

ER, AR and TR CALUX® Technology Endocrine Disruptor Testing

The logo for BioDetection Systems (BDS) features the letters 'BDS' in a bold, white, sans-serif font. The letters are contained within a blue, rounded rectangular shape that is slightly tilted. A yellow curved line sweeps around the right side of the blue shape, and a green rounded rectangular shape is partially visible behind it.

BioDetection
Systems

- A rapid, high sensitivity cell based bioassay for the ISO 17025 accredited analysis of hormonally active compounds in chemicals, pharmaceuticals and cosmetics.
- These bioassays have proven in many applications its usefulness in testing both agonists and anti-agonistic properties of all kinds of (waste) waters, urines, migrates and leachates of all kinds of chemical/pharmaceutical relevant mixtures
- One stop platform for all 3 relevant ED endpoints (ER, AR, TR)
- High sensitivity: low pg EQ/l range
- Standardized training and handling of all kinds of steps from extraction, clean-up, cell culture handling and luminometer measurement
- Please ask also for our other CALUX tests for obesogens (PPAR), dioxins/PCBs (DR), veterinary drugs (GR), genotoxicity (p53) or oxidative stress (Nrf2)



Human cell based
Effect-based
analyse

Quantitative
analysis
HTPS Robotics

CALUX® Assays

Endocrine disruptors are compounds which are regulated in several international guideline (e.g. for biocides, cosmetics, drinking water, hazardous waste and REACH/3R).

BDS CALUX Principle:

Human ER/AR/TR receptors are integrated in the human U2OS cell line. If an ED is binding on the receptors, luciferase is equivalent activated to the standards (estradiol, DHT and T3) and can be measured by a luminometer.

Why use BDS' ER/AR/TR CALUX® bioassays?



Who uses BDS' ER CALUX® bioassay?

- Collaboration with well-known pharmaceutical companies (e.g. reproductive field)
- Applications in the chemical industry regarding REACH
- Mostly used by the water and water recycling industry (e.g. Water treatment plants)
- Monitoring studies of ER/AR/TR/PR/GR levels in plastic migration and food safety
- Monitoring studies of ER/AR/TR/PR/GR levels in environment and human population

International R&D projects that validated and used CALUX bioassays:

- "New Generis" 2006-2008: HTPS clinical measurements
- "Reprotect and ChemScreen" 2004-2013: Androgens/Estrogens in hazard analysis
- "Techneau and DEMEAU" 2005-2015: Biological monitoring for Safe Water Quality
- "Technological Water Monitoring" 2004-2006: CALUX Battery for Water Control
- "EcoLink" 2011-2013: Eco-toxicological relevant biomarker