Environmental contaminants

In vitro receptor activity

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Assessment of environmental samples

Oestrogenic, androgenic and aryl hydrocarbon (dioxin-like) activity can be detected in rivers, streams, drinking water and marine sediments. This raises questions about the need to protect both the environment and human health from these and other types of toxic contaminants.

Our science

Cefas has demonstrated that oestrogenic, androgenic, mutagenic, anti-biotic and dioxin like compounds are entering the UK aquatic environment from wastewater treatment work effluents, and that receiving waters also contain detectable levels of activity. Activity can also be found in sediments, offshore produced water and can accumulate in the tissues of aquatic organisms.

We have extensive experience in the identification and detection of environmental oestrogens and androgens. We also have experience in the environmental impact assessment of effluents, water bodies and sediments.

Our services

Cefas has a long heritage of conducting cutting edge research and development in marine, coastal, estuarine and freshwater environments across the globe. We provide advice, consultancy, project management, research and training for clients from around the world.

Our services, which can be offered to industry, regulating bodies and water authorities alike, include:

- Evaluation of process streams, effluents and mixtures
- A variety of in vitro receptor based assays including:
  - Yeast Oestrogen Screen (YES) and ER-CALUX - (oestrogenic activity)
  - Yeast Androgen Screen (YAS) - (androgenic activity)
  - Anti-YES and Anti-YAS (Anti oestrogens and androgens)
  - DR-CALUX Activity - (aryl hydrocarbon activity)
  - Antibiotic Challenge Bioassay (ABC) – (antibiotics)
  - Mutagenic Assay (mutagens)
- Aquatic ecotoxicity consultancy
- Environmental sampling, analysis and method development
- Direct Toxicity Assessment (DTA)
- Toxicity Identification Evaluation (TIE)
- Environmental modelling and risk assessment

1 Sewage outfall

Cefas

Contact us

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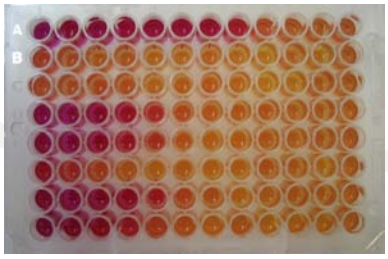

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2 Yeast plate
3 ABC assay
4 Large volume water sampling

About us

Cefas is a multidisciplinary scientific research and consultancy centre providing a comprehensive range of services in fisheries management, environmental monitoring and assessment, and aquaculture to a large number of clients worldwide.

We have more than 500 staff based in 3 laboratories, our own ocean-going research vessel, and over 100 years of fisheries experience. We have a long and successful track record in delivering high-quality services to clients in a confidential and impartial manner. (www.cefas.co.uk)

Cefas Technology Limited (CTL) is a wholly owned subsidiary of Cefas specialising in the application of Cefas technology to specific customer needs in a cost-effective and focussed manner.

CTL systems are developed by teams that are experienced in fisheries and environmental management and in working closely with clients to ensure that their needs are fully met. (www.cefastechnology.co.uk)

Customer focus

Our unique facilities and breadth of expertise in environmental and fisheries management, enable us to rapidly put together a multi-disciplinary team of experienced specialists, fully supported by our comprehensive in-house resources.

Our existing customers are drawn from a broad spectrum with wide ranging interests. Clients include:

- international and UK government departments
- the European Commission
- the World Bank
- United Nations Food and Agriculture Organisation (UNFAO)
- oil, water, chemical, pharmaceutical, agro-chemical, aggregate and marine industries
- non-governmental and environmental organisations
- regulators and enforcement agencies
- local authorities and other public bodies

We also work successfully in partnership with other organisations, operate in international consortia and have several joint ventures commercialising our intellectual property.

Cefas