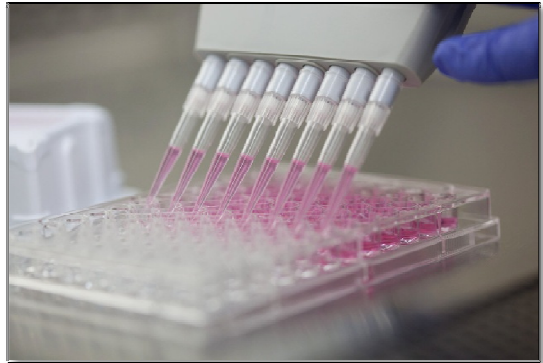


TyraTech® Essential Oil Screening Process

TyraTech uses a patented process to discover blends of plant-based essential oils that are highly efficacious against pestiferous insects and endoparasites while at the same time are very safe for humans. This process starts by cloning invertebrate-specific receptors



including tyramine and octopamine, and olfactory receptors. Cells expressing these receptors are then used in an advanced high throughput screening assay that rapidly identifies oils that bind to the receptors, thereby leading to activation and release of intracellular calcium. The proprietary high throughput assay, which is extremely rapid compared to traditional screening methods, is then used to identify oil blends which are synergistic in their action upon these receptors. Finally, activity of the most potent oil blends is verified via bioassays utilizing the roundworm, *Caenorhabditis elegans* and various public health insect pests including German cockroaches (susceptible and pyrethroid-resistant strains), houseflies, fleas, ticks, and mosquitoes.