



Excellent alternatives for animal trials

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Toxicity tests are currently still carried out mainly on livestock. Within the context of environmental risk assessment, this is done most commonly on fish. An alternative method developed by Eawag researchers is currently overcoming crucial hurdles to its widespread use in practice. Thanks in part to the persuasive efforts of the scientists involved.

How do you measure whether a chemical substance is safe for the environment? By exposing live fish to increasing doses of this chemical until they finally die. And how do you measure whether the water from wastewater treatment plants is really clean? By keeping fish as living sensors. They indicate if there are problems with the water quality, as an early warning system, so to speak.

Professor Kristin Schirmer, Head of the Environmental Toxicology Department at Eawag, had long come to realise that there would have to be another way of doing this. She calls the current standard procedure for measuring water quality an “outmoded, crude test”. Nevertheless, the so-called acute fish toxicity test is one of the most widely used tests in environmental regulation. Schirmer is convinced that it is time to change this. So how do you make sure that any danger is detected without experimenting on living organisms?

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