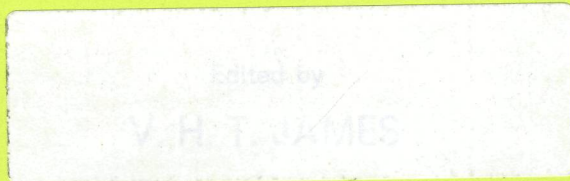


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## 12. ANALYTICAL METHODS: II

## 159. STEROID DETERMINATION IN MILK BY ENZYME IMMUNOASSAY (EIA)

Arnstadt, K.-I., Schmidt-Adamopoulou, B. and Gregor, R. - Institut für Physiologie der Südd. Versuchs- u. Forschungsanstalt für Milchwirtschaft, Techn.Universität München, 8050 Freising-WEIHENSTEPHAN, FRG

A simple and sensitive enzyme immunoassay for progesterone using a homologous system was developed covering the range of 0.03 - 3 pmol/test tube (9.4-944 ng) and applicated to extracts from milk fat and bovine serum (1, 2). The EIA also can be used to follow the change of progesterone under physiological, pathological and therapeutic conditions in samples of human blood and saliva after extraction and in serum directly (3). The reagents have a good storage and charge to charge stability (Co. Biolab, Munich). By changing test conditions the sensitivity of the assay was increased to measure milk from cows directly. The influence of milk fat in the sample volume of 15 µl is tolerable and does not falsify physiological results concerning corpus luteum activity or inactivity. Experiences with this EIA system are extended to an EIA for estrone sulfate now under investigation.

1) Arnstadt, K.I. & Cleere, W.F. (1981): J. Reprod. Fert. 62, 173-180.

2) Arnstadt, K.I., Grunert, E., Prokopp, S. & Schulte, B. (1982): in preparation.

3) Arnstadt, K.I. & Berg, D. (1981): J. Clin. Chem.Clin.Biochem. 19, 602-603.