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The LACTEC Institute of Technology and Development, located in Curitiba Brazil, is one the world's premier testing and certifications laboratories. The LACTEC campus houses 38 individual laboratories, each specializing in specific disciplines. These include: high and low tension energy systems, geologic processing, microelectronics, civil structures, applied chemistry, hydraulics, mechanics, metallics, ceramics, electromagnetics, telecommunications and environmental systems.

As a self-sustained entity, LACTEC operates by conducting research and development projects as well as technological services. It is a financially independent organization and is not financially linked to any private or public company or organization.

The majority of LACTEC's laboratories are certified to ISO/IEC17025 standards and LACTEC was recently awarded Brazil's highest honor for technology and innovation as "Best Research Institution" by Brazilian President, Luis Inácio Lula da Silva.

LACTEC maintains a broad range of domestic and international research partnerships which include: The University of Wales (United Kingdom), Institute of Spectral Technology and Applied Spectrochemistry (Germany), The Institute of Analytic Sensor Systems (Germany), The Japanese International Cooperation Agency (Japan), The Federal University of Rio de Janeiro (Brazil), The Brazilian Ministry of Science and Technology, and the University of Strathclyde (Scotland), as well as many others.

LACTEC also enjoys a wide range of household-name clients who rely on its laboratories to certify the safety and efficiency of their products. These include: Renault, Ford Motor Company, Mitsubishi Motor Company, MWM/International Engines, General Motors Brazil, Johnson Matthey, Umicore, Bosch, Peugeot, and Delphi Systems.

LEME

Established in May 2000, Lactec's Laboratory of Vehicular Emissions encompasses a total area of 54,358 square feet, the first laboratory of its kind in Latin America. The laboratory's instruments are state-of-the-art, and are comprised of a full range of Horiba diagnostic equipment, the acquisition and installation of which required an initial capital investment of over US\$5MM.

Lactec's suite of equipment enables it to conduct tests and provide certifiable results which correspond to both Brazil's NBR6601 Standard, and European Directive 70/220.

Standard components employed in conducting LEME's measurements of pollutive emissions

and fuel economy include: dynamometers, Mix T gas dilution systems, venturi flow control systems, and analysis benches controlling for HC, CO, NO_x, CO₂ and CH₄.

Emissions and fuel economy tests correspond to Brazil's NBR 6601. Among other constraints, NBR 6601 requires that:

- The vehicle be filled with standard unleaded fuel.
- The vehicle be pre-conditioned by running the vehicle for 12.1 Km (7.5 miles), for the purposes of decarbonization and ascertainment of electronic systems.
- The vehicle be conditioned in an acclimatized room for 24 hours
- The vehicle be run, through the FTP cycle, as shown in image 01 (American Norm – EPA), and that all gases be collected for analysis;
- The final results to be expressed in grams/km of (HC, CO, NO_x, CO₂, CH₄, NMHC)

Photos: Lactec's Laboratory of Vehicular Emissions

Photos taken by Sabertec during testing.



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Written by Administrator

Saturday, 06 February 2010 - Last Updated Saturday, 06 February 2010

