

Sex Hormone Ester Lipophilicity (Log P) Tables

By [Aly](#) of [Transfeminine Science](#)

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By Sex Hormone Type

Estradiol Esters

Compound	XLogP3	ACD/Labs	EPISuite/KOWWIN	ALOGPS	ChemAxon	Experimental
Estradiol [no ester]	4 [PC]	4.13 [CS]	3.94 [CS]	3.57 [DB]	3.75 [DB]	4.01 [PC , DB], 3.472 [CS]

Estradiol propionate	5.1 [PC]	5.56 [CS]	5.44 [CS]	? [no DB entry]	? [no DB entry]	?
Estradiol benzoate	4.5 [PC]	6.24 [CS]	5.47 [CS]	5.25 [DB]	5.71 [DB]	4.725 [CS]
Estradiol dipropionate	4.3 [PC]	6.16 [CS]	6.01 [CS]	? [no DB entry]	? [no DB entry]	4.909 [CS]
Estradiol valerate	6 [PC]	6.62 [CS]	6.42 [CS]	5.28 [DB]	5.78 [DB]	5.603 [CS]
Estradiol benzoate butyrate	5.9 [PC]	8.20 [CS]	7.46 [CS]	? [no DB entry]	? [no DB entry]	6.287 [CS]
Estradiol phenylpropionate	6.5 [PC]	7.11 [CS]	7.15 [CS]	? [no DB entry]	? [no DB entry]	?
Estradiol cypionate	7.1 [PC]	7.59 [CS]	7.71 [CS]	6.47 [DB]	6.49 [DB]	6.909 [CS]
Estradiol hexahydrobenzoate	6.7 [PC]	7.09 [CS]	7.22 [CS]	? [no DB entry]	? [no DB entry]	?
Estradiol enanthate	7 [PC]	7.68 [CS]	7.40 [CS]	? [no DB entry]	? [no DB entry]	6.741 [CS]
Estradiol dianthate	8.3 [PC]	10.41 [CS]	9.94 [CS]	8.08 [DB]	9.06 [DB]	?
Estradiol decanoate	8.7 [PC]	9.28 [CS]	8.88 [CS]	? [no DB entry]	? [no DB entry]	?
Estradiol undecylate	9.2 [PC]	9.81 [CS]	9.37 [CS]	? [no DB entry]	? [no DB entry]	?
Estradiol stearate	13 [PC]	13.53 [CS]	? [no CS tab]	? [no DB entry]	? [no DB entry]	?

More: [Estradiol pivalate](#) (estradiol trimethyl acetate) and [estradiol distearate](#).

Testosterone Esters

Compound	XLogP3	ACD/Labs	EPISuite/KOWWIN	ALOGPS	ChemAxon	Experimental
Testosterone [no ester]	3.3 [PC]	3.47 [CS]	3.27 [CS]	2.99 [DB]	3.37 [DB]	3.32 [PC, DB]
Testosterone propionate	4.4 [PC]	4.90 [CS]	4.77 [CS]	3.65 [DB]	4.51 [DB]	?

Testosterone benzoate	5.6 [PC]	6.39 [CS]	5.73 [CS]	? [no DB entry]	? [no DB entry]	?
Testosterone phenylpropionate	5.8 [PC]	6.45 [CS]	6.47 [CS]	? [bad DB entry]	? [bad DB entry]	?
Testosterone isobutyrate	4.9 [PC]	5.25 [CS]	5.18 [CS]	? [no DB entry]	? [no DB entry]	?
Testosterone valerate	5.3 [PC]	5.97 [CS]	5.75 [CS]	? [no DB entry]	? [no DB entry]	?
Testosterone isocaproate	5.5 [PC]	6.31 [CS]	6.17 [CS]	4.36 [DB]	5.68 [DB]	?
Testosterone caproate	5.8 [PC]	6.50 [CS]	6.24 [CS]	? [no DB entry]	? [no DB entry]	?
Testosterone hexahydrobenzoate	6 [PC]	6.43 [CS]	6.54 [CS]	? [no DB entry]	? [no DB entry]	?
Testosterone cypionate	6.4 [PC]	6.93 [CS]	7.04 [CS]	5.1 [DB]	6.11 [DB]	?
Testosterone enanthate	6.3 [PC]	7.03 [CS]	6.73 [CS]	5.11 [DB]	6.29 [DB]	3.58 [PC, DB]
Testosterone decanoate	8 [PC]	8.62 [CS]	8.20 [CS]	6.3 [DB]	7.62 [DB]	?
Testosterone undecanoate	8.5 [PC]	9.15 [CS]	8.69 [CS]	6.74 [DB]	8.06 [DB]	?
Testosterone buciclate	7.9 [PC]	8.52 [CS]	8.44 [CS]	? [no DB entry]	? [no DB entry]	?

Nandrolone Esters

Compound	XLogP3	ACD/Labs	EPISuite/KOWWIN	ALOGPS	ChemAxon	Experimental
Nandrolone [no ester]	2.6 [PC]	3.00 [CS]	2.82 [CS]	2.6 [DB]	3.07 [DB]	2.62 [PC]
Nandrolone phenylpropionate	5.1 [PC]	5.97 [CS]	6.02 [CS]	4.22 [DB]	5.79 [DB]	?
Nandrolone cyclotate	5.8 [PC]	6.50 [CS]	? [no CS tab]	? [no DB entry]	? [no DB entry]	?
Nandrolone decanoate	7.3 [PC]	8.14 [CS]	7.75 [CS]	5.96 [DB]	7.32 [DB]	?

Nandrolone hexyloxyphenylpropionate	7.4 [PC]	8.55 [CS]	? [no CS tab]	? [no DB entry]	? [no DB entry]	?
Nandrolone undecanoate	7.8 [PC]	8.67 [CS]	? [no CS tab]	? [no DB entry]	? [no DB entry]	?

More: [Nandrolone propionate](#), [nandrolone benzoate](#), [nandrolone cypionate](#), and [nandrolone enanthate](#).

Progesterone

Compound	XLogP3	ACD/Labs	EPISuite/KOWWIN	ALOGPS	ChemAxon	Experimental
Progesterone [no ester]	3.9 [PC]	4.04 [CS]	3.67 [CS]	3.58 [DB]	4.15 [DB]	3.87 [PC, DB], 4.826 [CS]

Note: Progesterone esters are not chemically possible since progesterone has no available hydroxyl groups for esterification (see also [Wiki](#)).

Other Esters

More: [DHT esters](#), [other anabolic steroid esters](#), [progesterin esters](#), etc.

By Ester Type

No Ester

Compound	XLogP3	ACD/Labs	EPISuite/KOWWIN	ALOGPS	ChemAxon	Experimental
Estradiol [no ester]	4 [PC]	4.13 [CS]	3.94 [CS]	3.57 [DB]	3.75 [DB]	4.01 [PC, DB], 3.472 [CS]
Testosterone [no ester]	3.3 [PC]	3.47 [CS]	3.27 [CS]	2.99 [DB]	3.37 [DB]	3.32 [PC, DB]
Nandrolone [no ester]	2.6 [PC]	3.00 [CS]	2.82 [CS]	2.6 [DB]	3.07 [DB]	2.62 [PC]
Progesterone [no ester]	3.9 [PC]	4.04 [CS]	3.67 [CS]	3.58 [DB]	4.15 [DB]	3.87 [PC, DB], 4.826 [CS]

Propionate Esters

Compound	XLogP3	ACD/Labs	EPISuite/KOWWIN	ALOGPS	ChemAxon	Experimental
Estradiol propionate	5.1 [PC]	5.56 [CS]	5.44 [CS]	? [no DB entry]	? [no DB entry]	?
Testosterone propionate	4.4 [PC]	4.90 [CS]	4.77 [CS]	3.65 [DB]	4.51 [DB]	?

Benzoate Esters

Compound	XLogP3	ACD/Labs	EPISuite/KOWWIN	ALOGPS	ChemAxon	Experimental
Estradiol benzoate	4.5 [PC]	6.24 [CS]	5.47 [CS]	5.25 [DB]	5.71 [DB]	4.725 [CS]
Testosterone benzoate	5.6 [PC]	6.39 [CS]	5.73 [CS]	? [no DB entry]	? [no DB entry]	?

Valerate Esters

Compound	XLogP3	ACD/Labs	EPISuite/KOWWIN	ALOGPS	ChemAxon	Experimental
Estradiol valerate	6 [PC]	6.62 [CS]	6.42 [CS]	5.28 [DB]	5.78 [DB]	5.603 [CS]
Testosterone valerate	5.3 [PC]	5.97 [CS]	5.75 [CS]	? [no DB entry]	? [no DB entry]	?

Phenylpropionate Esters

Compound	XLogP3	ACD/Labs	EPISuite/KOWWIN	ALOGPS	ChemAxon	Experimental
Estradiol phenylpropionate	6.5 [PC]	7.11 [CS]	7.15 [CS]	? [no DB entry]	? [no DB entry]	?
Testosterone phenylpropionate	5.8 [PC]	6.45 [CS]	6.47 [CS]	? [bad DB entry]	? [bad DB entry]	?

Nandrolone phenylpropionate	5.1 [PC]	5.97 [CS]	6.02 [CS]	4.22 [DB]	5.79 [DB]	?
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Cypionate (Cyclopentylpropionate) Esters

Compound	XLogP3	ACD/Labs	EPISuite/KOWWIN	ALOGPS	ChemAxon	Experimental
Estradiol cypionate	7.1 [PC]	7.59 [CS]	7.71 [CS]	6.47 [DB]	6.49 [DB]	6.909 [CS]
Testosterone cypionate	6.4 [PC]	6.93 [CS]	7.04 [CS]	5.1 [DB]	6.11 [DB]	?

Hexahydrobenzoate (Cyclohexanecarboxylate) Esters

Compound	XLogP3	ACD/Labs	EPISuite/KOWWIN	ALOGPS	ChemAxon	Experimental
Estradiol hexahydrobenzoate	6.7 [PC]	7.09 [CS]	7.22 [CS]	? [no DB entry]	? [no DB entry]	?
Testosterone hexahydrobenzoate	6 [PC]	6.43 [CS]	6.54 [CS]	? [no DB entry]	? [no DB entry]	?

Enanthate (Heptanoate) Esters

Compound	XLogP3	ACD/Labs	EPISuite/KOWWIN	ALOGPS	ChemAxon	Experimental
Estradiol enanthate	7 [PC]	7.68 [CS]	7.40 [CS]	? [no DB entry]	? [no DB entry]	6.741 [CS]
Testosterone enanthate	6.3 [PC]	7.03 [CS]	6.73 [CS]	5.11 [DB]	6.29 [DB]	3.58 [PC, DB]

Decylate (Decanoate) Esters

Compound	XLogP3	ACD/Labs	EPISuite/KOWWIN	ALOGPS	ChemAxon	Experimental
Estradiol decanoate	8.7 [PC]	9.28 [CS]	8.88 [CS]	? [no DB entry]	? [no DB entry]	?

Testosterone decanoate	8 [PC]	8.62 [CS]	8.20 [CS]	6.3 [DB]	7.62 [DB]	?
Nandrolone decanoate	7.3 [PC]	8.14 [CS]	7.75 [CS]	5.96 [DB]	7.32 [DB]	?

Undecylate (Undecanoate) Esters

Compound	XLogP3	ACD/Labs	EPISuite/KOWWIN	ALOGPS	ChemAxon	Experimental
Estradiol undecylate	9.2 [PC]	9.81 [CS]	9.37 [CS]	? [no DB entry]	? [no DB entry]	?
Testosterone undecanoate	8.5 [PC]	9.15 [CS]	8.69 [CS]	6.74 [DB]	8.06 [DB]	?
Nandrolone undecanoate	7.8 [PC]	8.67 [CS]	? [no CS tab]	? [no DB entry]	? [no DB entry]	?