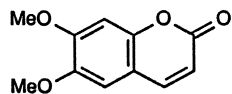
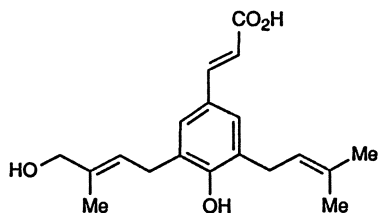


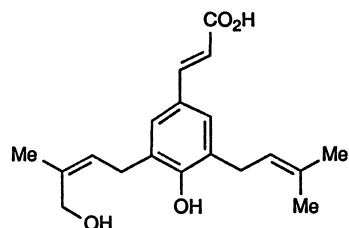
In addition to these constituents, the coumarin derivative scoparone (24-13) [1, 10, 11] and two new stereoisomeric constituents, capillartemisin A (24-14) and B (24-15) [12], were isolated from *A. capillaris*.



Scoparone (24-13)



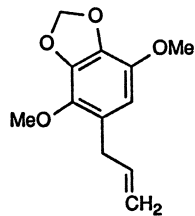
Capillartemisin A (24-14)



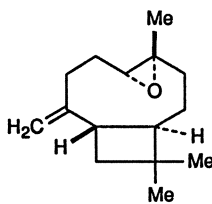
Capillartemisin B (24-15)

24.2.2 Chemical Constituents of *Artemisia scoparia*

From the essential oil of *A. scoparia*, the following compounds were isolated and identified: α - and β -pinene, myrcene, cineol, *p*-cymol, carvone, thujone, apiole (24-16), isoeugenol, cadinene [13], caryophyllene epoxide (24-17) [14], vanillin, capillin, and 1-phenyl-2,4-hexadiyne-1-ol [15].



Apiole (24-16)



Caryophyllene epoxide (24-17)

The flavones 7-methylaromadendrin (3,5,4'-trihydroxy-7-methoxyflavanone), rhamnocitrin, eupalitin (3,5,4'-trihydroxy-6,7-dimethoxyflavone), cirsimaritin, and eupatolitin; the coumarin derivatives 7-methyl-esculetin, scoparone, and scopoletin [16]; and the isocoumarin derivative capillarin [17] were isolated from *A. scoparia*. In addition, *p*-hydroxyacetophenone and chlorogenic acid (24-18) were also found [18]. Large amounts of *p*-hydroxyacetophenone were found in the plant in June and July, of chlorogenic acid in July through October, and of scoparone in August through October [18].