

Alanine Aminotransferase (ALT)

Alanine aminotransferase was performed with on Hitachi Model 737 multichannel analyzer (Roche Diagnostics, Indianapolis, IN).

α -Ketoglutarate reacts with L-alanine in the presence of ALT to form L-glutamate plus pyruvate. The pyruvate is used in the indicator reaction for a kinetic determination of the reduced form of nicotinamide adenine dinucleotide (NADH) consumption. The International Federation of Clinical Chemistry (IFCC) has now recommended standardized procedures for ALT determination, including 1) optimization of substrate concentrations, 2) the use of Tris buffers, 3) preincubation of a combined buffer and serum solution to allow side reactions with NADH to occur, 4) substrate start (α - ketoglutarate), and 5) optimal pyridoxal phosphate activation.

-from *Laboratory Procedures Used for the Third National Health and Nutrition Examination Survey (NHANES III) 1988-1994*
Elaine W. Gunter, Brenda G. Lewis, and Sharon M. Koncikowski, 1996