



**Molecular Formula:** C<sub>21</sub>H<sub>28</sub>O<sub>9</sub>  
**Molecular Weight:** 424.447  
**Accurate Mass:** 424.173335  
**Percentage Composition:** C 59.43%; H 6.65%; O 33.93%  
**Biological Source:** Constit. of *Vernonanthura squamulosa*  
**Physical Description:** Gum  
**Optical Rotation:** [ $\alpha$ ]<sub>D</sub> +41 (c, 0.7 in EtOH)  
**UV:** [neutral]  $\lambda_{\max}$  214 (log  $\epsilon$  3.82); 286 (log  $\epsilon$  4.39) (MeOH)

>>Derivative: 8-(Methylpropenoyl)

**Synonym(s):** Piptocarphin C

**CAS Registry Number:** 76215-50-4

**Molecular Formula:** C<sub>19</sub>H<sub>24</sub>O<sub>8</sub>  
**Molecular Weight:** 380.394  
**Accurate Mass:** 380.14712  
**Percentage Composition:** C 59.99%; H 6.36%; O 33.65%  
**Biological Source:** Constit. of *Piptocarpha chontalensis*  
**Physical Description:** Oil  
**Solubility:** BERDY SOL: Sol. MeOH, CHCl<sub>3</sub>  
**UV:** [neutral]  $\lambda_{\max}$  285 ( $\epsilon$  47900) (MeOH) (Derep) [neutral]  $\lambda_{\max}$  283 ( $\epsilon$  17700) (MeOH) (Berdy)

>>Derivative: 8-(Methylpropenoyl), 13-Ac

**Synonym(s):** Piptocarphin A

**CAS Registry Number:** 76248-63-0

**Molecular Formula:** C<sub>21</sub>H<sub>26</sub>O<sub>9</sub>  
**Molecular Weight:** 422.431  
**Accurate Mass:** 422.157685  
**Percentage Composition:** C 59.71%; H 6.20%; O 34.09%  
**Biological Source:** Constit. of *Piptocarpha chontalensis*  
**Physical Description:** Oil  
**Solubility:** BERDY SOL: Sol. MeOH, CHCl<sub>3</sub>; poorly sol. H<sub>2</sub>O, hexane  
**UV:** [neutral]  $\lambda_{\max}$  285 ( $\epsilon$  47900) (MeOH) (Derep) [neutral]  $\lambda_{\max}$  286 ( $\epsilon$  48000) (MeOH) (Berdy)

>>Derivative: 13-(2-Methylpropenoyl)

**Synonym(s):** Piptocarphin H

**Molecular Formula:** C<sub>19</sub>H<sub>24</sub>O<sub>8</sub>  
**Molecular Weight:** 380.394  
**Accurate Mass:** 380.14712  
**Percentage Composition:** C 59.99%; H 6.36%; O 33.65%  
**Biological Source:** Isol. from *Piptocarpha opaca*  
**Physical Description:** Oil

>>Derivative: 8-(2-Hydroxymethyl-2-propenoyl), 13-Ac

**Molecular Formula:** C<sub>21</sub>H<sub>26</sub>O<sub>10</sub>  
**Molecular Weight:** 438.43  
**Accurate Mass:** 438.1526  
**Percentage Composition:** C 57.53%; H 5.98%; O 36.49%  
**Biological Source:** Constit. of *Vernonia cinerea*  
**Physical Description:** Oil