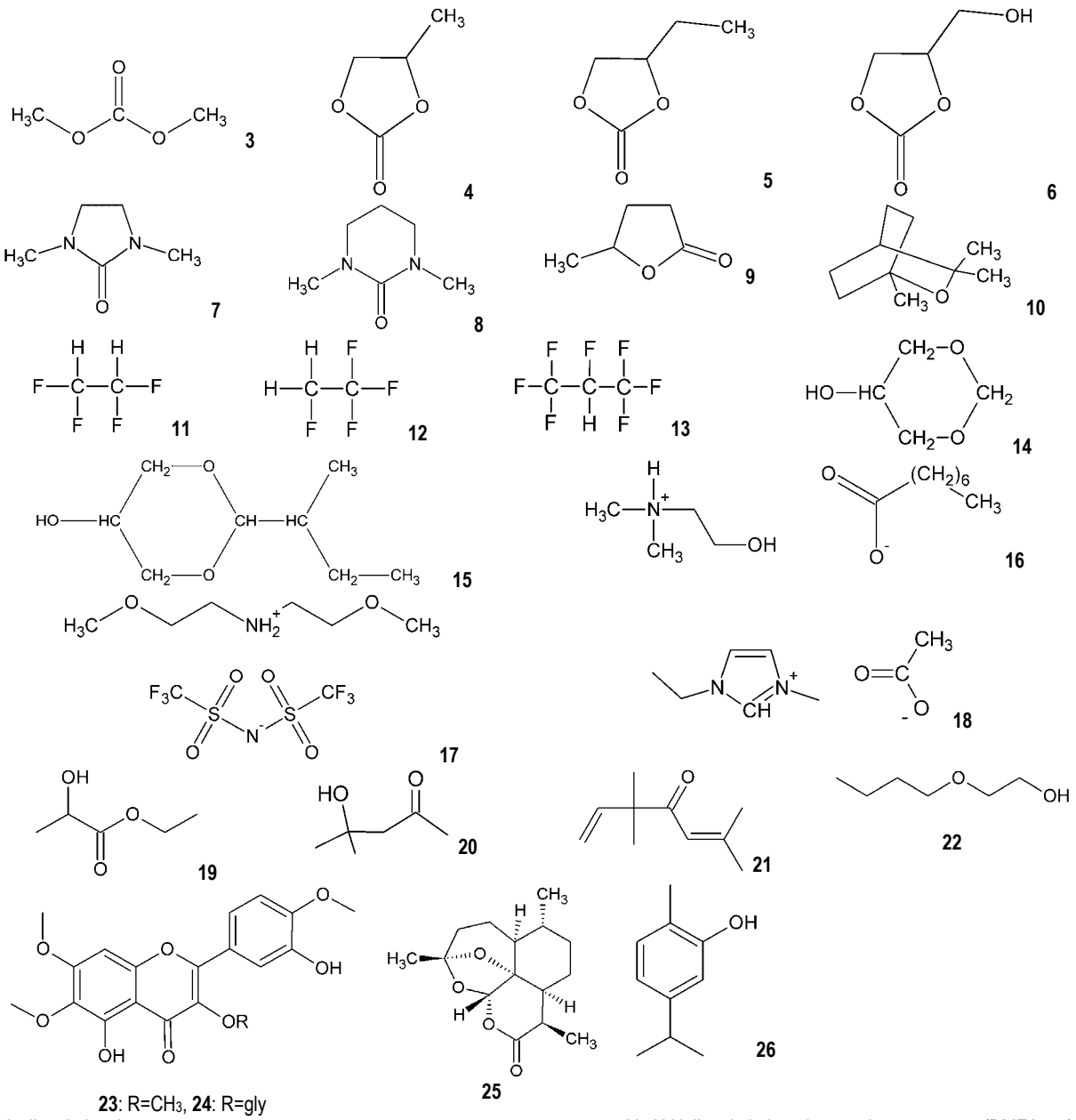

23: R=CH_3, **24**: R=gly

3: dimethyl carbonate
4: propylene carbonate
5: butylene carbonate
6: glyceryl carbonate
7: DMI
8: DMPU
9: γ-valerolactone
10: 1,8-cineol
11: 1,1,2,2-tetrafluoroethane
12: 1,1,1,2-tetrafluoroethane (R134a) **13**: 1,1,1,2,3,3,3-heptafluoropropane (R227)
14: 1,3-dioxane-5-ol (glycerol formal)
15: 2-isobutyl-1,3-dioxane-5-ol (glycerol isobutyral)
16: *N*,*N*-dimethylethanolammonium octanoate (DMEA oct)
17: bis(2-methoxyethyl)ammonium bis(trifluoromethylsulfonyl)imide (BMOEA bst)
18: 1-ethyl-3-methylimidazolium acetate (EMIM OAc)**19**: ethyl lactate
20: diacetone alcohol
21: artemisia ketone (3,3,6-trimethyl-1,5-heptadiene-4-one)
22: 2-butoxy ethanol
23: R=CH_3, casticin
24: R=gly, casticin glycoside
25: deoxyartemisinin
26: carvacrol

Scheme S1. Molecular structures of some potential solvents, co-solvents and solubility modifiers for artemisinin extraction.

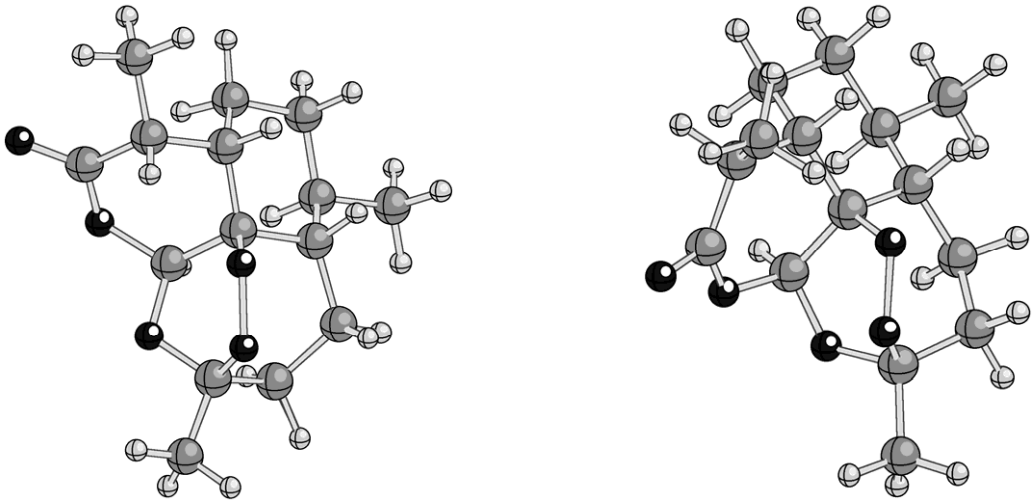

Fig. S1. Optimised geometry of the conformers of artemisinin (**1**, left) and epiartemisinin (**1'**, right) dominating the solubility calculations.

Fig. S2. Screening charge density maps of toluene (left) and perfluorotoluene (right), calculated by COSMOtherm.