).and the American Heart Association and American College of Cardiology.[52] There are several limitations of the Friedewalk equation as follows

- o The estimated LDL-C level is not accurate in patients with hypertriglyceridemia(up to 4.5mmol/l or 400 mg/dL) – such a setting warrants ultracentrifugal single spin analysis or immunoprecipitation technique
- o There is an underestimation of LDL-C level in patients with lower LDL-C (less than 25 mg/dL or 0.6 mmol/L)
- o There is an underestimation of intermediate-density lipoprotein(IDL), and some VLDL remnants which are considered atherogenic

First developed in the 1960s, Friedewald equation has been used widely to estimate LDL-C which is  $(\text{total cholesterol} - (\text{high-density lipoprotein cholesterol [HDL-C]} - (\text{triglycerides}/5))$  in mg/dL for research as well as clinical purpose. Generally, a lipid profile or lipid panel consists of the following

- o Total cholesterol
- o High-density lipoprotein (HDL) cholesterol
- o Low-density lipoprotein (LDL) cholesterol
- o Triglycerides

Cholesterol level measurement is from serum.