

New test to identify illegal steroids in cattle

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In an effort to curb the illegal use of steroids in the European beef industry, scientists in the United Kingdom are reporting the development of a new test that can identify steroids with higher accuracy, more convenience, and less cost than conventional doping tests. Their report is in the current issue of *Analytical Chemistry*.

In the new study, Rodat Cunningham and colleagues note that the European Union banned use of growth-promoting agents in cattle. However, widespread abuse of steroids continues and remains difficult to detect, they say. The standard methods for detecting steroid abuse — mass spectrometry and gas chromatography — involve directly measuring these substances in cattle. But the tests are expensive and can't detect some of the newer steroid hormones.

The scientists describe a new test that measures steroids indirectly based on chemical changes associated with growth and muscle development in steroid-treated cattle. Using a commercial blood analyzer commonly found in hospitals, the researchers measured 20 chemical markers, including proteins and cholesterol, in cattle treated with and without commonly used steroids over a 42-day study period. The new test detected the steroids with accuracy between 91 and 96 percent. The study opens the door to on-site steroid testing with portable instrumentation, the researchers say.

More information: *Analytical Chemistry*, "Feasibility of a Clinical Chemical Analysis Approach To Predict Misuse of Growth Promoting Hormones in Cattle"

Source: ACS

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