Phenosense
HIV Drug Resistance Assay
Cenetron Test Code: 3200

Description:	Phenotypic analysis is a quantitative measure of HIV drug resistance. This methodology measures the ability of a specific HIV-1 clinical isolate to replicate in the presence of a defined panel of antiretroviral agents.
Clinical Utility:	♦ Modifying therapy in patients with increasing viral loads. ♦ Determining resistance patterns in heavily treated patients.
Turn Around Time:	21 days
Technical Information:	The assay is performed by cotransfecting host cells with RTV DNA and a plasmid that expresses the envelope proteins of amphotropic murine leukemia virus (MLV). Following transfection, virus particles are harvested and used to infect fresh target cells. The completion of a single round of viral replication results in the production of luciferase. Serial concentrations of PR inhibitors are added at the transfection step and RT inhibitors at the infection step. Drug susceptibility is measured by comparing the luciferase activity in the presence and absence of PR and/or RT inhibitors. Susceptible viruses produce reduced levels of luciferase activity in the presence of antiviral drugs.
Specimen Requirements:	Required volume: 3.0 mL of plasma (EDTA). ♦ Plasma must be removed from cells within six hours of collection. ♦ Centrifuge blood specimen tubes at 800-1600*g* for 20 minutes at room temperature. ♦ Optimal storage and transport of plasma specimens is frozen (-20 to -80°C), but specimens are stable at room temperature for up to one day, or for five days at 2 to 8°C. ♦ Patient's name, I.D. or birthdate, and date of sample acquisition must be marked on tube.
References:	Call SA, Saag MS, Westfall AO, et al. Phenotypic drug susceptibility testing predicts long-term virologic suppression better than treatment history in patients with human immunodeficiency virus infection. J Infect Dis. 2001;183:401-408.