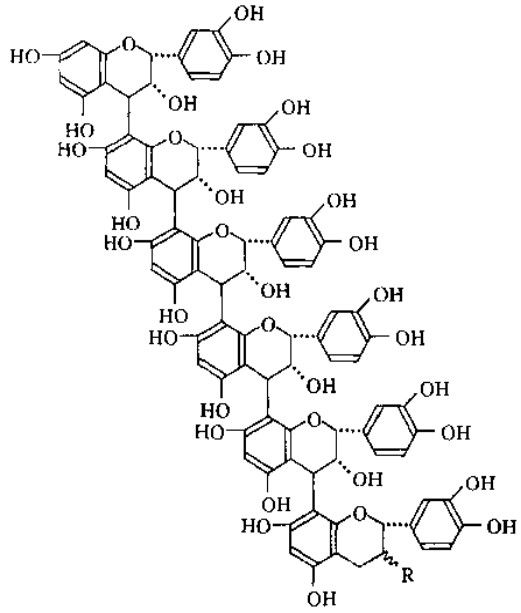
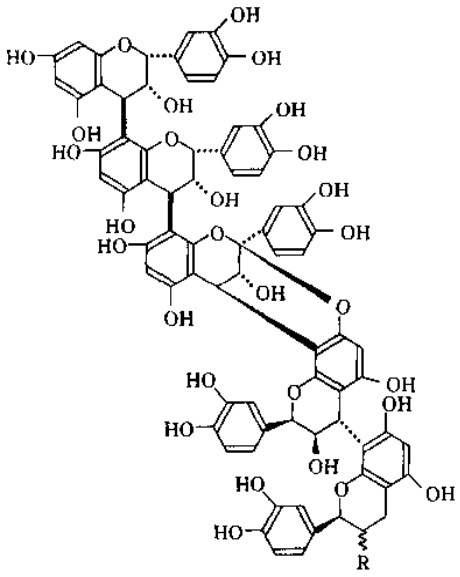
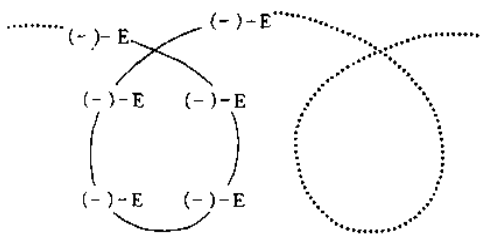


桂皮鞣质(cinnamtannin)A-3 R=β-OH
桂皮鞣质(cinnamtannin)A-4 R=α-OH



桂皮鞣质(cinnamtannin)B-3 R=β-OH
桂皮鞣质(cinnamtannin)D-3 R=α-OH

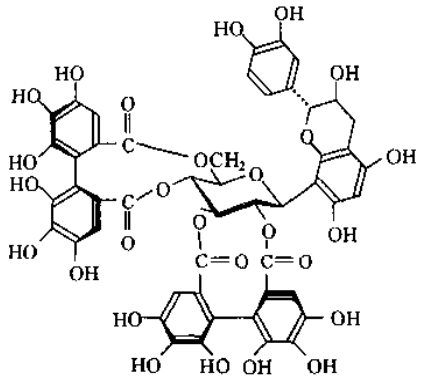
五聚体以上的缩合鞣质，还可以形成螺旋状的三维结构，例如桂皮鞣质 A-4 可形成如下结构：



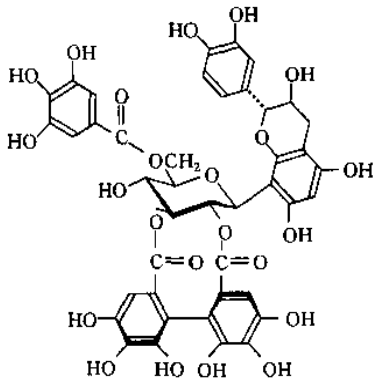
(-)-E=(-)表儿茶精

三、新型鞣质

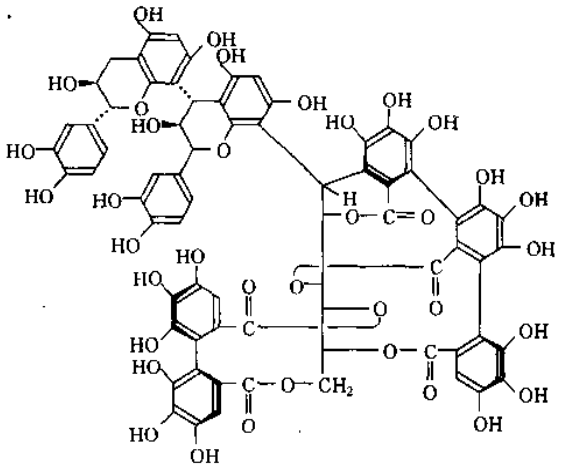
该类鞣质兼有可水解鞣质和缩合鞣质两者的结构和性质。例如从狭叶栎{*Quercus stenophylla* Makino (Fagaceae)}皮中分离出的狭叶栎鞣质(stenophynin)A、B[73]为黄烷-鞣花酸鞣质，从蒙古栎(*Quercus mongolica* var. *grosseserrata*)中分离出的蒙栎鞣质(mongolicanin)[74]为原花青素-鞣花酸鞣质。



狭叶栎鞣质 A



狭叶栎鞣质 B



蒙栎鞣质