

Environmental contaminants

Risk assessments of pharmaceuticals



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New regulations for registering pharmaceuticals

The detection of pharmaceuticals in rivers, streams, drinking water and ground water has raised questions about the need to protect both the environment and human health from these contaminants. In response to this situation, new regulations have been developed that require the environmental risk assessment of pharmaceuticals as part of their registration.

In order to inform the registration process, data are required on the occurrence, fate and effects of pharmaceuticals and their major metabolites.



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Our science

Cefas has demonstrated that human pharmaceuticals and their residues are entering the UK aquatic environment from wastewater treatment work effluents, and that receiving waters also often contain detectable levels of certain pharmaceuticals.

We have extensive experience in the identification and detection of environmental estrogens and androgens, as well as unique experience of fish molecular biology and pathology.



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We also have experience of the environmental impact assessment of effluents, water bodies and sediments. Investigations are conducted by utilising a range of sampling techniques, chemical analyses and effects studies to deliver robust environmental solutions.

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 to the pharmaceutical industry include:

- Environmental sampling, analysis and method development
- Aquatic ecotoxicity consultancy
- Fish pathology and molecular biology expertise
- Bespoke non-standard testing
- Direct toxicity assessment
- Toxicity identification
- Evaluation of process streams effluents and mixtures
- Environmental modelling and risk assessment

1 Receiving waters can contain human pharmaceuticals and their residues

2 A modern sewage treatment plant
(© Stuart Howes)

3 Sediment sampling

Contact us

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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 with other organisations through partnership, operate in international consortia and have several joint ventures commercialising our intellectual property.



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- 4 Stickleback tanks
5 Cefas laboratory facilities
6 Pharmaceuticals can be detected in a river ecosystem