

Supporting Information

Enantiodiscriminating lipophilic liquid membrane-based assay for high-throughput nanomolar enantioenrichment of chiral building blocks

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3. Preliminary studies on kinetics of separability using UV-Vis absorption spectroscopy to determine the concentration of the aqueous phases

Section S1. UV-Vis calibration curves (10^{-4} - 10^{-5} mol·L⁻¹) for determining the concentration of the model compounds (19-23) at pH=1.0 in aqueous solutions

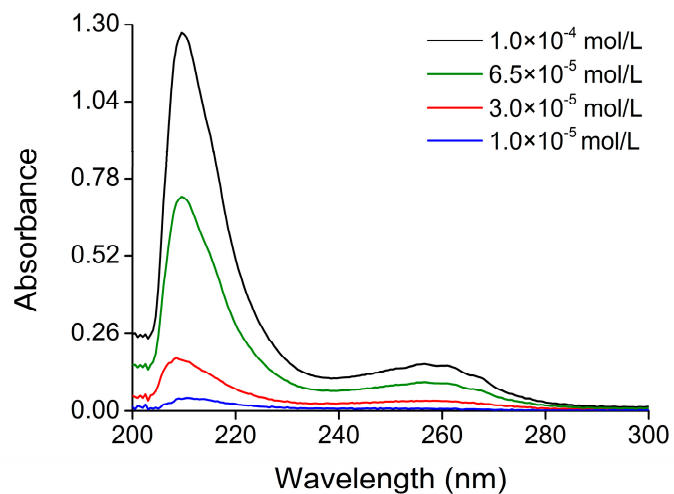


Figure S1. UV-absorption spectra of model compound **19**

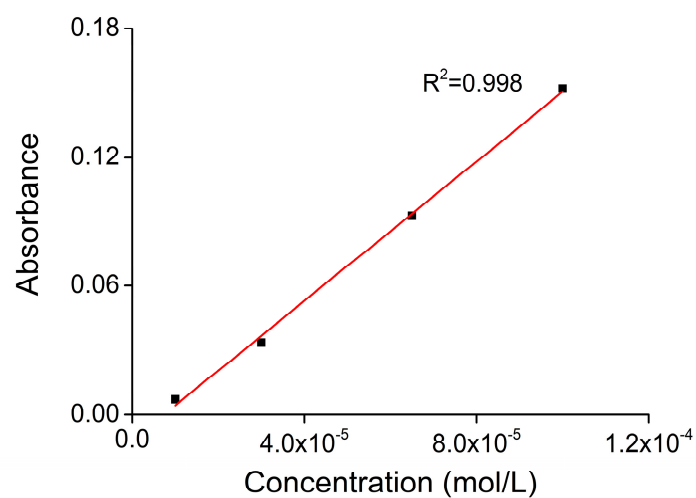


Figure S2. Calibration curve for model compound **19** at 258 nm

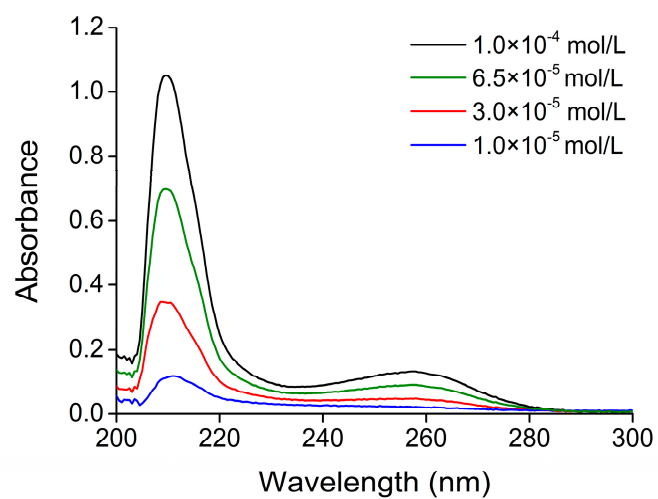


Figure S3. UV-absorption spectra of model compound **20**

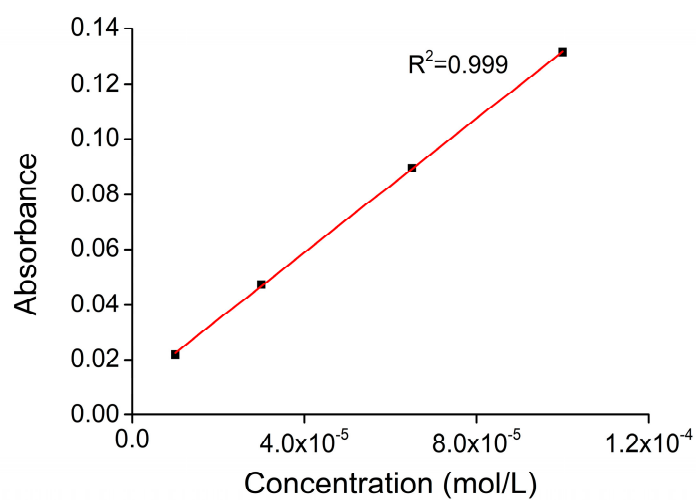


Figure S4. Calibration curve for model compound **20** at 258 nm

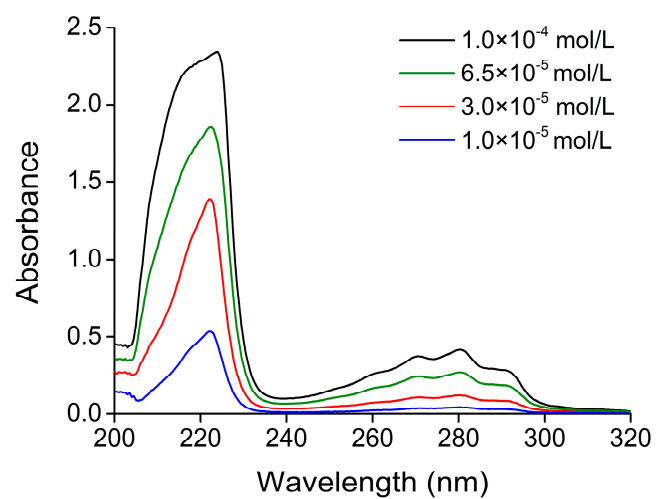


Figure S5. UV-absorption spectra of model compound **21**

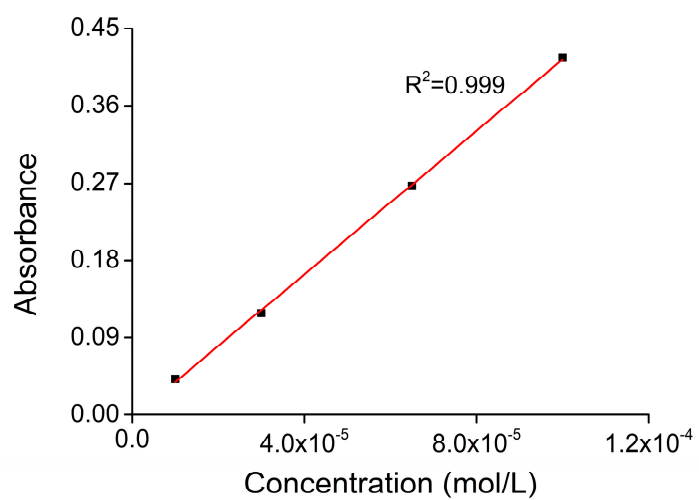


Figure S6. Calibration curve for model compound **21** at 280 nm

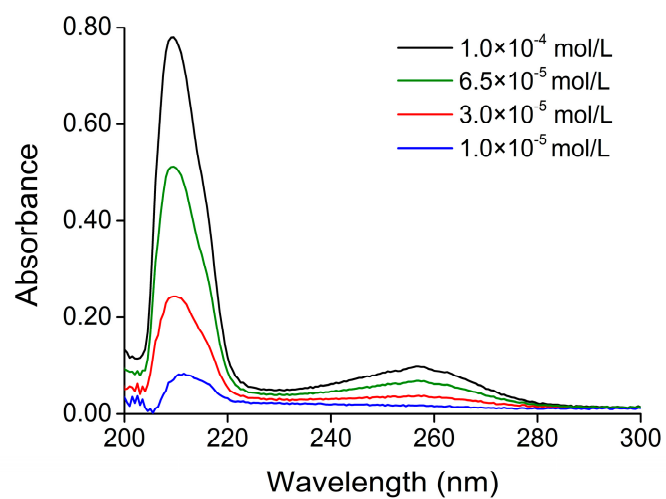


Figure S7. UV-absorption spectra of model compound **22**

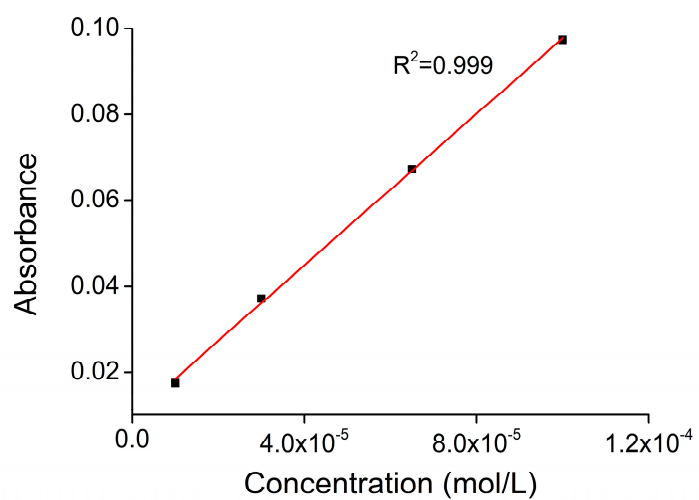


Figure S8. Calibration curve for model compound **22** at 258 nm

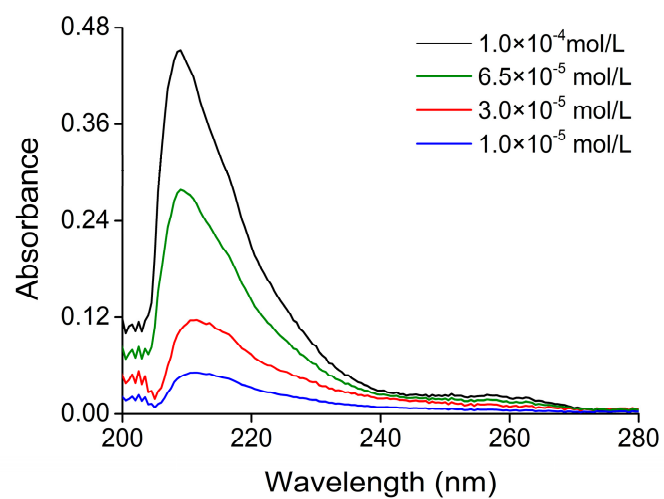


Figure S9. UV-absorption spectra of model compound **23**

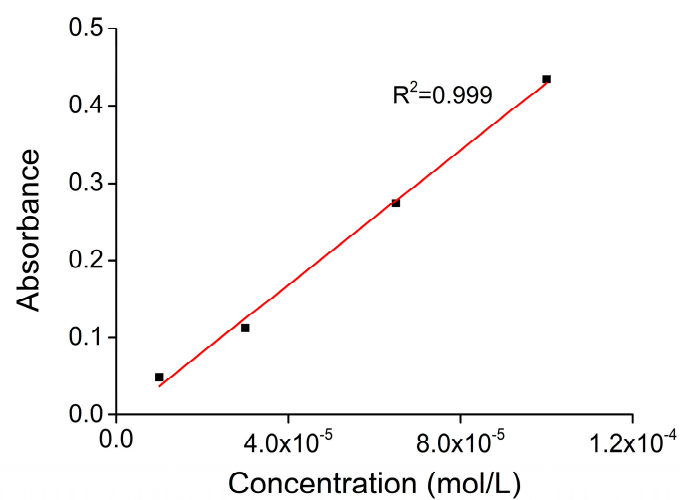


Figure S10. Calibration curve for model compound **23** at 210 nm

Section S2. ^1H -NMR and ^{13}C -NMR spectra of the new compounds

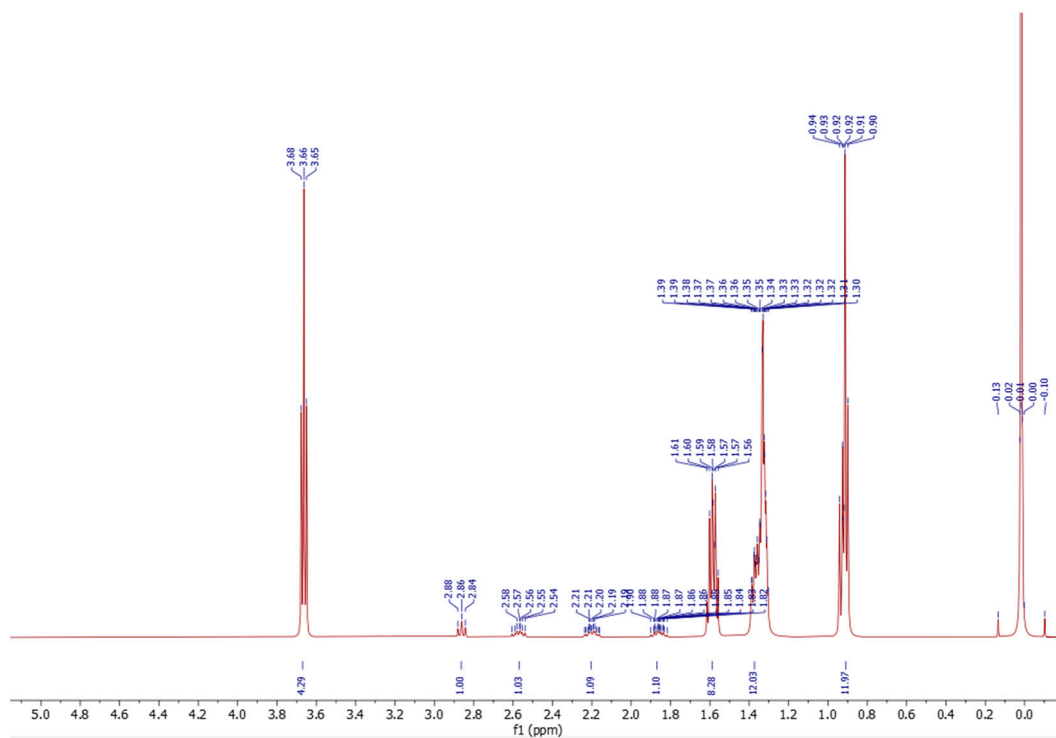


Figure S11. ^1H -NMR spectrum of CA-6 (**8**, solvent: CDCl_3)

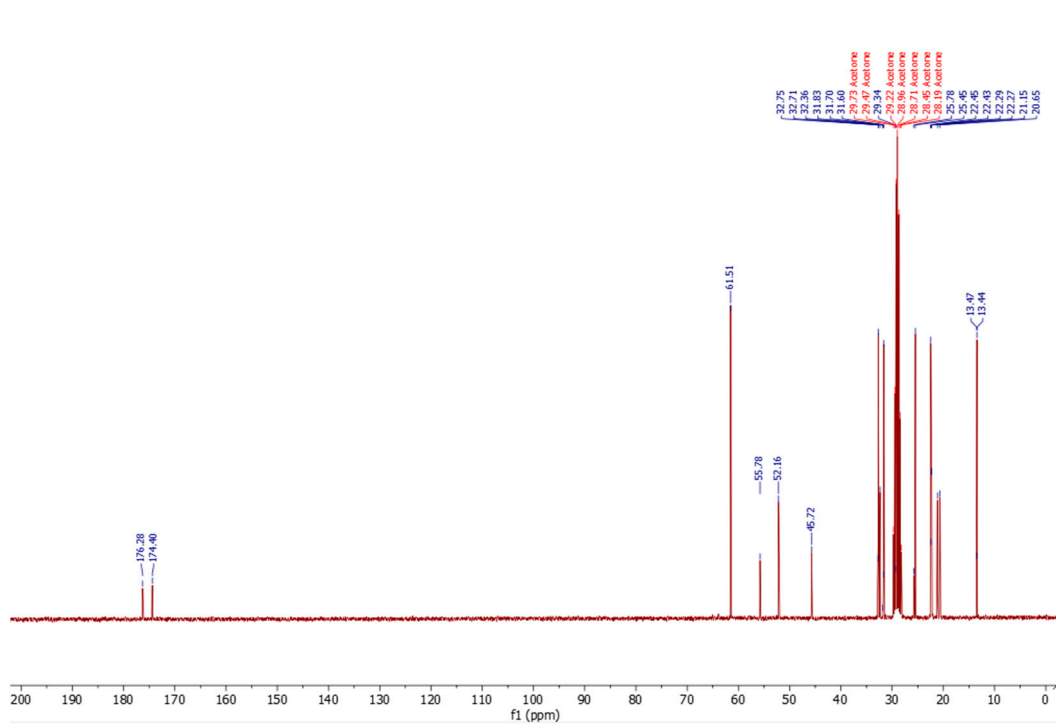


Figure S12. ^{13}C -NMR spectrum of CA-6 (**8**, solvent: $\text{acetone-}d_6$)

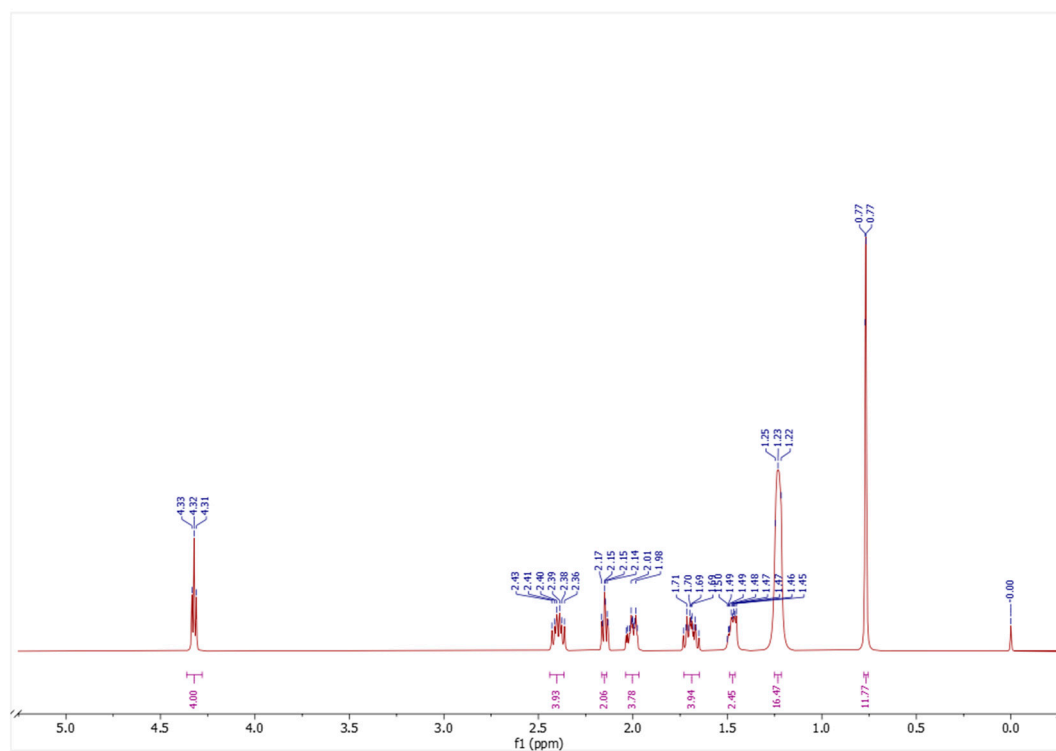


Figure S13. ¹H-NMR spectrum of CA-8 (**9**, solvent: acetone-*d*₆)

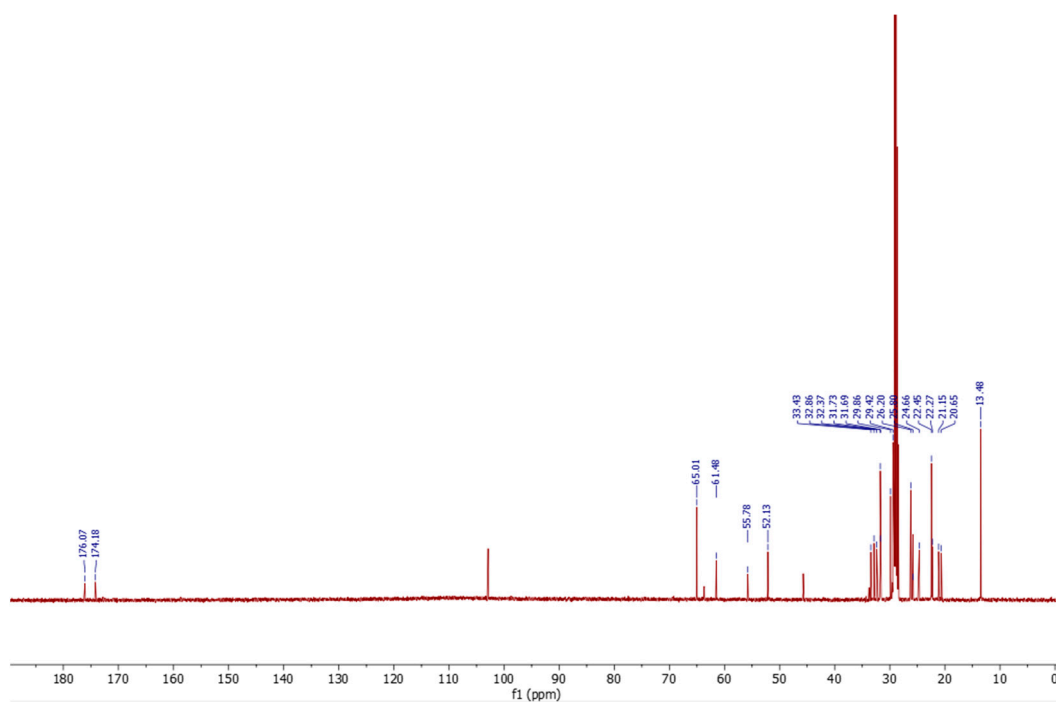


Figure S14. ¹³C-NMR spectrum of CA-8 (**9**, solvent: acetone-*d*₆)

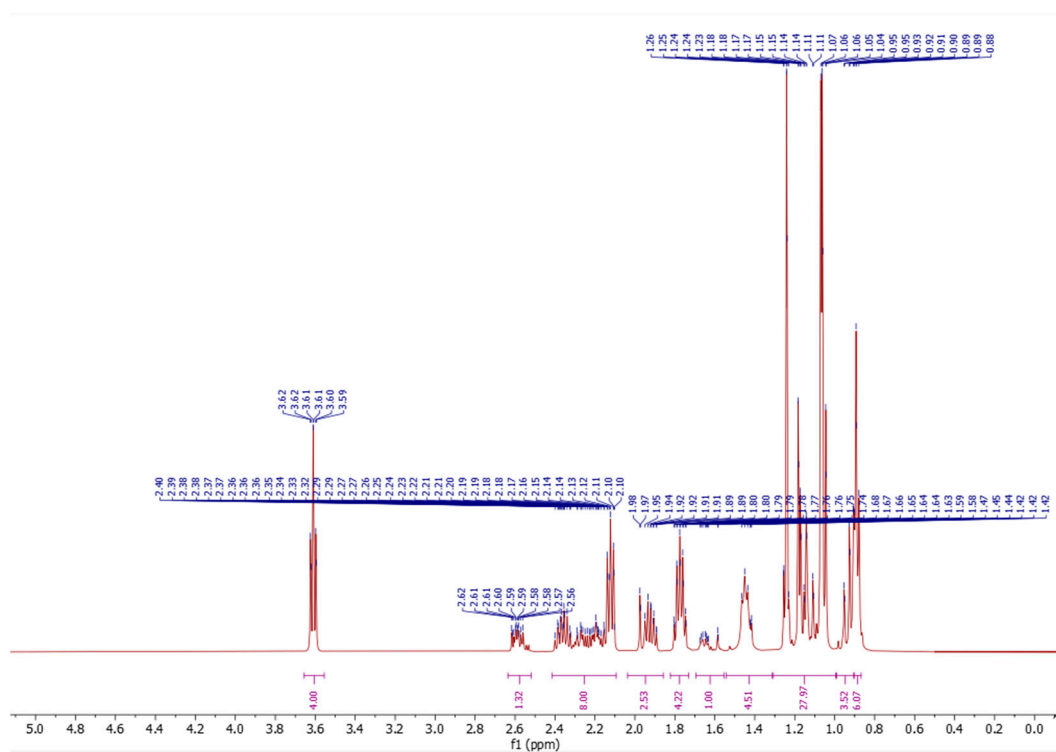


Figure S15. ¹H-NMR spectrum of CA-12 (**10**, solvent: CDCl₃)

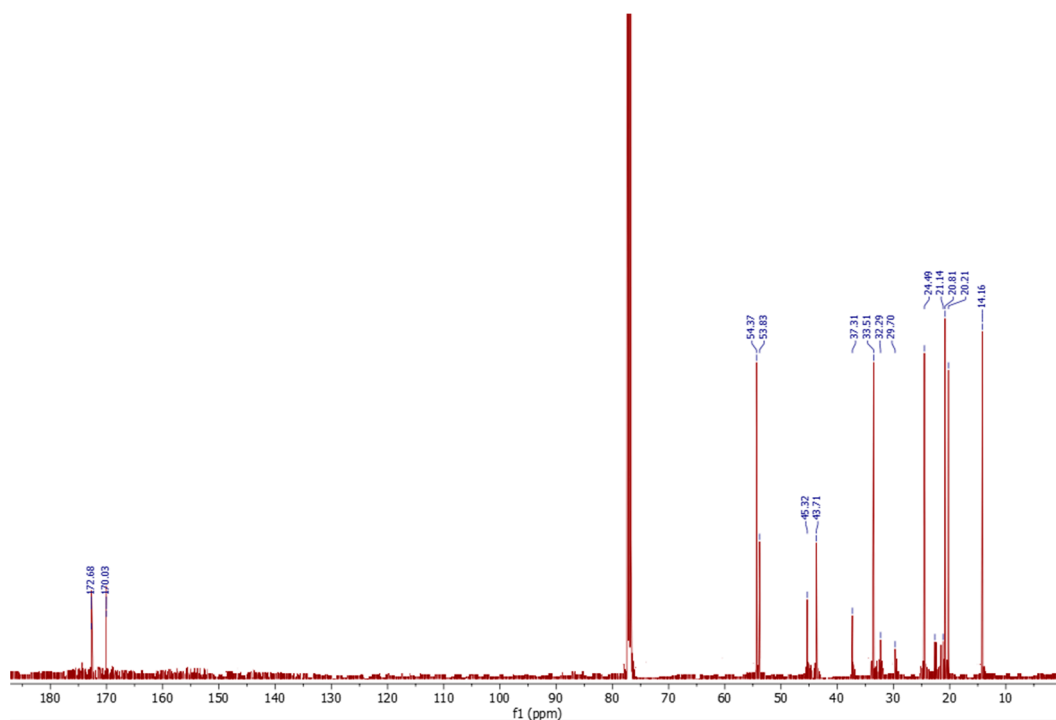


Figure S16. ¹³C-NMR spectrum of CA-12 (**10**, solvent: CDCl₃)

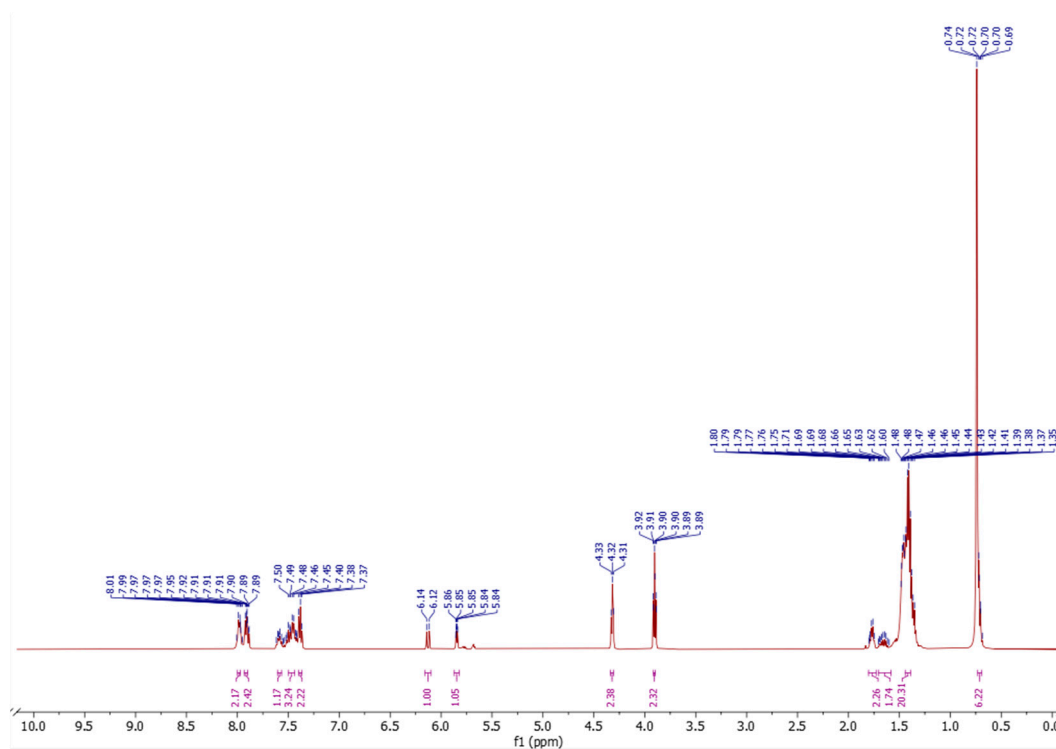


Figure S17. ¹H-NMR spectrum of DBTA-8 (**16**, solvent: acetone-*d*₆)

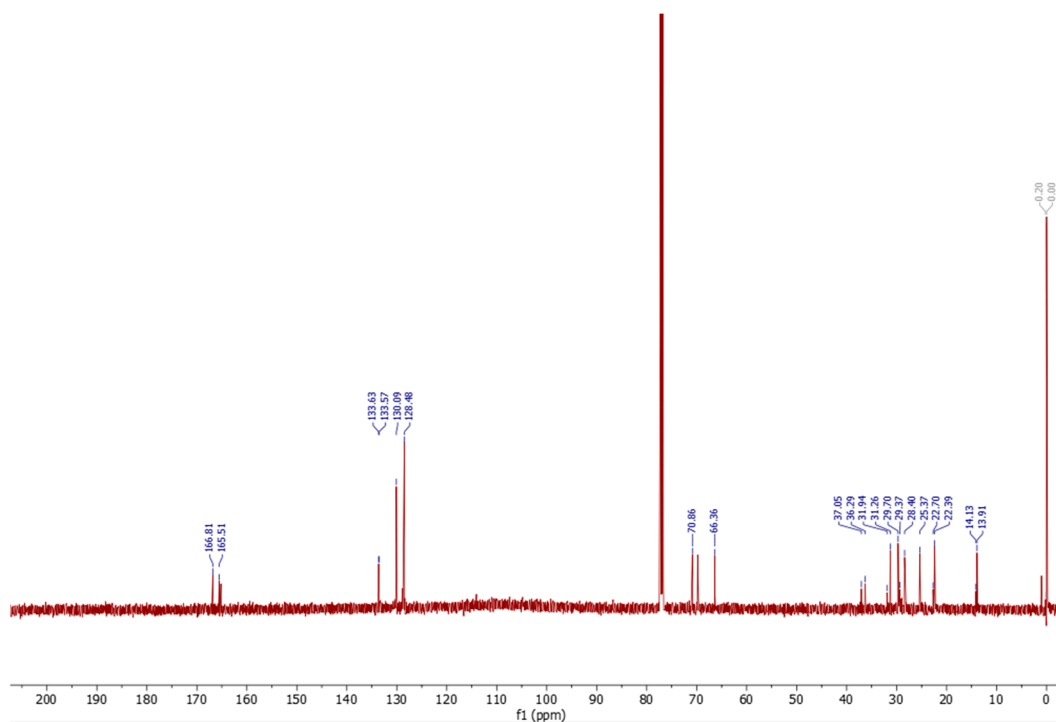


Figure S18. ¹³C-NMR spectrum of DBTA-8 (**16**, solvent: CDCl₃)

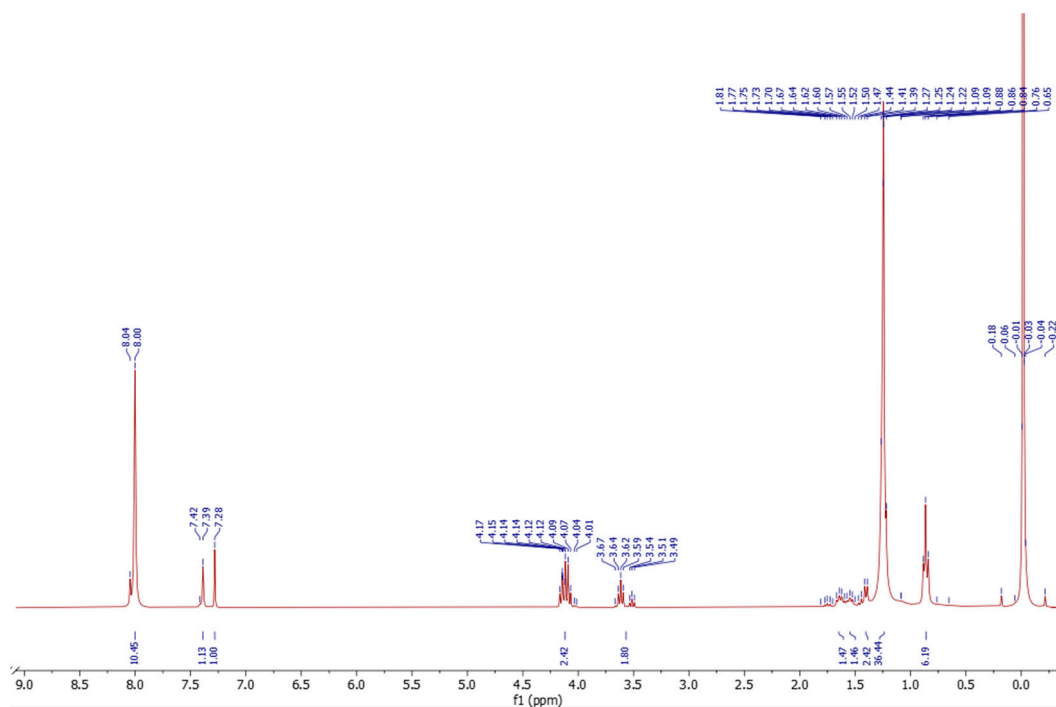


Figure S21. ^1H -NMR spectrum of DBTA-12 (**17**, solvent: CDCl_3)

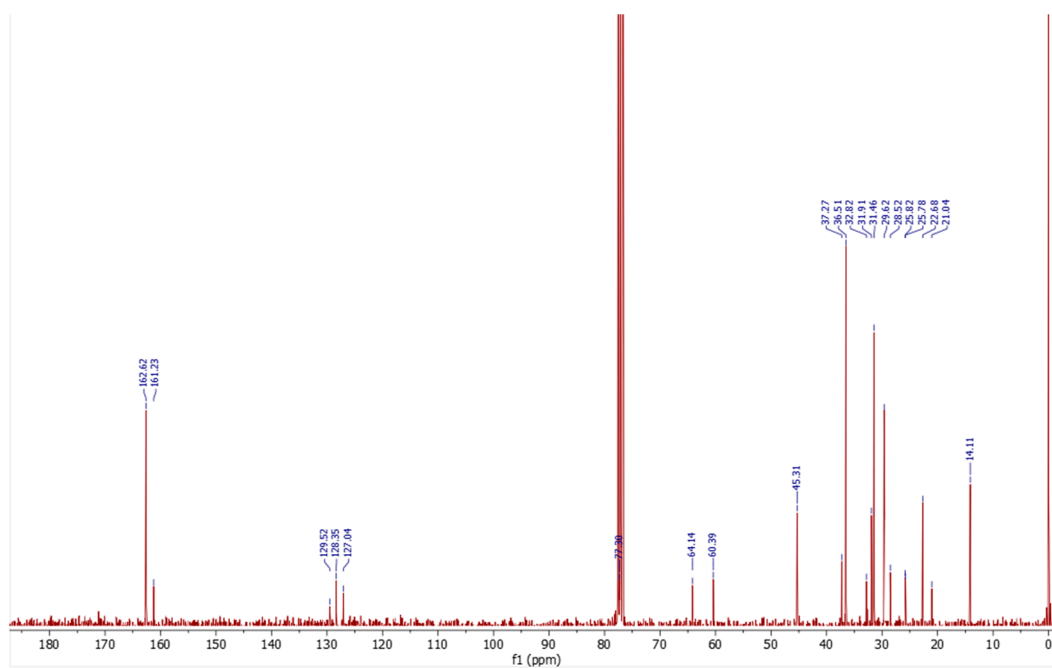


Figure S22. ^{13}C -NMR spectrum of C DBTA-12 (**17**, solvent: CDCl_3)

Section S3. Preliminary studies on kinetics of separability using UV-Vis absorption spectroscopy to determine the concentration of the aqueous phases

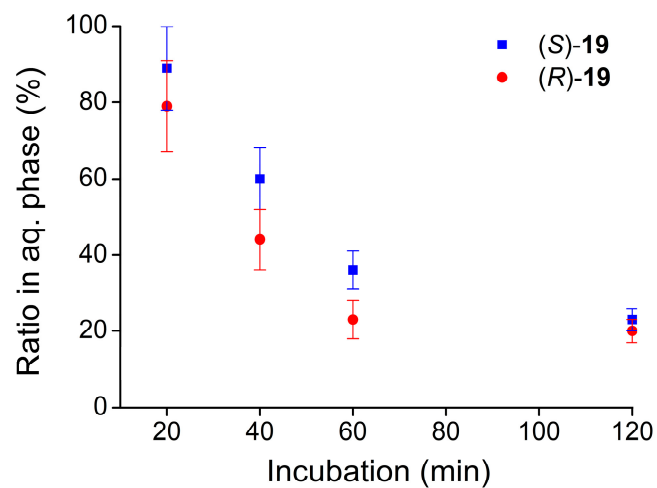


Figure S23. Studies on separability of model compound **19** using NAP-6 (**18**) as a single-component selector

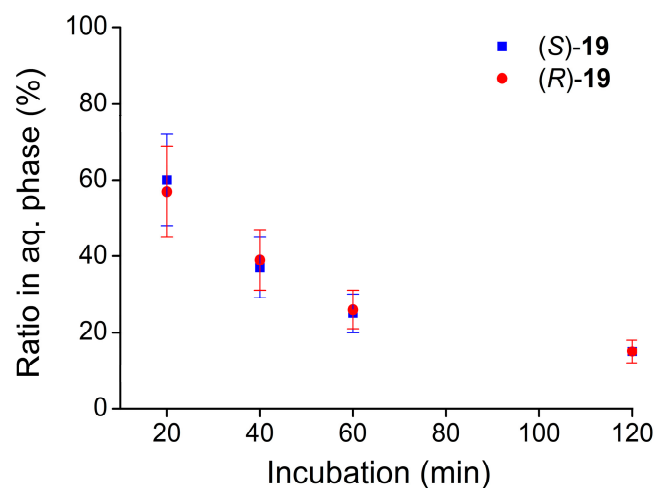


Figure S24. Studies on separability of model compound **19** using NAP-6 (**18**) as a selector molecule in a decane-1-ol based apolar liquid membrane

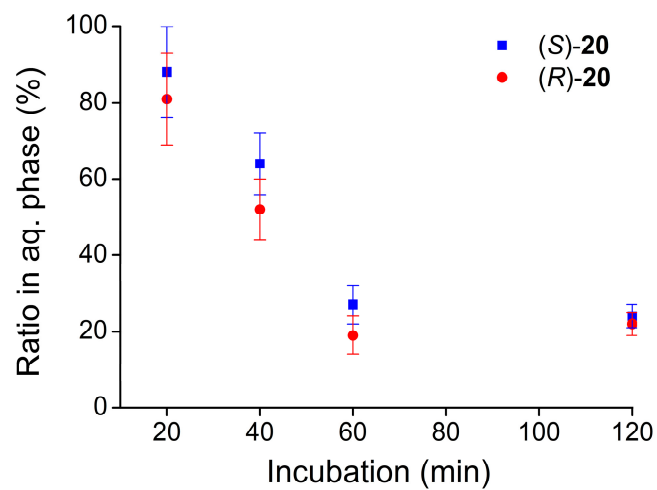


Figure S25. Studies on separability of model compound **20** using NAP-6 (**18**) as a single-component selector

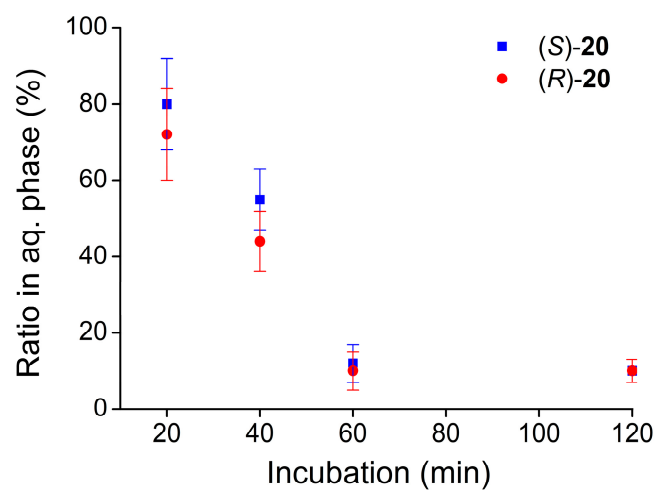


Figure S26. Studies on separability of model compound **20** using NAP-6 (**18**) as a selector molecule in a decane-1-ol based apolar liquid membrane

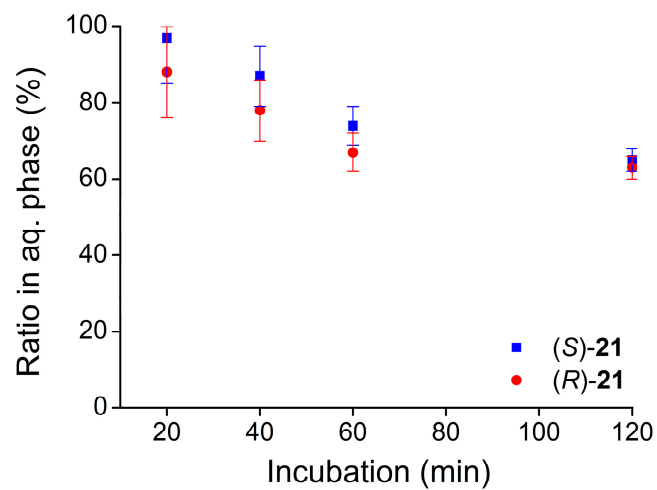


Figure S27. Studies on separability of model compound **21** using NAP-6 (**18**) as a single-component selector

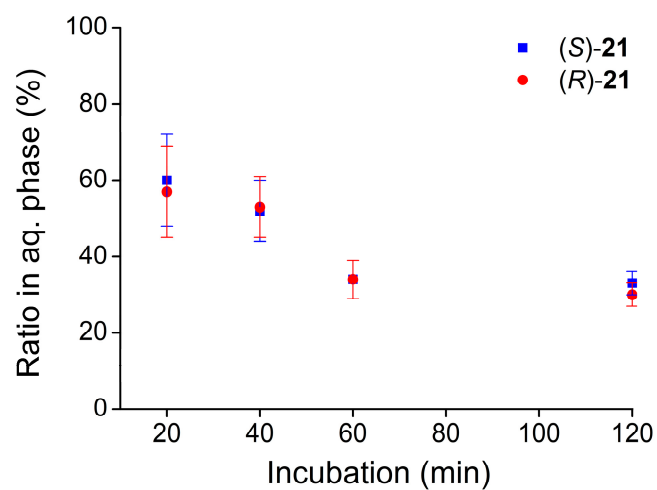


Figure S28. Studies on separability of model compound **21** using NAP-6 (**18**) as a selector molecule in a decane-1-ol based apolar liquid membrane

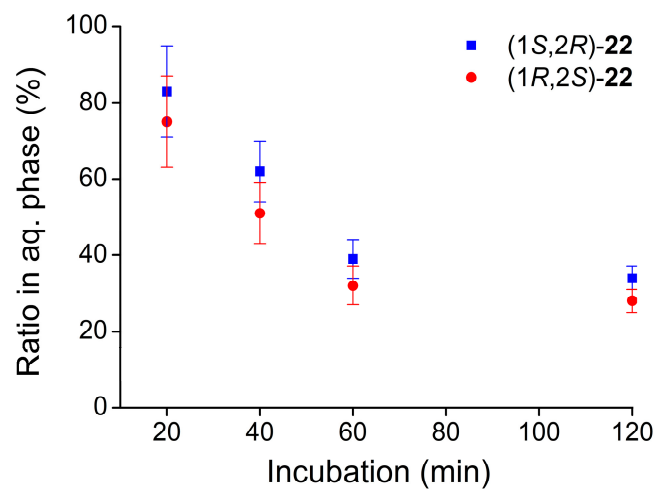


Figure S29. Studies on separability of model compound **22** using NAP-6 (**18**) as a single-component selector

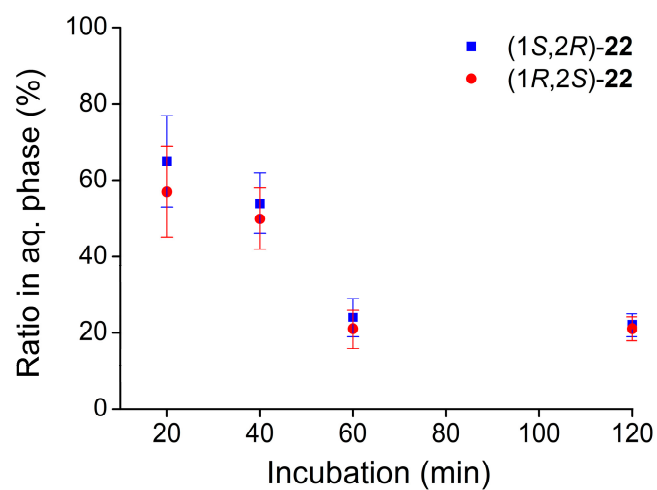


Figure S30. Studies on separability of model compound **22** using NAP-6 (**18**) as a selector molecule in a decane-1-ol based apolar liquid membrane

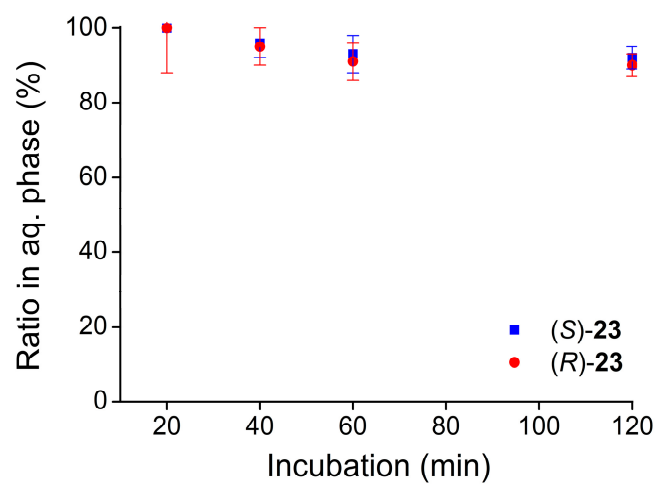


Figure S31. Studies on separability of model compound **23** using NAP-6 (**18**) as a single-component selector

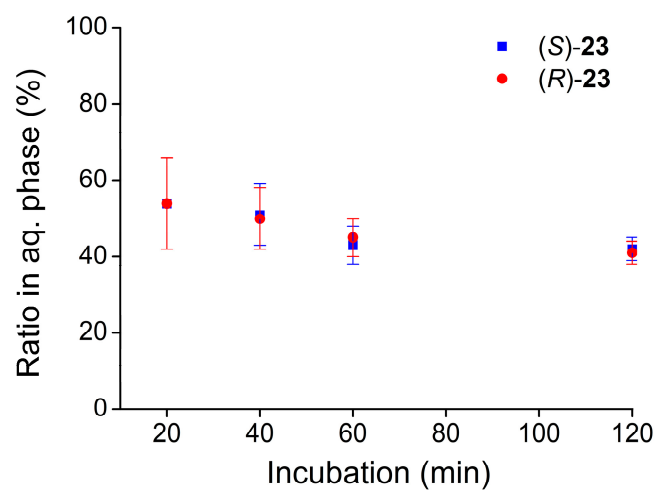


Figure S32. Studies on separability of model compound **23** using NAP-6 (**18**) as a selector molecule in a decane-1-ol based apolar liquid membrane

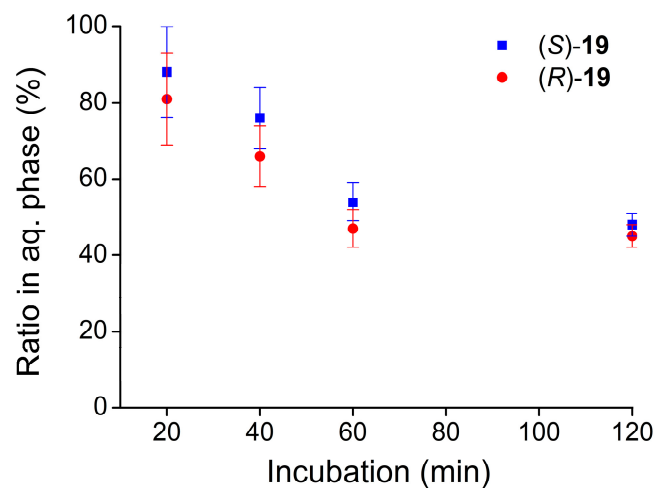


Figure S33. Studies on separability of model compound **19** using CA-12 (**10**) as a selector molecule in a decane-1-ol based apolar liquid membrane

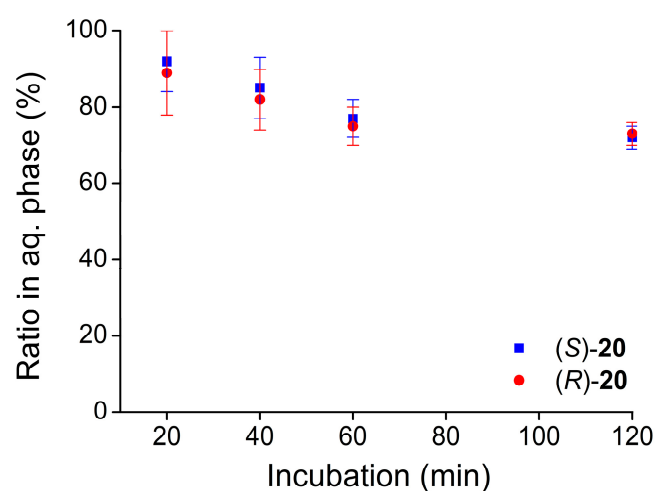


Figure S34. Studies on separability of model compound **20** using CA-12 (**10**) as a selector molecule in a decane-1-ol based apolar liquid membrane

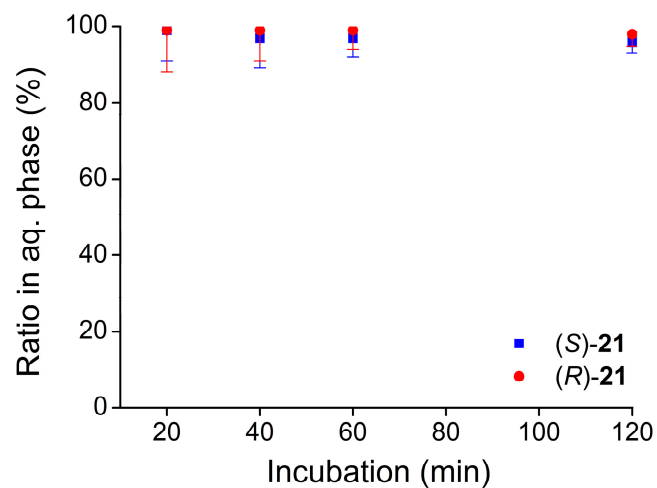


Figure S35. Studies on separability of model compound **21** using CA-12 (**10**) as a selector molecule in a decane-1-ol based apolar liquid membrane

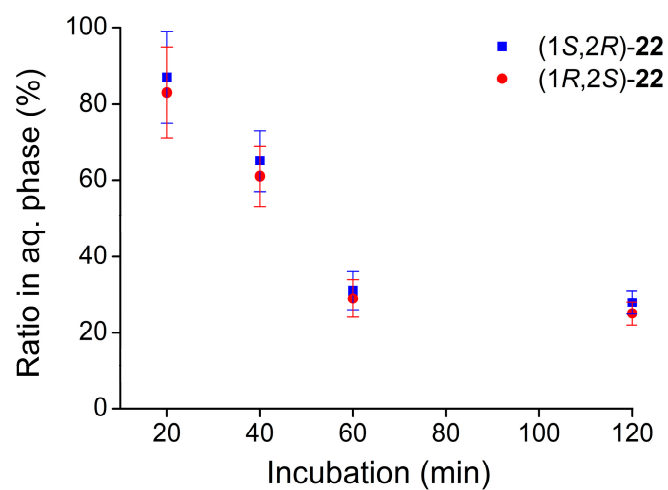


Figure S36. Studies on separability of model compound **22** using CA-12 (**10**) as a selector molecule in a decane-1-ol based apolar liquid membrane

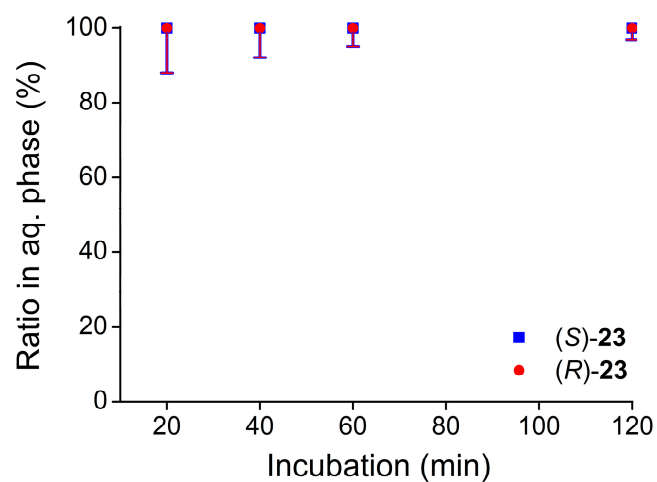


Figure S37. Studies on separability of model compound **23** using CA-12 (**10**) as a selector molecule in a decane-1-ol based apolar liquid membrane

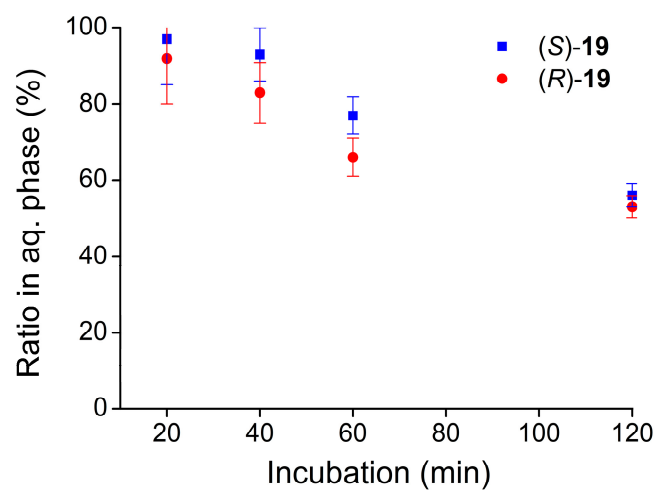


Figure S38. Studies on separability of model compound **19** using MEN-10 (**14**) as a single-component selector

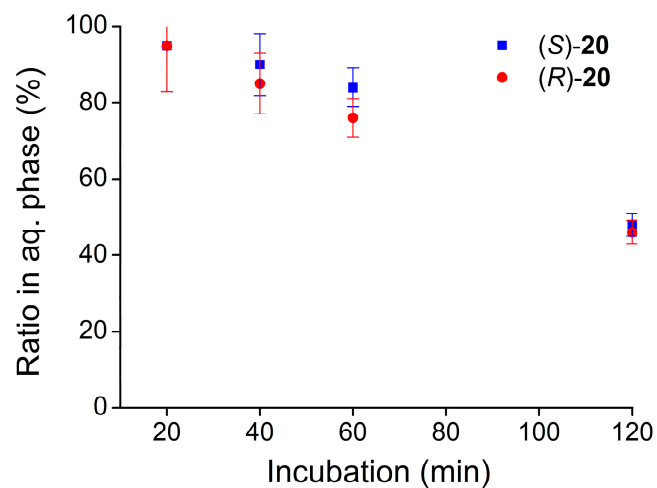


Figure S39. Studies on separability of model compound **20** using MEN-10 (**14**) as a single-component selector

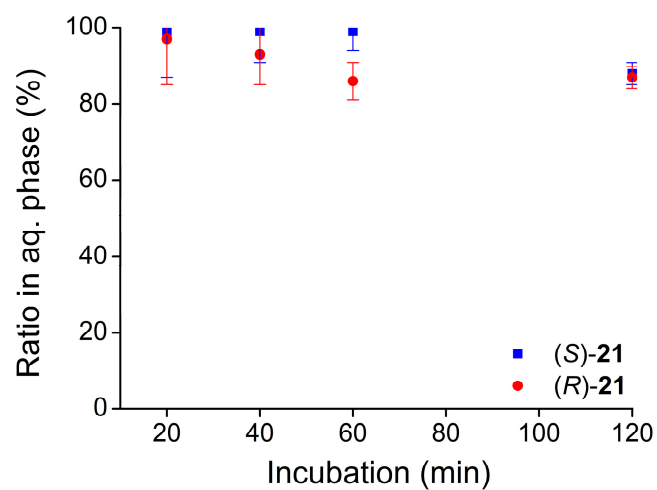


Figure S40. Studies on separability of model compound **21** using MEN-10 (**14**) as a single-component selector

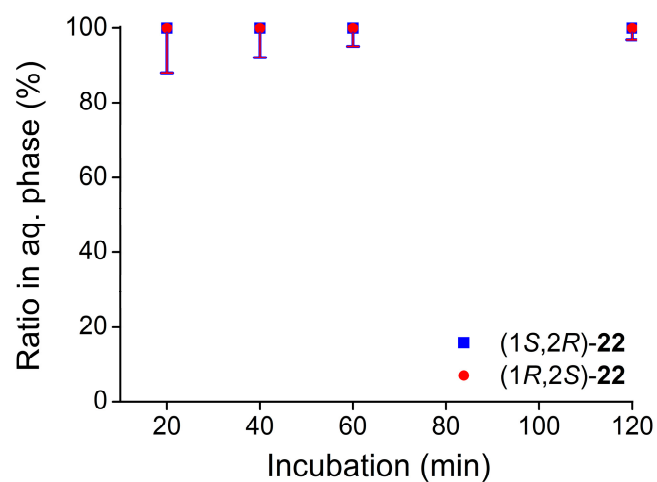


Figure S41. Studies on separability of model compound **22** using MEN-10 (**14**) as a single-component selector

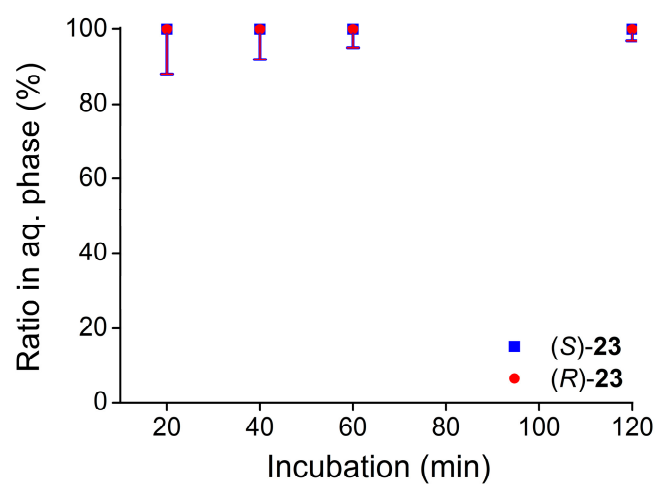


Figure S42. Studies on separability of model compound **23** using MEN-10 (**14**) as a single-component selector

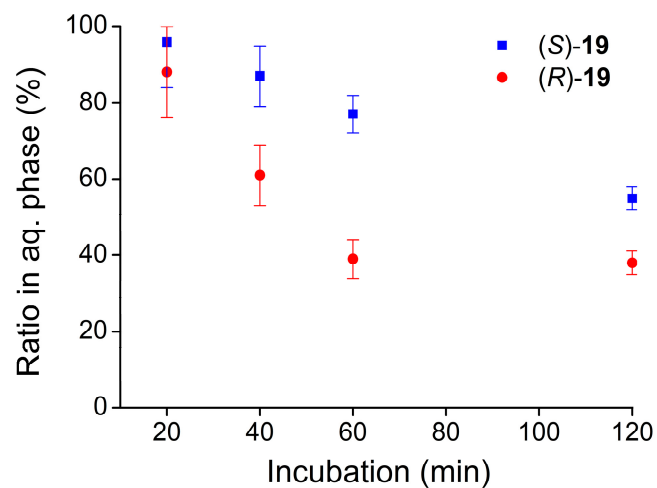


Figure S43. Studies on separability of model compound **19** using DBTA-12 (**17**) as a single-component selector

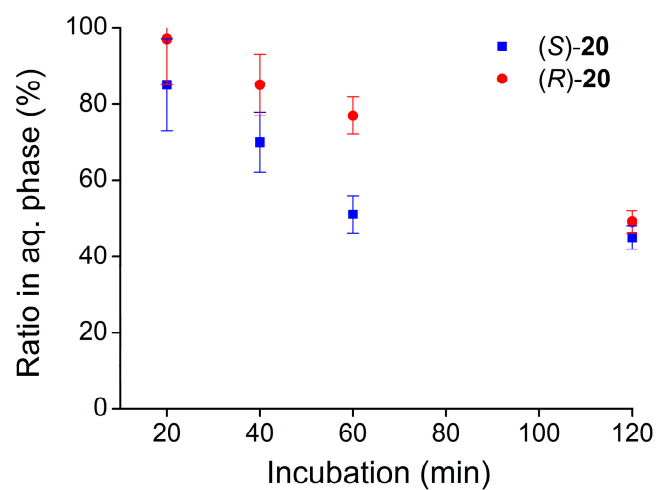


Figure S44. Studies on separability of model compound **20** using DBTA-12 (**17**) as a single-component selector

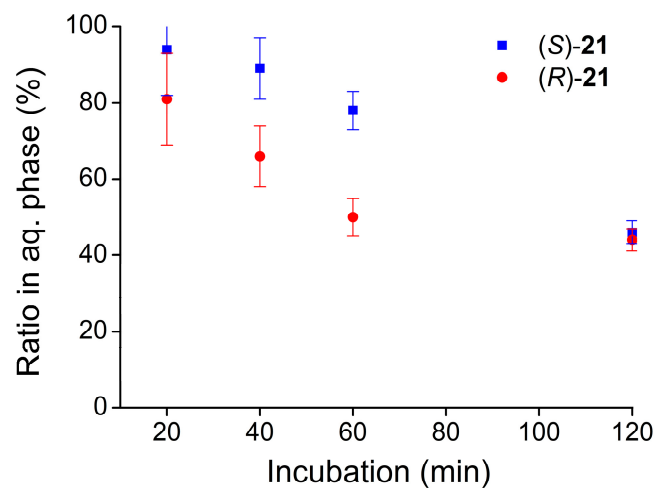


Figure S45. Studies on separability of model compound **21** using DBTA-12 (**17**) as a single-component selector

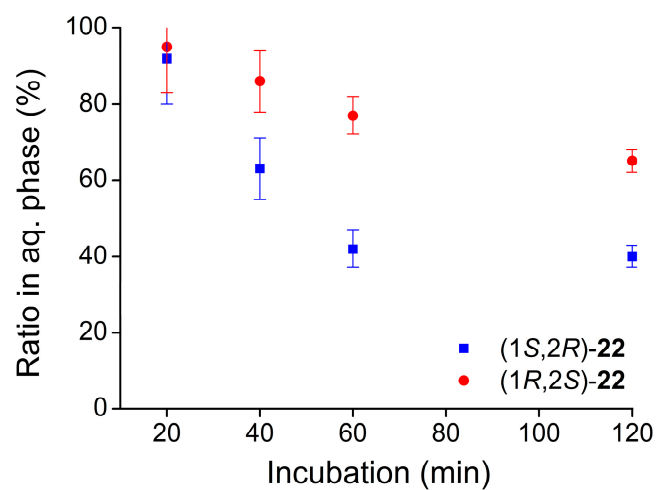


Figure S46. Studies on separability of model compound **22** using DBTA-12 (**17**) as a single-component selector

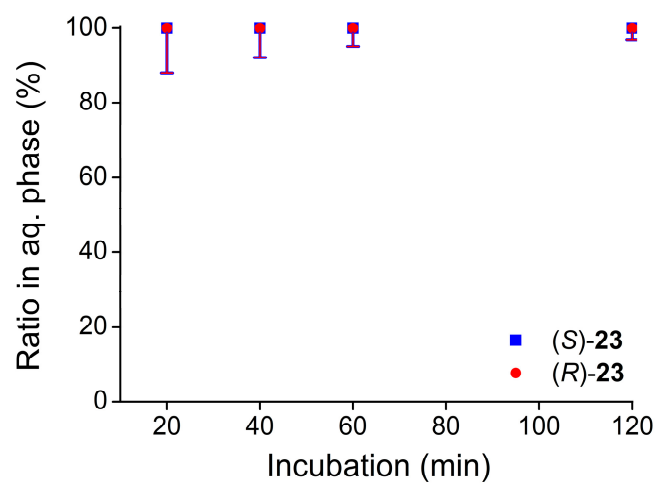


Figure S47. Studies on separability of model compound **23** using DBTA-12 (**17**) as a single-component selector