The dual-precipitation method for measurement of cholesterol in high-density lipoprotein subfractions HDL₂ and HDL₃ (Warnick et al., Clin Chem 1982;28:1574) was compared with quantification of cholesterol in HDL₂ and HDL₃ by zonal ultracentrifugation (Patsch et al., J Lipid Res 1974;15:356-366.) For 39 plasma specimens differing widely in their HDL subfraction cholesterol concentration, the coefficient of correlation between the two methods was 0.94 for HDL₂–cholesterol, 0.82 for HDL₃–cholesterol. Storage of plasma specimens at –70 degrees celsius decreased the apparent content of HDL₃–cholesterol by 5%; no significant changes in HDL₂–cholesterol were observed. In frozen plasma, interference by apoB-containing lipoproteins and by lipoprotein(a) was negligible. Mean weight ratios of apoA-I to cholesterol were twice as high for HDL₃ as for HDL₂, reflecting the increased cholesterol content of HDL₂. The study suggests that quantification of HDL₂ and HDL₃ cholesterol by precipitation is appropriate for use in epidemiological studies.

Abstract Related to MS #053