

New test to identify illegal steroids in cattle

February 20 2009

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

Citation: New test to identify illegal steroids in cattle (2009, February 20) retrieved 4 February 2023 from <https://phys.org/news/2009-02-illegal-steroids-cattle.html>

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