

A new methodology for measuring TxPA was developed in 2000 and called TxPA-S (the S standing for supernatant). TxPA-S is a calculation based on the molar ratio of albumin to NEFA after removal of VLDL and LDL from the plasma. NEFA and albumin bind to lipoproteins and mask the true amount of soluble NEFA in solution. The VLDL and LDL are precipitated by a mixture of dextran sulfate (0.2 mM), magnesium chloride (63.9 mM), sodium chloride (63.3 mM), and polyethylene glycol (3.3 mM) in a 1:1 ratio with serum or plasma. This mixture is then centrifuged at 3000 rpm for 10 minutes and supernatant removed from the precipitated VLDL and LDL. After removing the VLDL and LDL, NEFA and albumin are measured on the supernatant. NEFA are measured using an enzymatic method developed by WAKO involving the acetylation of Coenzyme A and the generation of hydrogen peroxide (Wako Pure Chemical Industries, Ltd., Osaka, Japan). Albumin is measured using the bromocresol green reagent (Albumin (BCG), Sigma, St. Louis, MO). TxPA-S is then calculated by dividing the albumin concentration in the supernatant (mM) by the NEFA concentration in the supernatant (mM).