



**Synonym(s): 3-*O*-Benzoylepicatechin 5-glucoside**

**Molecular Formula:** C<sub>28</sub>H<sub>28</sub>O<sub>12</sub>

**Molecular Weight:** 556.522

**Accurate Mass:** 556.15808

**Percentage Composition:** C 60.43%; H 5.07%; O 34.50%

**Biological Source:** Constit. of *Celastrus orbiculatus*

**Biological Use/Importance:** Antioxidant

**Physical Description:** Bright pink needles (CH<sub>2</sub>Cl<sub>2</sub>/MeOH)

**Melting Point:** Mp 191-192°

**Optical Rotation:** [ $\alpha$ ]<sub>D</sub><sup>25</sup> -95 (c, 0.3 in MeOH)

**UV:** [neutral]  $\lambda_{\max}$  213 (log  $\epsilon$  4.67); 229 (log  $\epsilon$  4.47); 283 (log  $\epsilon$  3.78) (MeOH)

>> **Derivative:** 3-*O*-(4-Hydroxybenzoyl)

**Synonym(s):** 3-(4-Hydroxybenzoyl)epicatechin

**CAS Registry Number:** 108907-45-5

**Molecular Formula:** C<sub>22</sub>H<sub>18</sub>O<sub>8</sub>

**Molecular Weight:** 410.379

**Accurate Mass:** 410.10017

**Percentage Composition:** C 64.39%; H 4.42%; O 31.19%

**Biological Source:** Isol. from *Camellia sinensis* var. *assamica*

**Physical Description:** Off-white powder + 1H<sub>2</sub>O

**Optical Rotation:** [ $\alpha$ ]<sub>D</sub><sup>21</sup> -144.4 (c, 1 in Me<sub>2</sub>CO)

>> **Derivative:** 3-*O*-(3,4,5-Trihydroxybenzoyl)

**Synonym(s):** 3-*O*-Galloylepicatechin. Epicatechin gallate. Teatannin

**CAS Registry Number:** 1257-08-5

**Extra CAS Registry Numbers(s):** 863-03-6

**Molecular Formula:** C<sub>22</sub>H<sub>18</sub>O<sub>10</sub>

**Molecular Weight:** 442.378

**Accurate Mass:** 442.09

**Percentage Composition:** C 59.73%; H 4.10%; O 36.17%

**Biological Source:** Isol. from numerous plant spp.

**Biological Use/Importance:** Shows anti-HIV activity

**Melting Point:** Mp 257-258° (253°)

**Optical Rotation:** [ $\alpha$ ]<sub>D</sub> -190 (EtOH). [ $\alpha$ ]<sub>D</sub><sup>23</sup> -160.6 (c, 0.22 in Me<sub>2</sub>CO)

**Calculated Log P Data:** Log P 1.83 (uncertain value) (calc)

**Sigma:** E3893

>> **Derivative:** 3-*O*-(3,4-Dihydroxy-5-methoxybenzoyl)

**Synonym(s):** 3-*O*-(3-Methylgalloyl)epicatechin

**CAS Registry Number:** 83104-86-3

**Molecular Formula:** C<sub>23</sub>H<sub>20</sub>O<sub>10</sub>

**Molecular Weight:** 456.405

**Accurate Mass:** 456.10565

**Percentage Composition:** C 60.53%; H 4.42%; O 35.06%

**Biological Source:** Isol. from *Thea sinensis*

**Optical Rotation:** [ $\alpha$ ]<sub>D</sub><sup>14</sup> -168 (c, 1 in EtOH)

>> **Derivative:** 3-*O*-(3,5-Dihydroxy-4-methoxybenzoyl)

**Synonym(s):** 3-*O*-(4-Methylgalloyl)epicatechin

**CAS Registry Number:** 108907-44-4

**Molecular Formula:** C<sub>23</sub>H<sub>20</sub>O<sub>10</sub>

**Molecular Weight:** 456.405

**Accurate Mass:** 456.10565

**Percentage Composition:** C 60.53%; H 4.42%; O 35.06%

**Biological Source:** Isol. from *Camellia sinensis* var. *assamica* (coml. oolong tea)

**Physical Description:** Off-white powder + 2/3 H<sub>2</sub>O

**Optical Rotation:** [ $\alpha$ ]