

The chemical shift assignments of carbon and proton signals of **Dioscin G**
 (Compound 7) in Pyridine-*d*₅.

| Carbon NO. | Dioscin G | |
|---------------|------------------|--|
| | δ_C (ppm) | δ_C (ppm, <i>J</i> in Hz) |
| 1 | 37.07 | 0.92 (H ₂ -1, m) |
| 2 | 30.14 | 1.91 (H ₁ -2a, m), 2.14 (H ₁ -2b, m) |
| 3 | 78.55 | 3.93 (H ₁ -3, m) |
| 4 | 38.92 | 2.75 (H ₁ -4a, t, <i>J</i> =11.5 Hz), 2.81 (H ₁ -4b, dd, <i>J</i> =12.4, 3.8 Hz) |
| 5 | 140.73 | |
| 6 | 121.72 | 5.29 (H ₁ -6, d, <i>J</i> =4.6 Hz) |
| 7 | 32.27 | 1.91 (H ₁ -7a, m), 2.03 (H ₁ -7b, m) |
| 8 | 31.61 | 1.45 (H ₁ -8, m) |
| 9 | 50.25 | 0.92 (H ₁ -9, m) |
| 10 | 39.86 | |
| 11 | 21.03 | 1.45 (H ₂ -11, m) |
| 12 | 37.45 | 2.03 (H ₂ -12, m) |
| 13 | 40.71 | |
| 14 | 56.52 | 1.13 (H ₁ -14, m) |
| 15 | 32.41 | 1.45 (H ₁ -15a, m), 2.03 (H ₁ -15b, m) |
| 16 | 81.03 | 4.98 (H ₁ -16, m) |
| 17 | 63.77 | 1.91 (H ₁ -17, m) |
| 18 | 16.4 | 0.9 (H ₃ -18, s) |
| 19 | 19.35 | 1.05 (H ₃ -19, s) |
| 20 | 40.62 | 2.22 (H ₁ -20, m) |
| 21 | 16.4 | 1.33 (H ₃ -21, d, <i>J</i> =6.9 Hz) |
| 22 | 110.57 | |
| 23 | 37.15 | 1.72 (H ₁ -23a, m), 2.03 (H ₁ -23b, m) |
| 24 | 28.29 | 1.67 (H ₁ -24a, m), 2.03 (H ₁ -24b, m) |
| 25 | 34.22 | 1.91 (H ₁ -25, m) |
| 26 | 75.14 | 3.62 (H ₁ -26a, m), 4.29 (H ₁ -26b, m) |
| 27 | 17.41 | 0.98 (H ₃ -27, d, <i>J</i> =6.7 Hz) |
| 3-O-Glc-1' | 100.28 | 5.05 (1H, d, <i>J</i> =7.7 Hz) |
| 2' | 77.71 | 4.29 (1H, m) |
| 3' | 78.24 | 4.29 (1H, m) |
| 4' | 71.6 | 4.24 (1H, m) |
| 5' | 78.44 | 4.19 (1H, m) |
| 6' | 62.57 | 4.38 (1H, m), 4.64 (1H, m) |
| Rha(1→2) 1'' | 102.01 | 6.4 (1H, s) |
| 2'' | 71.72 | 4.24 (1H, m) |
| 3'' | 72.54 | 4.64 (1H, m) |
| 4'' | 72.78 | 4.64 (1H, m) |
| 5'' | 69.44 | 4.98 (1H, m) |
| 6'' | 18.63 | 1.78 (d, <i>J</i> =6.2 Hz) |
| 26-O-Glc-1''' | 104.89 | 4.81 (1H, d, <i>J</i> =7.7 Hz) |

| | | |
|------|-------|----------------------------|
| 2''' | 75.2 | 4.24 (1H, m) |
| 3''' | 79.61 | 4.29 (1H, m) |
| 4''' | 74.1 | 4.03 (1H, m) |
| 5''' | 77.84 | 4.29 (1H, m) |
| 6''' | 62.73 | 4.53 (1H, m), 4.64 (1H, m) |

The chemical shift assignments of carbon and proton signals of **Dioscin H** (Compound **8**) in Pyridine-*d*₅.

| Dioscin H | | |
|-------------------|------------------|--|
| | δ_C (ppm) | δ_C (ppm) |
| 1 | 37.07 | 0.92 (H ₂ -1, m) |
| 2 | 30.14 | 1.91 (H ₁ -2a, m), 2.14 (H ₁ -2b, m) |
| 3 | 78.55 | 3.93 (H ₁ -3, m) |
| 4 | 38.92 | 2.75 (H ₁ -4a, t, <i>J</i> =11.5 Hz), 2.81 (H ₁ -4b, dd, <i>J</i> =12.4, 3.8 Hz) |
| 5 | 140.73 | |
| 6 | 121.72 | 5.29 (H ₁ -6, d, <i>J</i> =4.6 Hz) |
| 7 | 32.27 | 1.91 (H ₁ -7a, m), 2.03 (H ₁ -7b, m) |
| 8 | 31.61 | 1.45 (H ₁ -8, m) |
| 9 | 50.25 | 0.92 (H ₁ -9, m) |
| 10 | 39.86 | |
| 11 | 21.03 | 1.45 (H ₂ -11, m) |
| 12 | 37.45 | 2.03 (H ₂ -12, m) |
| 13 | 40.71 | |
| 14 | 56.52 | 1.13 (H ₁ -14, m) |
| 15 | 32.41 | 1.45 (H ₁ -7a, m), 2.03 (H ₁ -7b, m) |
| 16 | 81.03 | 4.98 (H ₁ -16, m) |
| 17 | 63.77 | 1.91 (H ₁ -17, m) |
| 18 | 16.4 | 0.9 (H ₃ -18, s) |
| 19 | 19.35 | 1.05 (H ₃ -19, s) |
| 20 | 40.62 | 2.22 (H ₁ -20, m) |
| 21 | 16.4 | 1.33 (H ₃ -21, d, <i>J</i> =6.9 Hz) |
| 22 | 110.57 | |
| 23 | 37.15 | 1.72 (H ₁ -23a, m), 2.03 (H ₁ -23b, m) |
| 24 | 28.29 | 1.67 (H ₁ -28a, m), 2.03 (H ₁ -28b, m) |
| 25 | 34.22 | 1.91 (H ₁ -25, m) |
| 26 | 75.14 | 3.62 (H ₁ -26a, m), 4.29 (H ₁ -26b, m) |
| 27 | 17.41 | 0.98 (H ₃ -27, d, <i>J</i> =6.7 Hz) |
| 3-O-Glu-1' | 100.28 | 5.05 (1H, d, <i>J</i> =7.7 Hz) |
| 2' | 77.71 | 4.29 (1H, m) |
| 3' | 78.24 | 4.29 (1H, m) |
| 4' | 71.6 | 4.24 (1H, m) |
| 5' | 78.44 | 4.19 (1H, m) |
| 6' | 62.57 | 4.38 (1H, m), 4.64 (1H, m) |

| | | |
|----------------------|--------|----------------------------|
| Rha(1→2) 1'' | 102.01 | 6.4 (1H, s) |
| 2'' | 71.72 | 4.24 (1H, m) |
| 3'' | 72.54 | 4.64 (1H, m) |
| 4'' | 72.78 | 4.64 (1H, m) |
| 5'' | 69.44 | 4.98 (1H, m) |
| 6'' | 18.63 | 1.78 (d, $J=6.2$ Hz) |
| 26-O-Glu-1''' | 104.89 | 4.81 (1H, d, $J=7.7$ Hz) |
| 2''' | 75.2 | 4.24 (1H, m) |
| 3''' | 79.61 | 4.29 (1H, m) |
| 4''' | 74.1 | 4.03 (1H, m) |
| 5''' | 77.84 | 4.29 (1H, m) |
| 6''' | 62.73 | 4.53 (1H, m), 4.64 (1H, m) |

The chemical shift assignments of carbon and proton signals of **Dioscin I** (Compound **9**) in Pyridine- d_5 .

| Carbon NO. | Dioscin I | |
|------------|------------------|--|
| | δ_C (ppm) | δ_C (ppm) |
| 1 | 37.38 | 1.69 (H ₂ -1, m) |
| 2 | 30.02 | 2.08 (H ₂ -2, m) |
| 3 | 78.14 | 4.25 (H ₁ -3, m) |
| 4 | 38.8 | 2.73 (H ₂ -4, m) |
| 5 | 140.63 | |
| 6 | 121.72 | 5.27 (H ₁ -6, br.s) |
| 7 | 32.35 | 1.86 (H ₁ -7a, m), 2.03 (H ₁ -7b, m) |
| 8 | 31.55 | 1.55 (H ₁ -8, m) |
| 9 | 50.22 | 0.93 (H ₁ -9, m) |
| 10 | 39.8 | |
| 11 | 20.98 | 1.45 (H ₂ -11, m) |
| 12 | 37 | 2.03 (H ₂ -12, m) |
| 13 | 40.55 | |
| 14 | 56.46 | 1.11 (H ₁ -14, m) |
| 15 | 32.21 | 1.45 (H ₁ -15a, m), 2.03 (H ₁ -15b, m) |
| 16 | 80.98 | 4.95 (H ₁ -16, m) |
| 17 | 63.7 | 1.93 (H ₁ -17, m) |
| 18 | 16.34 | 0.89 (H ₃ -18, s) |
| 19 | 19.28 | 1.05 (H ₃ -19, s) |
| 20 | 40.67 | 2.23 (H ₁ -20, m) |
| 21 | 16.34 | 1.34 (H ₃ -21, d, $J=6.8$ Hz) |
| 22 | 110.56 | |
| 23 | 37.06 | 1.74 (H ₁ -23a, m), 2.03 (H ₁ -23b, m) |
| 24 | 28.23 | 1.69 (H ₁ -24a, m), 2.03 (H ₁ -24b, m) |
| 25 | 34.15 | 1.93 (H ₁ -25, m) |
| 26 | 75.15 | 3.62 (H ₁ -26a, m), 4.25 (H ₁ -26b, m) |

| | | |
|-----------------|--------|--|
| 27 | 17.35 | 0.99 (H ₃ -27, d, <i>J</i> =6.6 Hz) |
| 3-O-Glu-1' | 99.83 | 4.95 (1H, d, <i>J</i> =6.54 Hz) |
| 2' | 78.02 | 4.06 (1H, m) |
| 3' | 76.11 | 3.86 (1H, m) |
| 4' | 81.32 | 4.25 (1H, m) |
| 5' | 77.13 | 4.25 (1H, m) |
| 6' | 61.34 | 4.39 (1H, m), 4.56 (1H, m) |
| Glu(1→4) 1'' | 104.4 | 5.10 (1H, d, <i>J</i> =7.8 Hz) |
| 2'' | 73.96 | 4.39 (1H, m) |
| 3'' | 88.07 | 4.17 (1H, m) |
| 4'' | 69.18 | 4.17 (1H, m) |
| 5'' | 77.47 | 3.86 (1H, m) |
| 6'' | 61.6 | 4.39 (1H, m), 4.56 (1H, m) |
| Glu(1→3) 1''' | 105.72 | 5.30 (1H, d, <i>J</i> =7.2 Hz) |
| 2''' | 75.42 | 4.24 (1H, m) |
| 3''' | 77.84 | 3.86 (1H, m) |
| 4''' | 71.46 | 4.25 (1H, m) |
| 5''' | 78.54 | 4.06 (1H, m) |
| 6''' | 62.36 | 4.39 (1H, m), 4.56 (1H, m) |
| Rha(1→2)1'''' | 101.67 | 6.25 (1H, br.s) |
| 2'''' | 72.3 | 4.74 (1H, br.s) |
| 3'''' | 72.62 | 4.56 (1H, m) |
| 4'''' | 73.65 | 4.06 (1H, m) |
| 5'''' | 69.36 | 4.95 (1H, m) |
| 6'''' | 18.53 | 1.77 (3H, d, <i>J</i> =6.1 Hz) |
| 26-O-Glu-1''''' | 104.78 | 4.82 (1H, d, <i>J</i> =7.6 Hz) |
| 2''''' | 75.05 | 4.06 (1H, m) |
| 3''''' | 78.45 | 4.25 (1H, m) |
| 4''''' | 71.55 | 4.25 (1H, m) |
| 5''''' | 78.33 | 4.06 (1H, m) |
| 6''''' | 62.67 | 4.39 (1H, m), 4.56 (1H, m) |