APPENDIX

Determination of compound 21 in the sample

Fraction E22.9.4 (1,214 mg)

Concentration of fraction E22.9.4 from graph = 33.6 μg.mL^{-1}

$$C_1V_1 = C_2V_2$$

$$C_1 \text{ x } 1 \text{ mL} = 33.6 \ \mu\text{g.mL}^{-1} \text{ x } 10 \text{ mL}$$

$$C_1 = 336 \ \mu\text{g.mL}^{-1}$$

Then, the real concentration 336 μg.mL^{-1} of prepared solution

In solution 1000 mL have compound DO 336 mg

If solution 10 mL could have compound DO 3.36 mg

So, fraction E22.9.4 10 mg have compound DO 3.36 mg

If fraction E22.9.4 1,214 mg have compound DO 407.904 mg

Dicentrine[42]

^{1}H-NMR($CDCl_3$) δ: 7.65(1H, *s*, H-11), 6.67 (1H, *s*, H-8), 6.49 (1H, *s*, H-3), 6.05 (1H, *d*, *J*=1.5 Hz, OCH_2O), 5.91 (1H, *d*, *J*=1.5 Hz, OCH_2O), 3.90 (3H, *s*, OCH_3), 3.89 (3H,*s*, OCH_3), 3.09 (4H, *m*), 2.62 (3H, *m*), 2.53 (3H, *s*, N-CH_3). ^{13}C-NMR ($CDCl_3$) δ: 148.1 (C-9), 147.6 (C-10), 146.5 (C-2), 141.7 (C-1), 128.2 (C-7a), 126.5 (C-3a), 126.2 (C-1b), 123.4 (C-11a), 116.5 (C-1a), 111.2 (C-11), 110.4 (C-8), 106.5 (C-3), 100.6 (OCH_2O), 62.4 (C-6a), 56.1 (OMe), 55.9 (OMe), 53.6 (C-5), 43.9 (N-Me), 34.2 (C-7), 29.2 (C-4). MS *m/z*: 39 (M+, 2), 178 (24), 97 (23), 85 (22), 83 (33), 81 (37), 71 (38), 70 (21), 69 (93), 67 (24), 60 (24), 59 (44), 57 (84), 56 (28), 55 (80), 45 (33), 44 (30), 43 (100), 41 (97).

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