Use of a new hplc method in rat liver microsomal testosterone monooxygenation and its application to study the sex dependent expression of several hydroxylases

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An HPLC method described by Manclla and Gll [Analytical Letters 17,(B9),1984,873-886] has been applied to study the sex dependent expression of several rat liver testosterone hydroxylases. A sample clean up procedure has been developed using SEP-PACK C- 18 cartridges which retained testosterone and Its microsomal oxidative products. Undesired components were not retained or selectivly eluted with organic solvents.The clean steroid sample was eluted with a mixture of n-hexane and 2-propanol. HPLC of testosterone microsomal oxidation products was performed by normal phase In a Lichrosorb diol column using an isocratic mixture of n-hexane and 2-propanol. The main five testosterone metabolites produced by male and female rat liver microsomes were determined in only 24 min. The turnover rates for testosterone oxidation were similar in male and female microsomes, but significant differences were observed In the rate of production of different metabolites. Male microsomes catalized mainly ox