A new test to screen fish for 25 drug residues at the same time

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Amid growing concern about the accumulation of pharmaceutical and personal care products (PPCPs) in fish and other aquatic organisms, scientists in Texas are reporting development of the first method that can screen fish for several different groups of drugs at the same time. The research is scheduled for publication in the April 15 edition of ACS' *Analytical Chemistry*.

In the report, C. Kevin Chambliss and colleagues note that previous tests for detecting PPCPs in water, sediment and other environmental material could identify only individual medications or classes of medications, such as antibiotics. And there were just a few methods for measuring certain drug residues in fish tissue.

"We report the first multi-residue screening method for pharmaceuticals representing multiple therapeutic classes in fish tissue," the report states. It involves a way of preparing samples that is simpler and less-time consuming than existing methods and can simultaneously monitor fish for 25 drugs.

The researchers describe use of the method to identify drug residues in fish from the sunfish family (which includes popular pan fish such as bluegills) in a Texas creek composed almost entirely of effluent from a sewage treatment plant. The drugs included three medications never before identified in fish — diphenydramine (an over-the-counter antihistamine also used as a sedative in non-prescription sleep aids), diltiazem (a drug for high blood pressure) and cabamazepine (an

anticonvulsant).

Source: ACS