



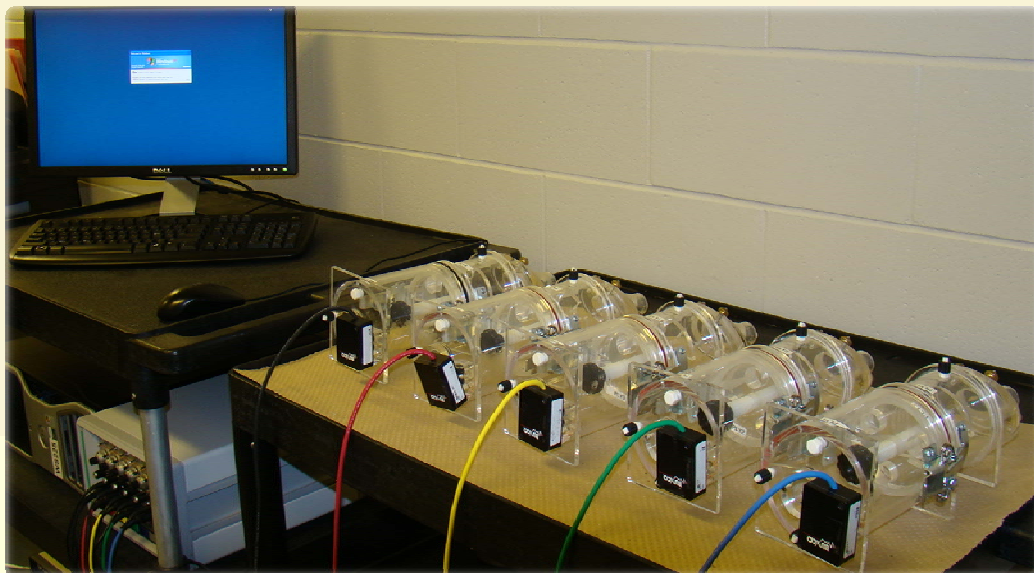
Respiratory Measurement Systems

ITR presently conducts respiratory measurements in toxicology, safety pharmacology and respiratory sensitization studies. Measurements in small laboratory animals (rodents and guinea pigs) are conducted using head out plethysmographs. In addition to bench top data collection following dosing, the plethysmographs can be integrated into the aerosol exposure systems to allow data collection during inhalation exposures.

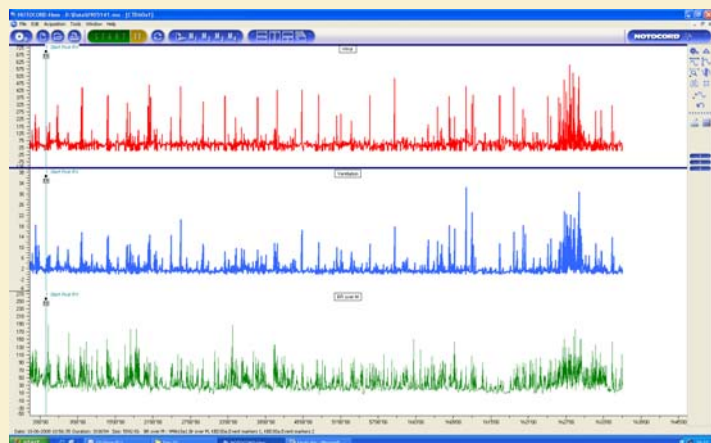


Respiratory measurements in large animals (dogs and primates) are routinely conducted at ITR using the classical approach of pneumotach and face mask. This sensitive method is capable of detecting subtle respiratory changes at discrete time points relative to exposure. However, due to the

requirement to restrain the animals during data acquisition this method is limited in the ability to collect respiratory data over extended durations, as often required in safety pharmacology studies.

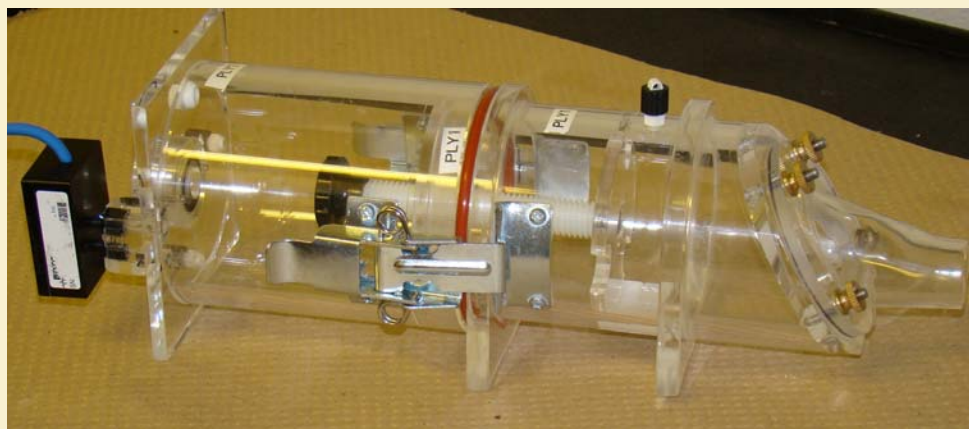


Using inductance plethysmography technology widely used in the clinical setting, Vivometrics® developed a non-invasive respiratory measurement system by means of a close fitting garment furnished with sensors capable of quantifying respiratory rate, tidal volume and derived respiratory minute volume.



The benefit of this LifeShirt® respiratory measurement system is once the garment is fitted to the animal it can be placed back in its home cage and data collection occurs remotely via Bluetooth® wireless technology. This negates the requirement for animal restraint and reduces stress on the animal. ITR also offers this non-invasive respiratory measurement system in dogs and is fully validated for use in

GLP studies. If required, respiratory data can be continuously recorded for up to 25 hours in unrestrained animals. The increased capabilities this non-invasive system brings are impressive and ITR is currently investigating expanding the LifeShirt® system for use in primates.



OTHER NEWS:

ITR ASIA: ITR is expanding. We recently purchased a laboratory facility in Hangzhou City, China and will be offering toxicology services in this new facility. Look out for our special announcement coming soon with more details about ITR ASIA and the services that will be offered.

ISAM 2009: ITR was present at ISAM 2009. Assad Aslam, Account Manager in Business Development presented "Inhalation Toxicology". If you would like a copy of this presentation, please don't hesitate to contact us.

SAFETY PHARMACOLOGY SOCIETY MEETING: September 15–18 in Strasbourg, France. ITR Canada will be present at the SPS meeting in 2009.