



Syddansk Universitet

Crystallization of artemisinin from chromatography fractions of *Artemisia annua* extract

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Supporting information

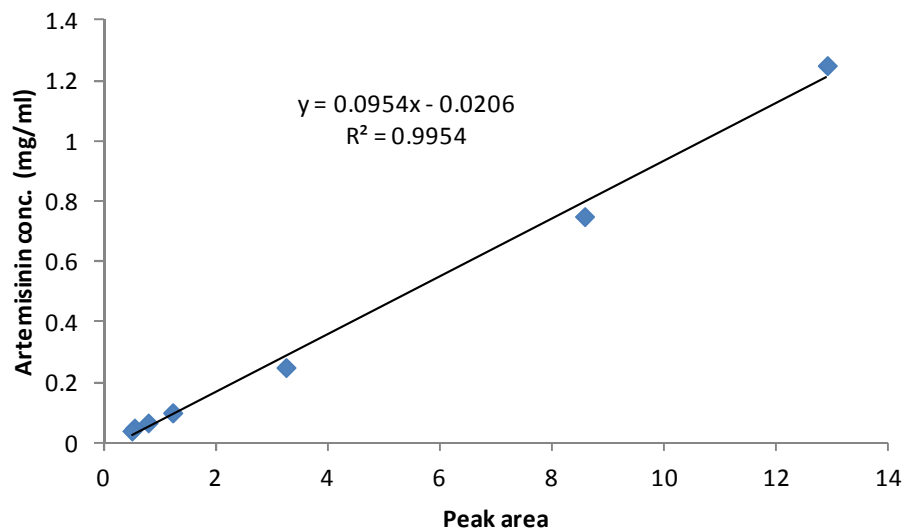


Figure S1. HPLC calibration curve for artemisinin obtained by using CAD signal.

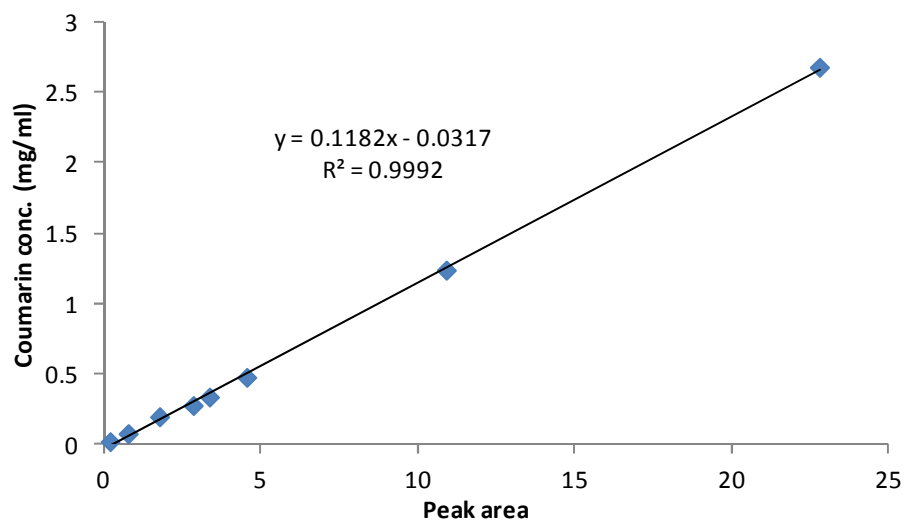


Figure S2. HPLC calibration curve for coumarin obtained by using signal at 200 nm.

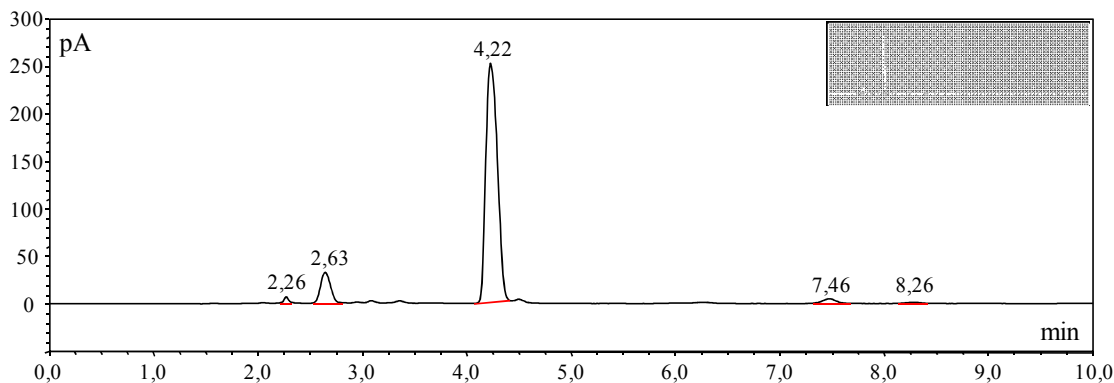


Figure S3. Chromatogram (CAD) of the combined fraction. Arteannuin B (RT 2.26 min); Artemisitene (RT 2.63 min); Artemisinin (RT 4.22 min); Dihydroartemisinic acid (RT 7.46 min); Artemisinic acid (RT 8.26).

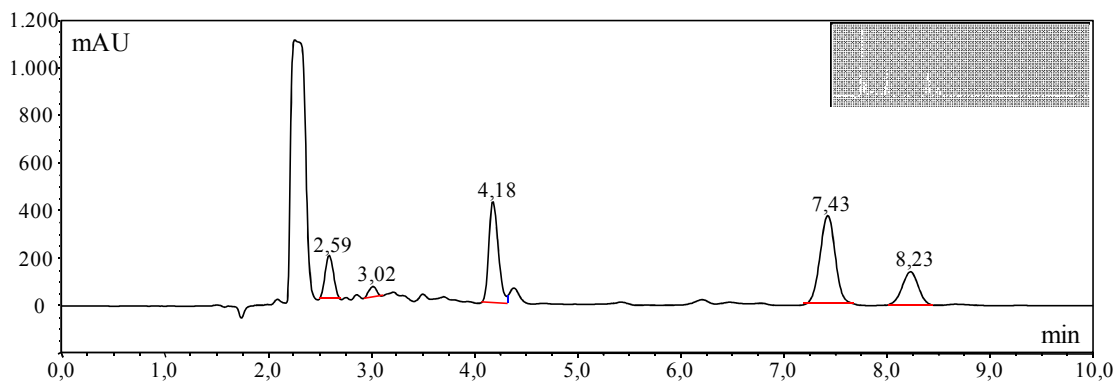


Figure S4. Chromatogram (UV 200 nm) of the combined fraction. Coumarin (RT 3.02 min).

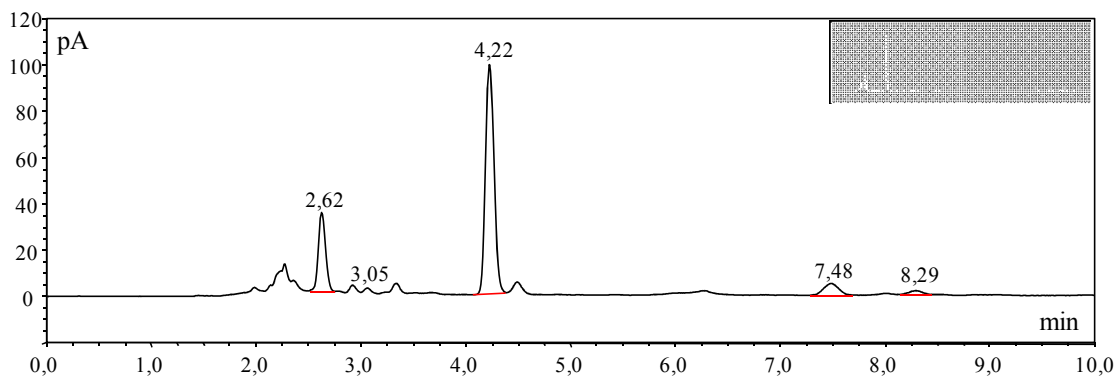


Figure S5. Chromatogram (CAD) of mother liquor obtained after cooling crystallization.

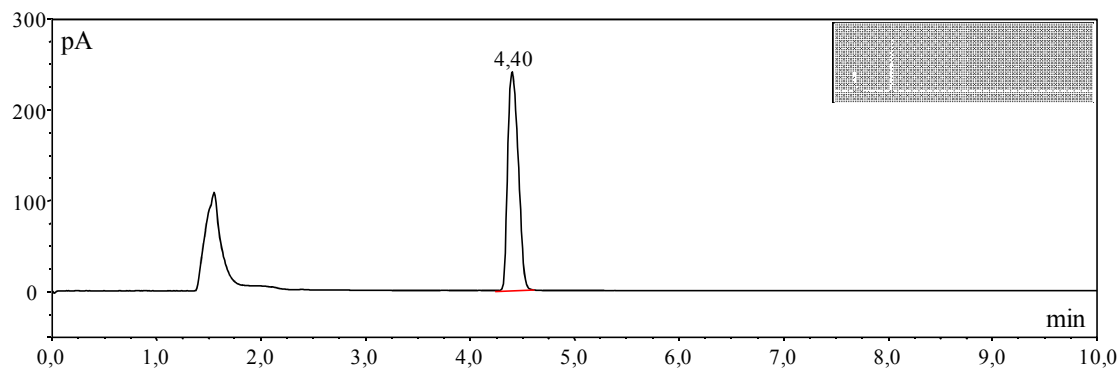


Figure S6. Chromatogram (CAD) of artemisinin crystals obtained after cooling crystallization.

Table S1. Mass balance of artemisinin during crystallization process.

| Step | Volume of solution (ml) | Artemisinin concentration (mg/ml of solution) | Artemisinin in solution (mg) | Yield (%) |
|----------------------------------|-------------------------|---|------------------------------|-----------|
| Combined fraction (1) | 180 | 1.82 | 327.6 | - |
| Evaporation (2) | 18 | 17.81 | 320.58 | - |
| Anti-solvent crystallization (3) | 78 | 3.5 | 273 | 14.84 |
| Cooling crystallization (4) | 78 | 2.07 | 161.46 | 40.85 |
| Overall yield (%) | | 49.63 | | |