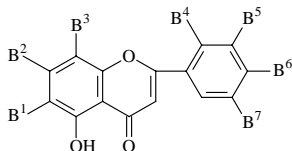


P-012: PHENOLIC COMPOUNDS FROM ARTEMISIA SPHAEROCEPHALLA KRASCHEN

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Artemisia sphaerocephalla Kraschen (Compositae) is distributed in the provinces of Gansu, Inner Mongolia, ShanXi, NinXia etc. of China. In Chinese traditional medicine and traditional Tibetan medicine, the plants are used to cure parotitis, tonsillitis, turgescence and tumefaction. Previous investigation on this species reports the analysis of the essential oil of the plant by means of CGC/MS/DS. The ethanol extract of the whole plant of *Artemisia sphaerocephala* Kraschen yielded 14 phenolic compounds: 5,2',4'-trihydroxy-6,7,5'-trimethoxyflavone (**8**), 5,7,2',4'-tetrahydroxy-6,5'-dimethoxyflavone (**9**), 5,7,2',4'-tetrahydroxy-5'-methoxyflavone (**10**), acacetin-6,8-di-C-β-D-glucopyranoside (**11**), isosakuranetin-7-O-rutinoside (**12**), acacetin-7-O-rutinoside (**13**) and picein (**14**), isosakuranetin (**1**), hesperetin (**2**), 5,3',4'-trihydroxy-7-methoxyflavanone (**3**), navingenin (**4**), eriodictyol (**5**), acacetin (**6**), chrysoeriol (**7**). The structures were determined on the basis of spectral methods including 2D-NMR and ESI-MS. The radical scavenging activity of some of the compounds were investigated with a 1,1-diphenyl-2-picrylhydrazyl (DPPH) radical-generating system. Compounds **3**, **5**, **8**, **9**, **10** presented strong inhibition, with IC₅₀ values of 2.893, 2.465, 5.809, 5.693 and 6.93 μg/mL respectively.



- (1) A¹=A³=A⁴=A⁵=H; A²=OH; A⁶=OCH₃
- (2) A¹=A³=A⁴=H; A²=A⁵=OH; A⁶=OCH₃
- (3) A¹=A³=A⁴=H; A⁵=A⁶=OH; A²=OCH₃
- (4) A¹=A³=A⁴=A⁵=H; A²=A⁶=OH
- (5) A¹=A³=A⁴=H; A²=A⁵=A⁶=OH
- (6) B¹=B³=B⁴=B⁵=B⁷=H; B²=OH; B⁶=OCH₃
- (7) B¹=B³=B⁴=B⁷=H; B²=B⁶=OH; B⁵=OCH₃

- (8) B³=B⁵=H; B⁴=B⁶=OH; B¹=B²=B⁷=OCH
- (9) B³=B⁵=H; B²=B⁴=B⁶=OH; B¹=B⁷=OCH
- (10) B¹=B³=B⁵=H; B²=B⁴=B⁶=OH; B⁷=OCH
- (11) B³=B⁵=H=B²; B²=OH; B⁶=OCH₃;
 B¹=B³=C-β-Glycoside
- (12) A¹=A³=A⁴=A⁵=H; A⁶=OCH₃;
 A²=O-rutinoside
- (13) B¹=B³=B⁴=B⁵=B⁷=H; B⁶=OCH₃;
 B²=O-rutinoside
- (14) picein

