

# Oestrone, 16.beta.-hydroxy, TFA

**Inchi:** InChI=1S/C22H20F6O5/c1-20-7-6-13-12-5-3-11(32-18(30)21(23,24)25)8-10(12)2-4-14(1  
**InchiKey:** UMQDMZKPNXRPD-L-OJOVYZNWSA-N  
**Formula:** C22H20F6O5  
**SMILES:** C[C@]12CC[C@@H]3c4ccc(OC(=O)C(F)(F)F)cc4CC[C@H]3[C@@H]1C[C@H](OC(=O)C(F)(F)F)C2  
**Mol. weight [g/mol]:** 478.38

## Physical Properties

| Property code | Value   | Unit   | Source             |
|---------------|---------|--------|--------------------|
| hfus          | 40.78   | kJ/mol | Joback Method      |
| ie            | 8.84    | eV     | Cheméo Relay (1.0) |
| log10ws       | -6.38   |        | Cheméo Relay (1.0) |
| logp          | 4.663   |        | Crippen Method     |
| mcvol         | 291.570 | ml/mol | McGowan Method     |
| tf            | 431.22  | K      | Cheméo Relay (1.0) |

## Temperature Dependent Properties

| Property code | Value   | Unit    | Temperature [K] | Source        |
|---------------|---------|---------|-----------------|---------------|
| cpg           | 1037.78 | J/mol×K | 968.62          | Joback Method |
| cpg           | 1055.68 | J/mol×K | 1006.38         | Joback Method |
| cpg           | 1073.41 | J/mol×K | 1044.15         | Joback Method |
| cpg           | 1091.18 | J/mol×K | 1081.91         | Joback Method |
| cpg           | 1109.20 | J/mol×K | 1119.68         | Joback Method |
| cpg           | 1127.68 | J/mol×K | 1157.44         | Joback Method |
| cpg           | 1146.82 | J/mol×K | 1195.20         | Joback Method |

## Sources

**NIST Webbook:** <http://webbook.nist.gov/cgi/cbook.cgi?Str2File=R524037>  
**Joback Method:** [https://en.wikipedia.org/wiki/Joback\\_method](https://en.wikipedia.org/wiki/Joback_method)  
**McGowan Method:** <http://link.springer.com/article/10.1007/BF02311772>

**Crippen Method:** <http://pubs.acs.org/doi/abs/10.1021/ci990307l>  
**Crippen Method:** [https://www.chemeo.com/doc/models/crippen\\_log10ws](https://www.chemeo.com/doc/models/crippen_log10ws)  
**Cheméo Relay (1.0):**  
**Cheméo Relay (1.0, beta):**

## Legend

|                 |                                           |
|-----------------|-------------------------------------------|
| <b>cpg:</b>     | Ideal gas heat capacity                   |
| <b>hfus:</b>    | Enthalpy of fusion at standard conditions |
| <b>ie:</b>      | Ionization energy                         |
| <b>log10ws:</b> | Log10 of Water solubility in mol/l        |
| <b>logp:</b>    | Octanol/Water partition coefficient       |
| <b>mcvol:</b>   | McGowan's characteristic volume           |
| <b>tf:</b>      | Normal melting (fusion) point             |

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