

### Hormone measurements from saliva:

In principle, **steroid hormones** can be measured quite well in saliva. However, the collection method and the concentration of the hormone to be measured in the saliva must be taken into account.

For steroids, "**passive drool**" in glass containers or polypropylene caps (salicaps or similar) is the method of choice. The amount required depends on the assay chosen.

**LH** and **FSH** are **peptide hormones** and do not enter the saliva via free diffusion, so cannot be meaningfully determined there.

If enough saliva has been collected for **testosterone** and **estrogen** using the correct method, it is still doubtful whether the hormone concentrations can be detected at all, as the saliva kits are not as sensitive as serum/plasma kits.

For saliva hormone CLIAs, we require the following quantities of saliva for the double determination:

- > DHEA: 100 µl
- > Estradiol: 100 µl
- > Testosterone: 100 µl
- > Cortisol: 40 µl
- > Progesterone: 40 µl

### Influence of different collection methods on the results of steroids in saliva

	Glass reference				
	DHEA	PROGESTERONE	CORTISOL	ESTRADIOL	TESTOSTERONE
Heated glass	y = 0,89x - 9,4 R2 = 0,93 yes	y = 1,02x - 15,7 R2 = 1,00 yes	y = 1,16x - 0,08 R2 = 0,96 yes	y = 0,75x - 0,12 R2 = 0,86	y = 0,79x + 1,16 R2 = 0,98
Salicaps	y = 1,10x - 14,5 R2 = 0,94 yes	y = 0,98x + 2,1 R2 = 0,94 yes	y = 0,89x + 0,0 R2 = 0,92 yes	y = 0,75x + 0,37 R2 = 0,85 yes	y = 0,94x + 0,6 R2 = 0,94 yes
Blue caps	y = 0,89x - 9,4 R2 = 0,93 yes	y = 0,49x + 11,2 R2 = 0,75 no	y = 1,01x - 0,01 R2 = 0,96 yes	y = 0,59x + 0,84 R2 = 0,35	y = 0,75x + 1,8 R2 = 0,94
Salivette	y = 3,86x + 4165,4 R2 = 0,03 no	y = 0,32x + 622,2 R2 = 0,00 no	y = 0,82x + 0,02 R2 = 0,92 yes	y = 0,44x + 5,2 R2 = 0,10 no	y = 0,47x + 165,1 R2 = 0,04 no
Versisal in Eppi	y = 2,03x + 749,8 R2 = 0,42 no	y = 0,51x + 66,1 R2 = 0,99 no	y = 1,11x + 0,01 R2 = 0,89 yes	y = 0,73x + 4,14 R2 = 0,29 no	y = 0,82x + 16,18 R2 = 0,86 yes
Versisal in Salicaps	y = 2,84x + 209,3 R2 = 0,36 no	y = 0,85x + 32,8 R2 = 0,69 no	y = 0,87x + 0,03 R2 = 0,96 yes	y = 1,48x + 1,4 R2 = 0,45 no	y = 0,85x + 12,2 R2 = 0,84 yes
Visispear	y = 1,07x + 235,1 R2 = 0,56 no	y = 0,75x + 510,2 R2 = 0,93 no	y = 1,03x - 0,08 R2 = 0,94 yes	y = 0,29x + 2,53 R2 = 0,41 no	y = 0,77x + 21,61 R2 = 0,96

evaluation criteria:

Slope of the correlation  $0.8 < m < 1.2$

Correlation coefficient  $0.81 < r^2 < 1.21 \Rightarrow 0.9 < r < 1.1$

y-axis intercept < cut off normal range

evaluation criteria:

Slope of the correlation  $0.7 < m < 1.3$

Correlation coefficient  $0.81 < r^2 < 1.21 \Rightarrow 0.9 < r < 1.1$

y-axis intercept < cut off normal range