

Supporting Information

Modification of Natural Proanthocyanidin Oligomers and Polymers via Chemical Oxidation in Alkaline Conditions

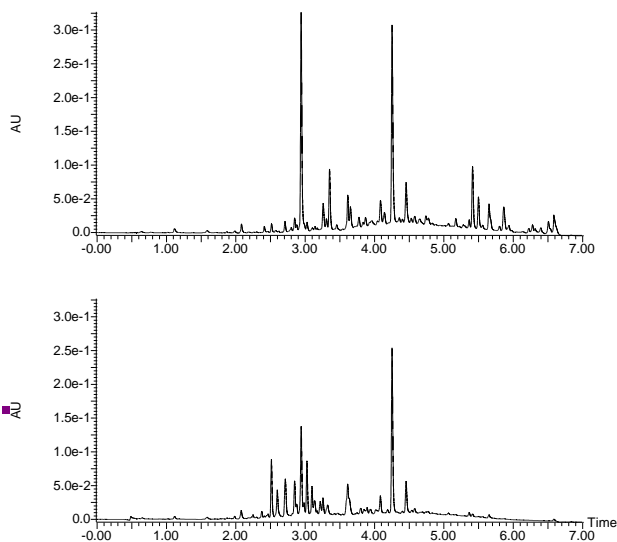
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Turku, Finland

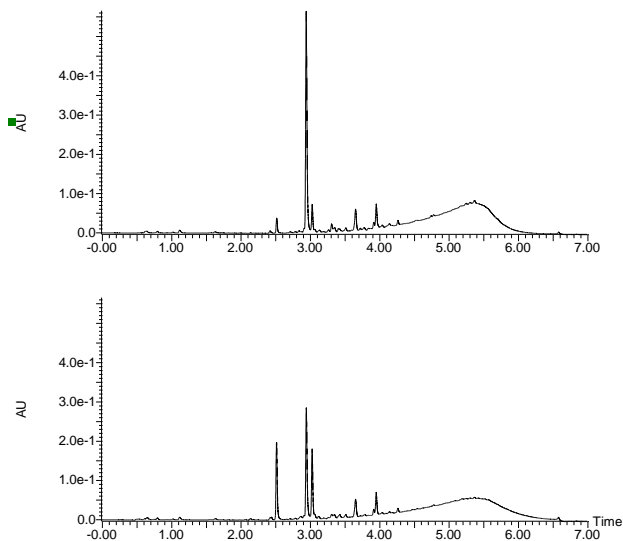
*Corresponding author: Marica T. Engström, E-mail: mtengs@utu.fi, Phone: +358 29 450 3168

Figure S1. UHPLC-DAD profiles ($\lambda=280$ nm) before and after oxidation of the proanthocyanidin containing 102 studied plant samples. The upper panels show the non-oxidized samples and the lower panels the oxidized samples. Each panels X-axis refer to retention time (min) and Y-axis refer to intensity (AU). Sample numbers refer to Table 1.

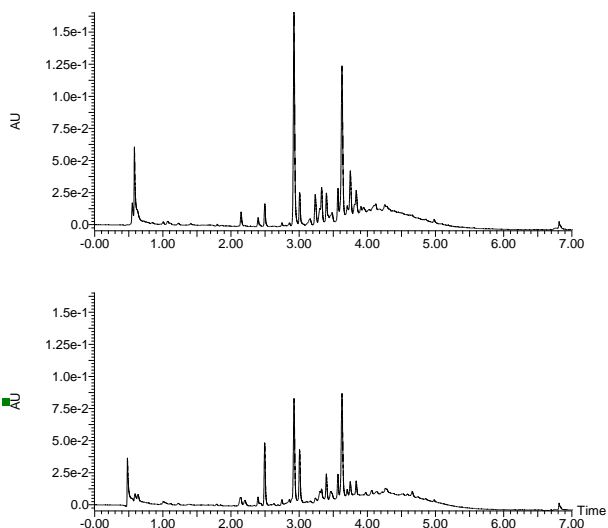
1. *Viburnum tinus*



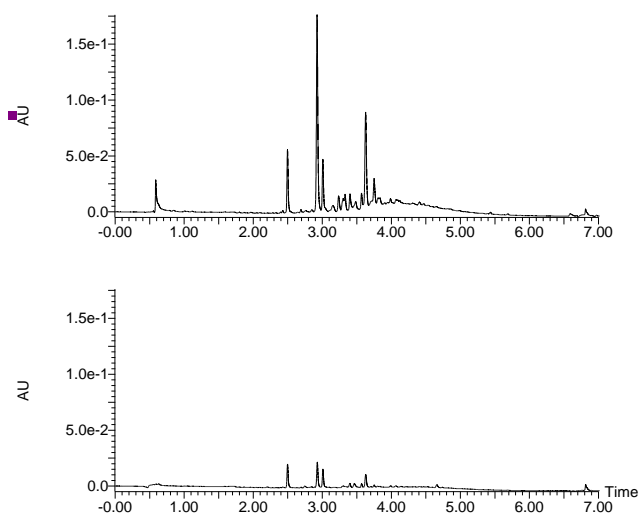
2. *Mandevilla splendens*



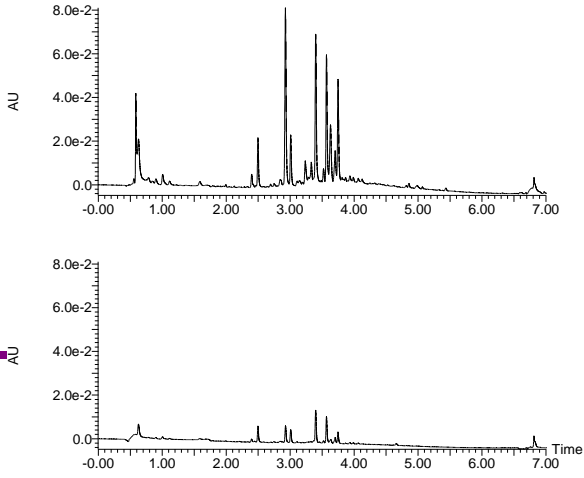
3. *Aglaonema commutatum* var. *maculatum*



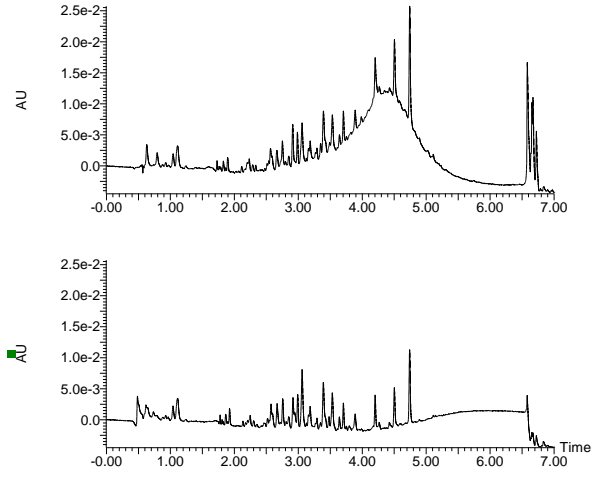
4. *Aglaonema crispum*



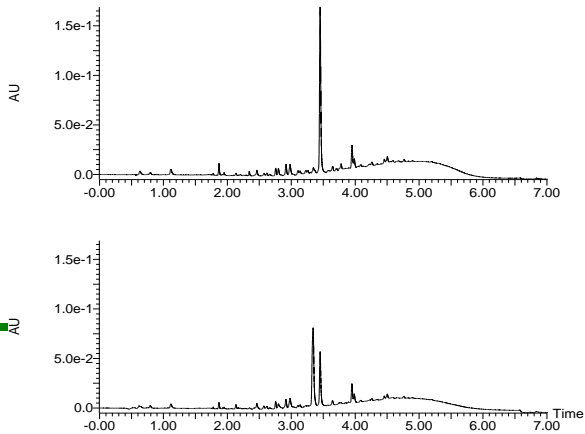
5. *Aglaonema treubii*



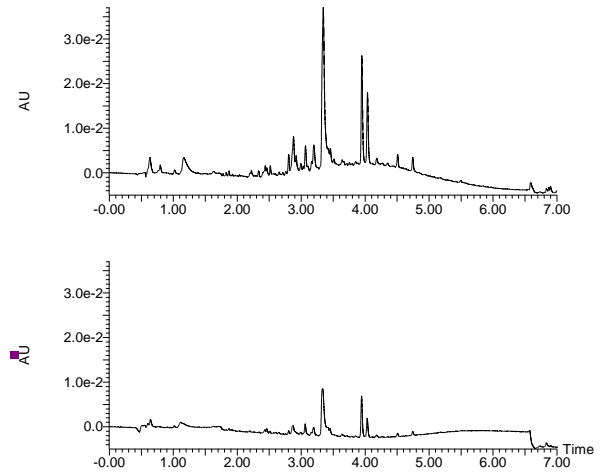
6. *Araucaria bidwillii*



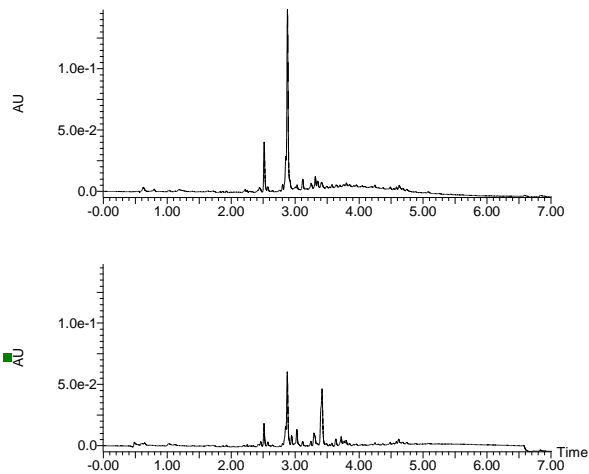
7. *Wollemia nobilis*



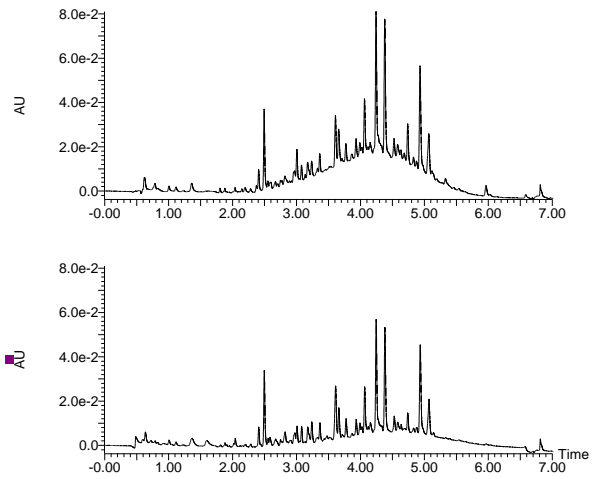
8. *Dianella ensifolia*



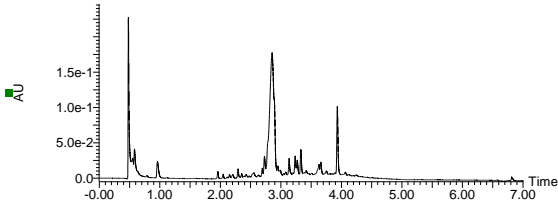
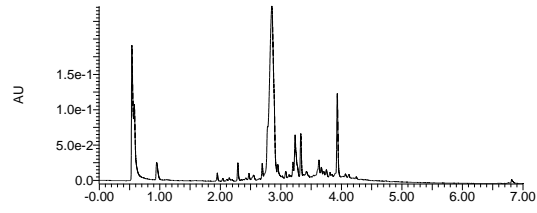
9. *Dianella intermedia*



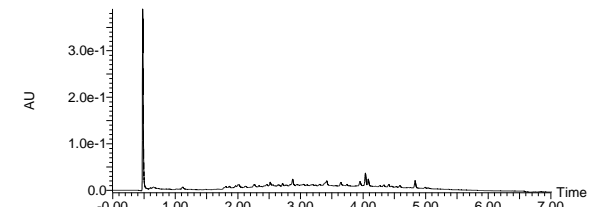
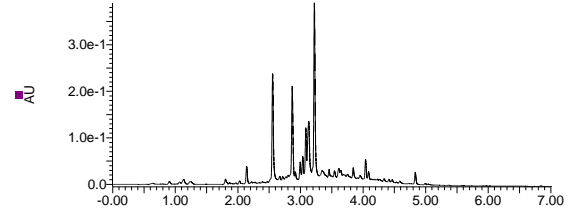
10. *Impatiens repens*



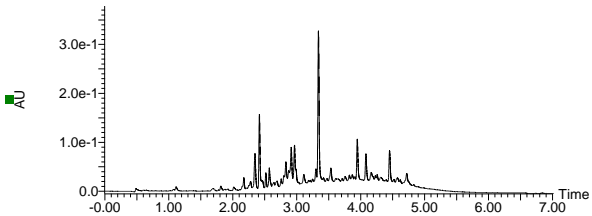
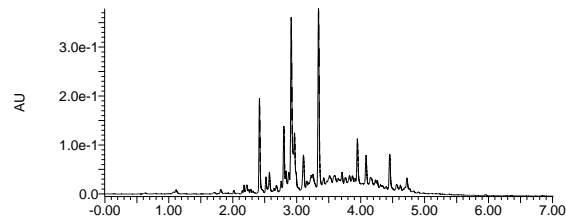
11. *Begonia bowerae* 'Nigra'



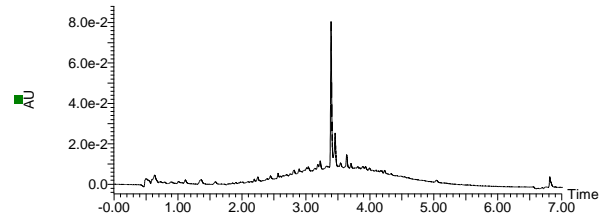
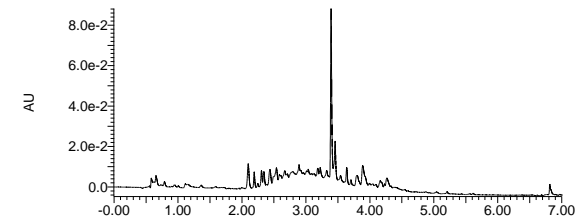
12. *Allocasuarina campestris*



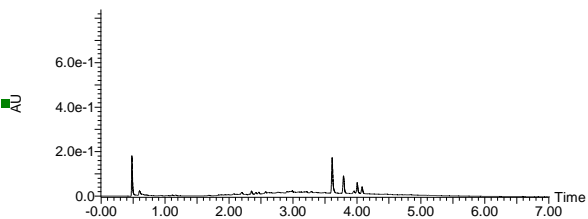
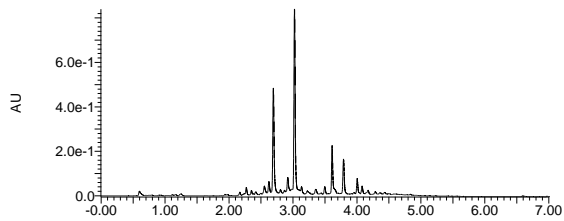
13. *Cephalotaxus harringtonia* subsp. *drupacea*



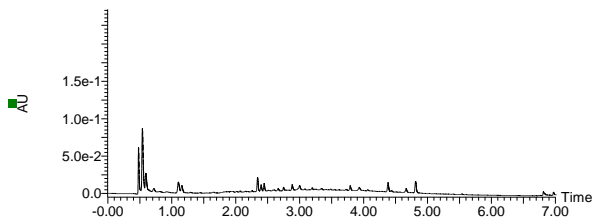
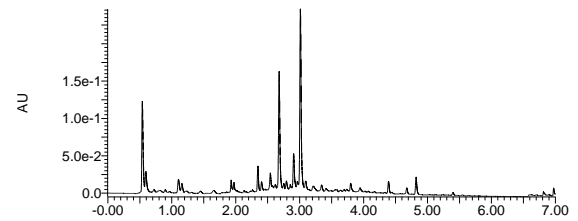
14. *Callisia gentlei* var. *elegans*



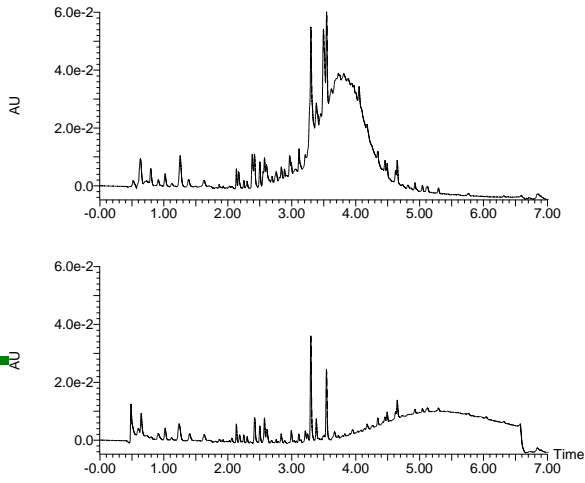
15. *Combretum bracteosum*



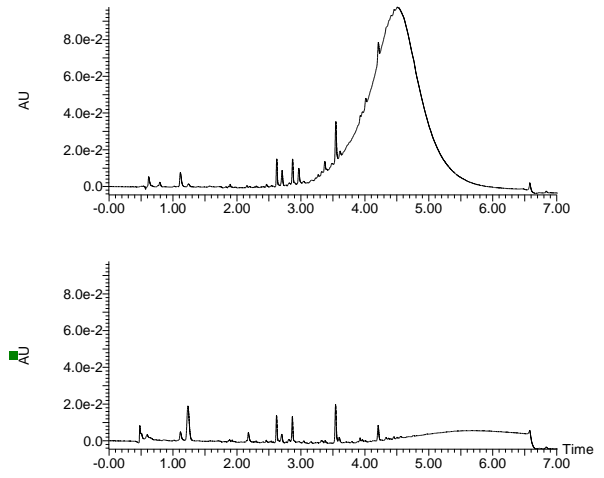
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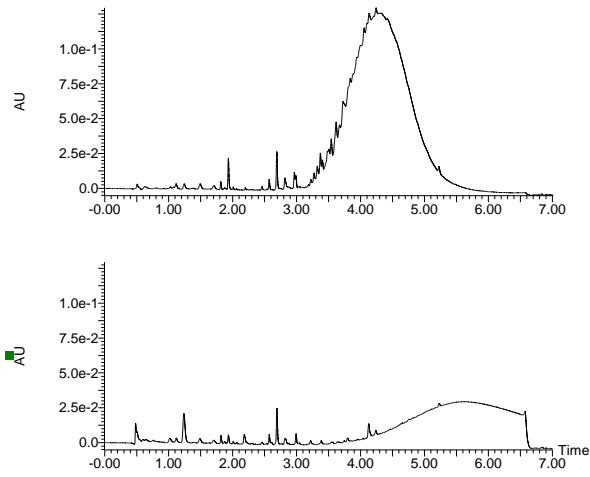
17. *Aeonium arboreum*



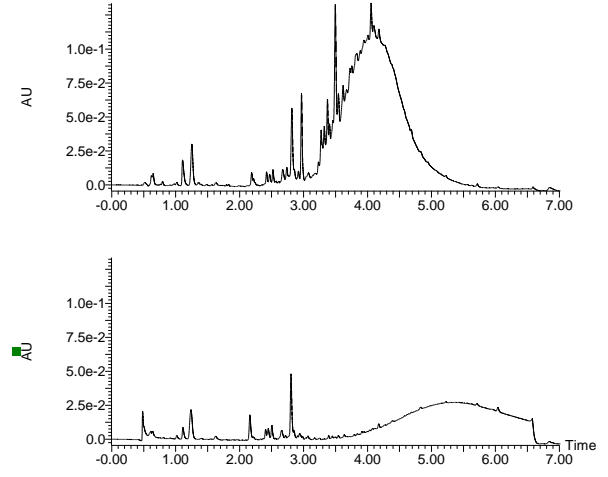
18. *Crassula ovata*



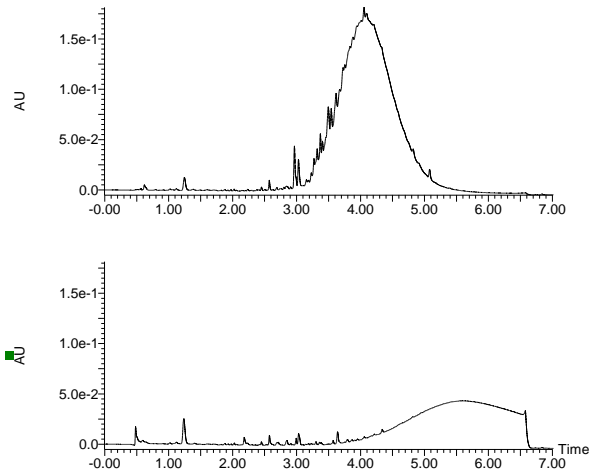
19. *Echeveria harmsii*



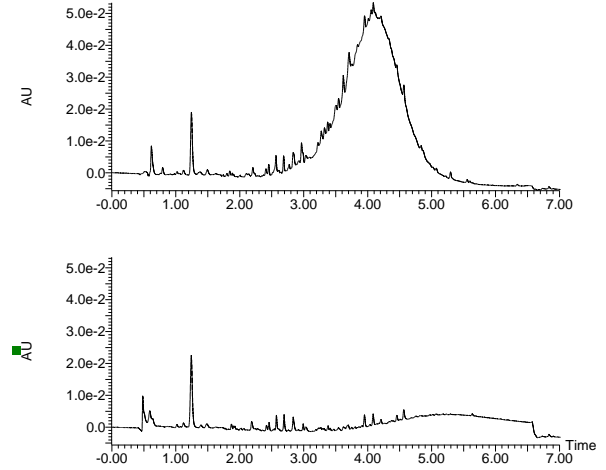
20. *Kalanchoë manginii*



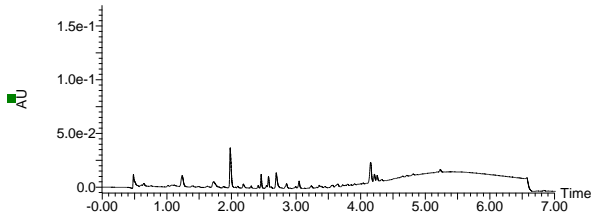
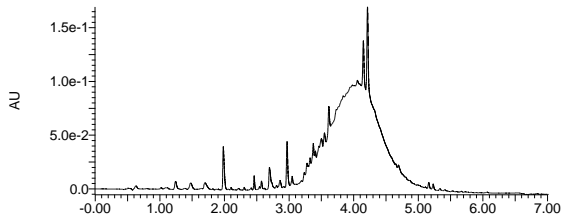
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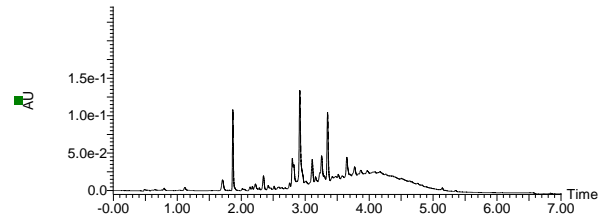
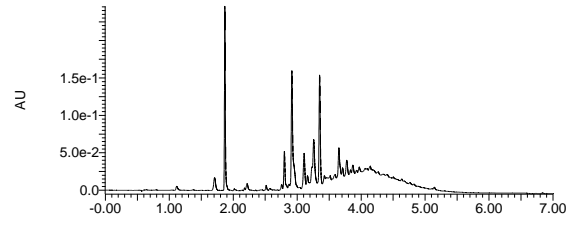
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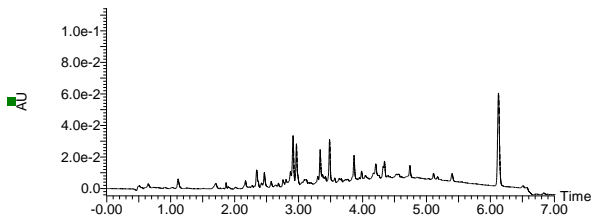
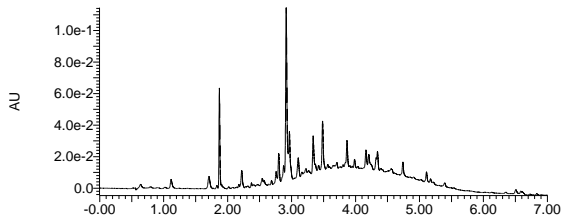
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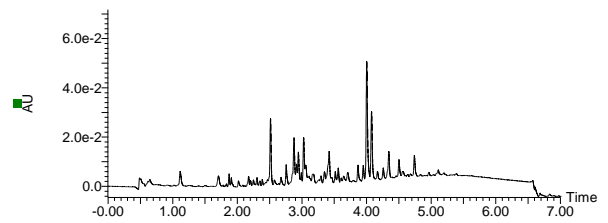
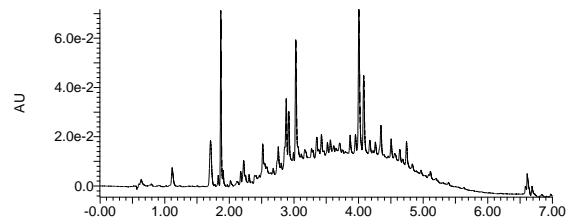
24. *Cunninghamia lanceolata*



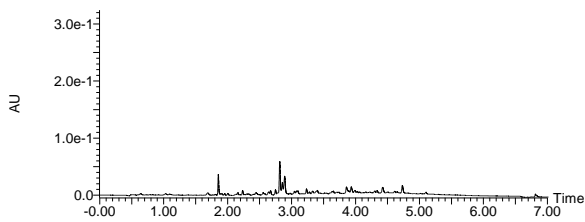
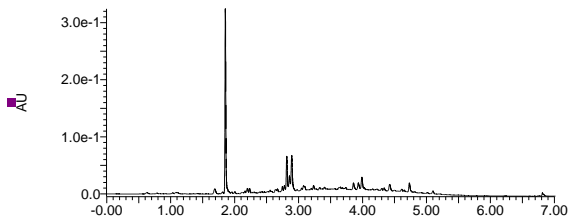
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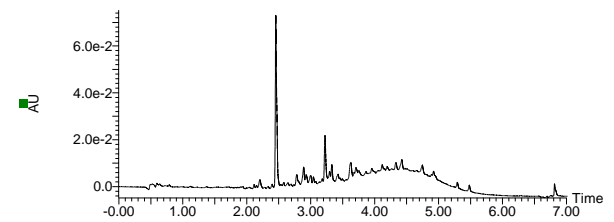
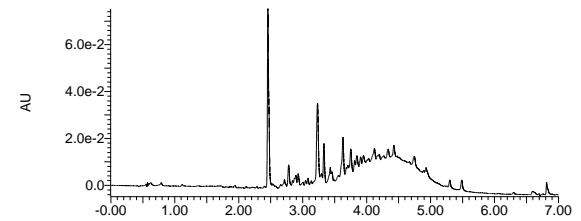
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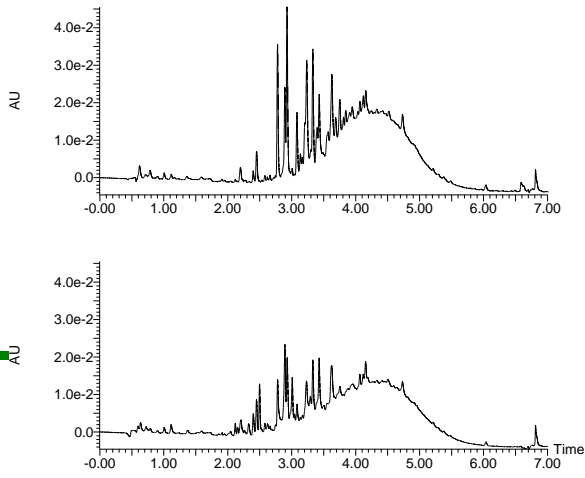
27. *Tetraclinis articulata*



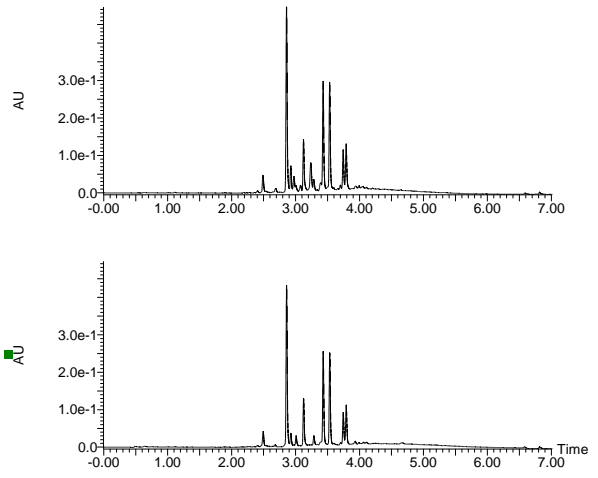
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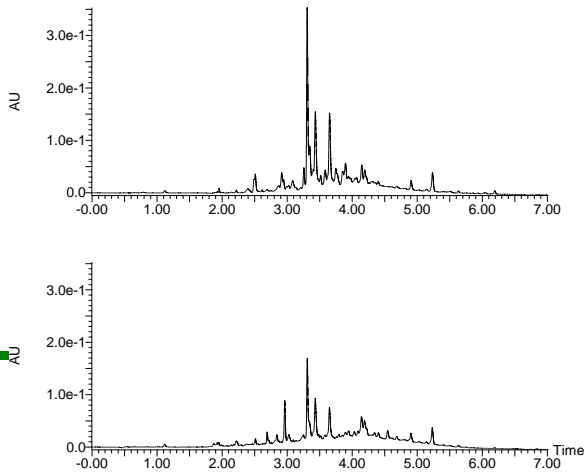
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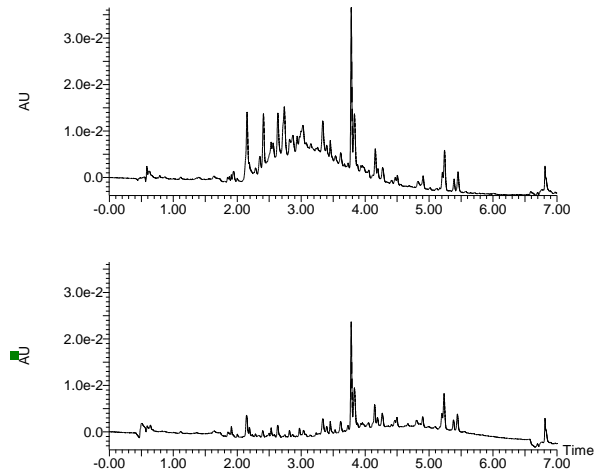
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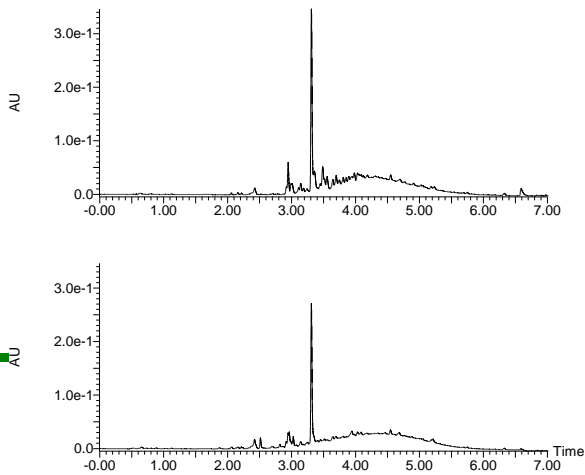
31. *Dicksonia squarrosa*



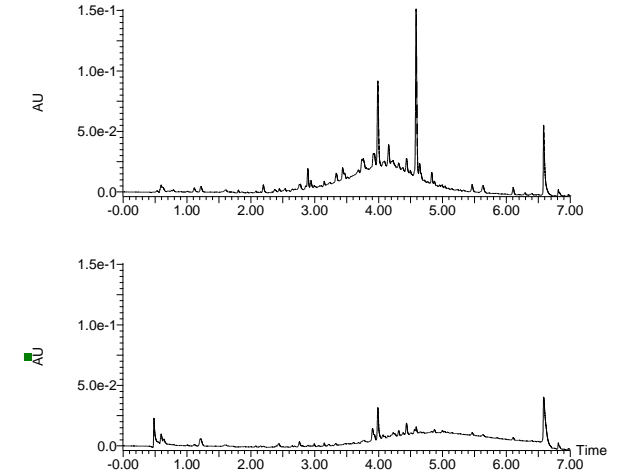
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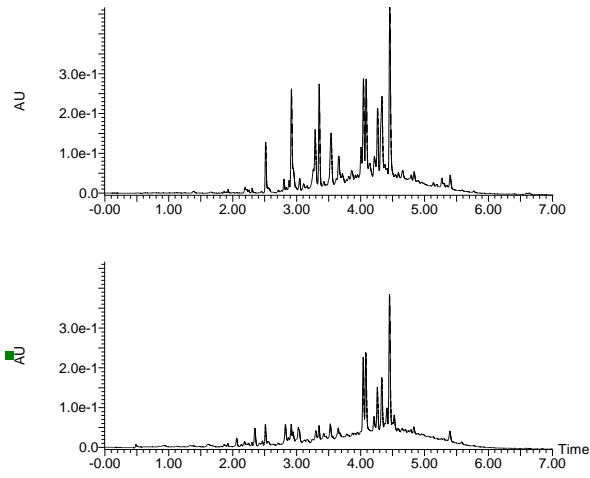
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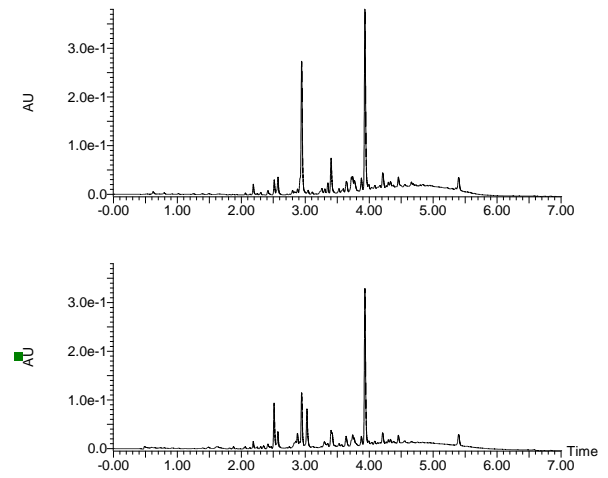
34. *Diospyros mespiliformis*



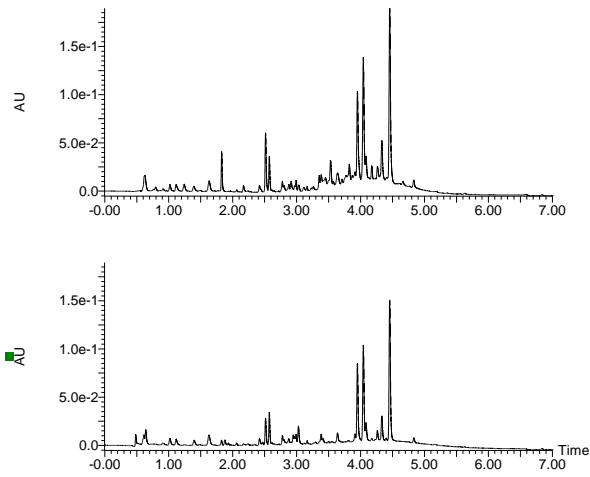
35. *Rhododendron hemitrichotum*



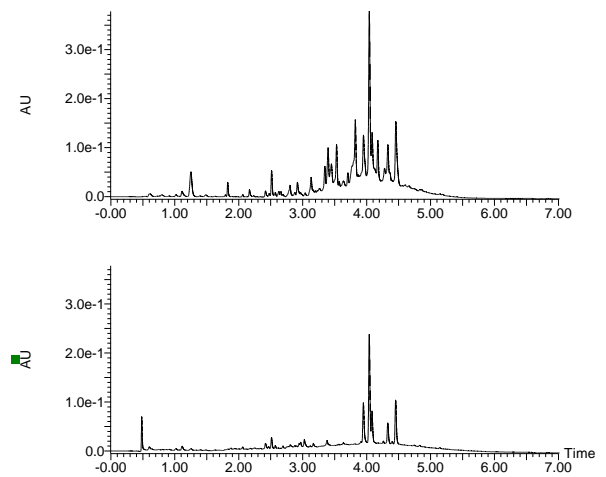
36. *Rhododendron hemitrichotum*



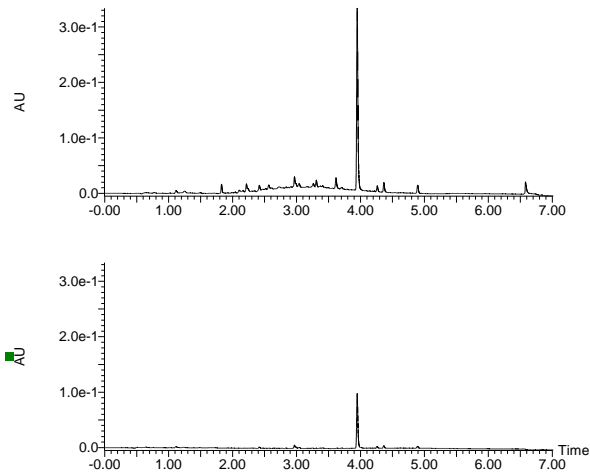
37. *Euphorbia characias* (leaves)



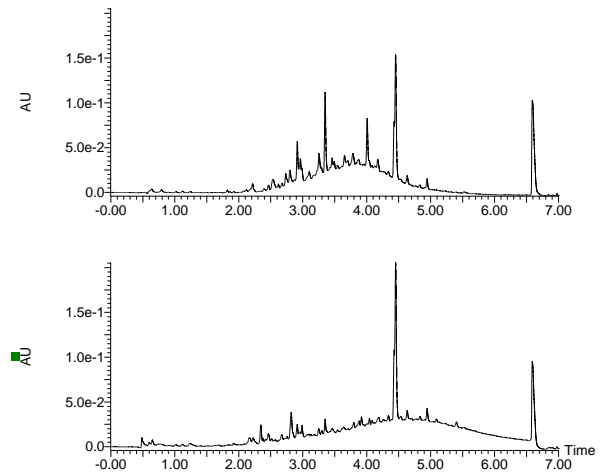
38. *Euphorbia characias* (flowers)



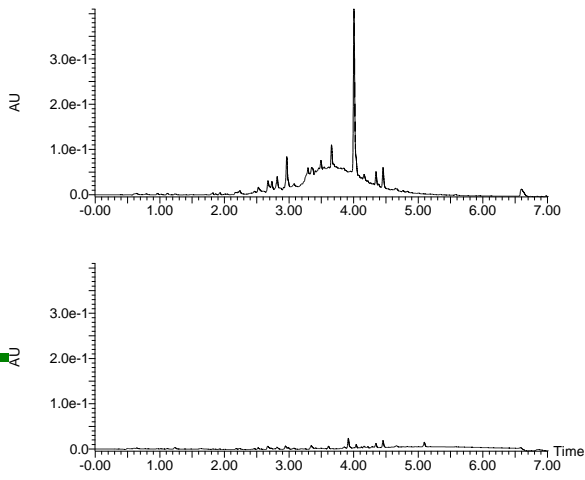
39. *Acacia karroo*



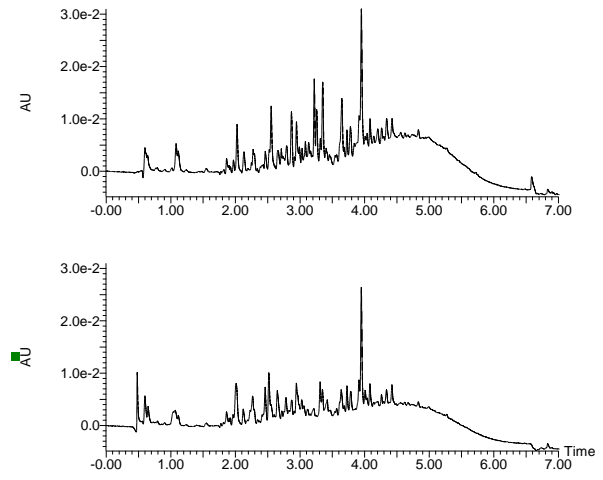
40. *Acacia melanoxylon*



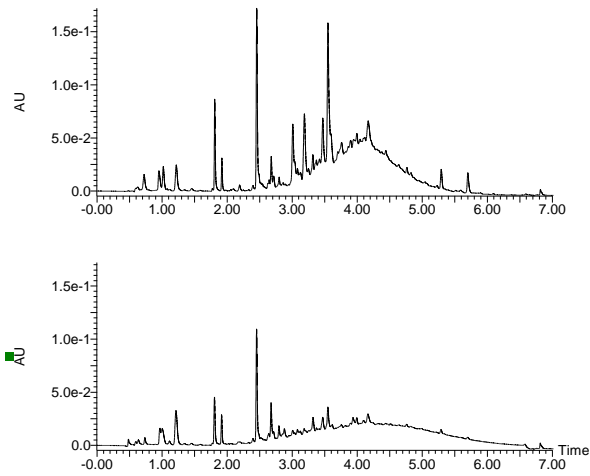
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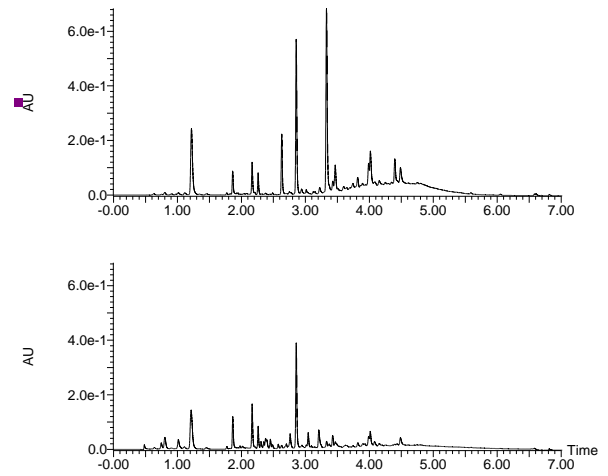
42. *Bauhinia variegata*



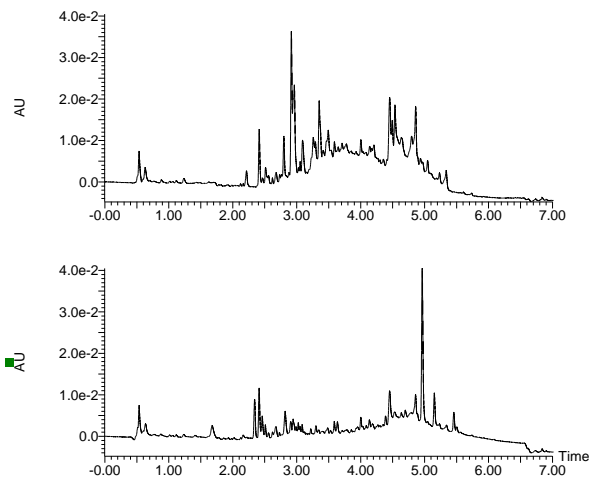
43. *Calliandra haematocephala*



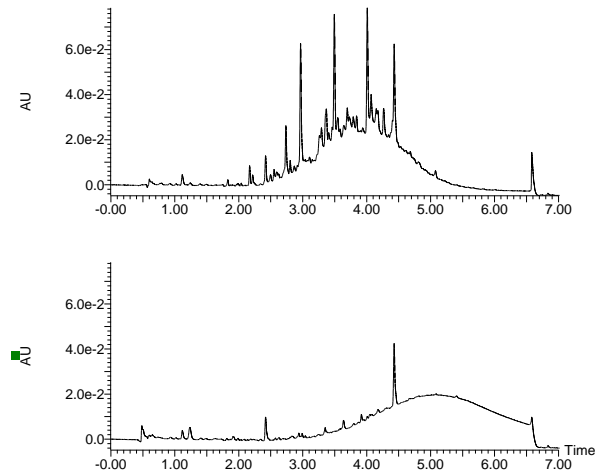
44. *Ceratonia siliqua*



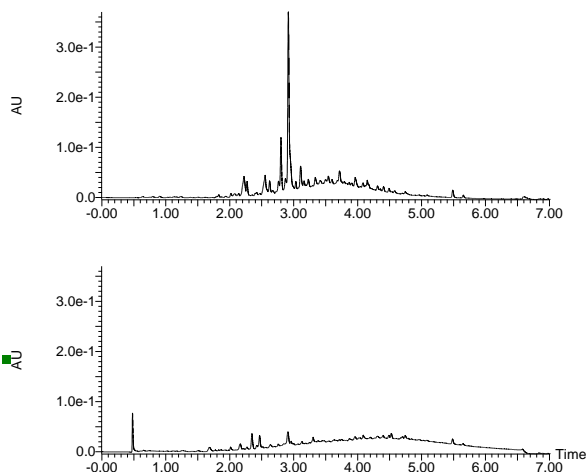
45. *Mimosa polycarpa*



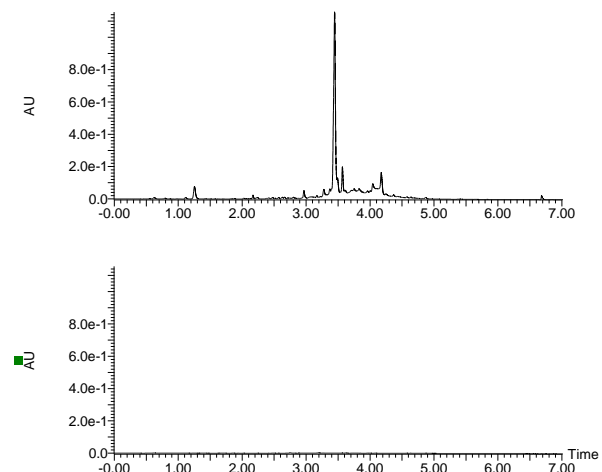
46. *Newtonia buchananii*



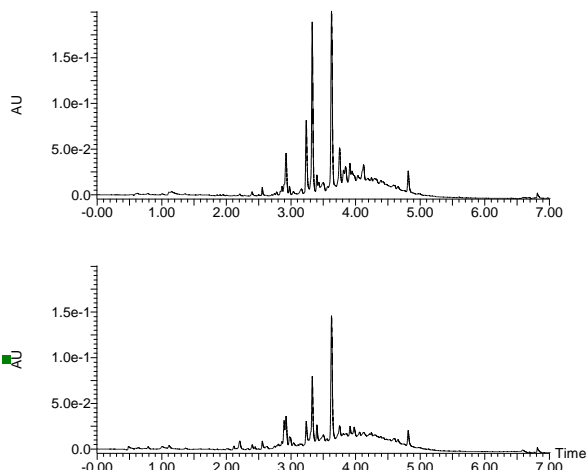
47. *Quercus ilex*



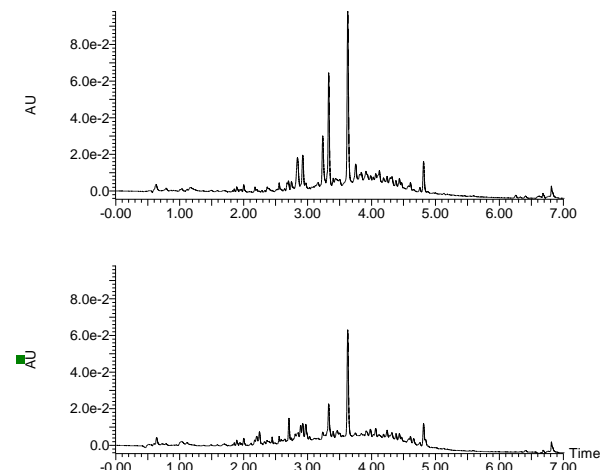
48. *Pelargonium odoratissimum*



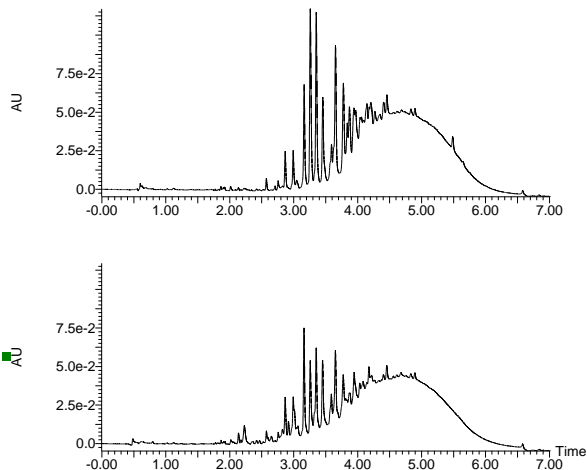
49. *Apollonias barbujana*



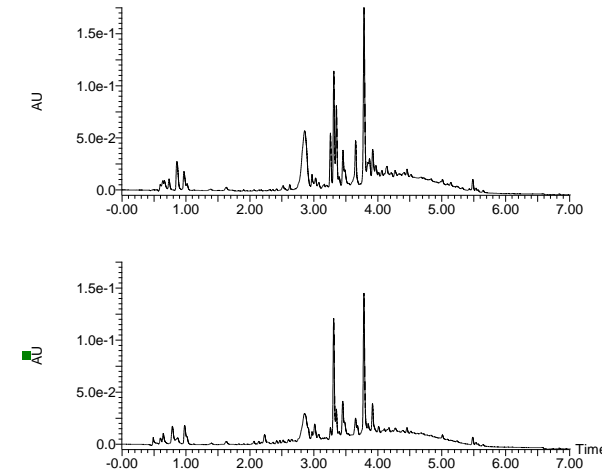
50. *Laurus nobilis*



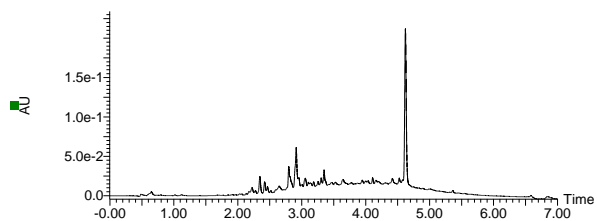
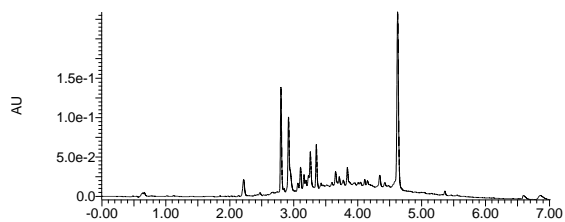
51. *Heritiera solomonensis*



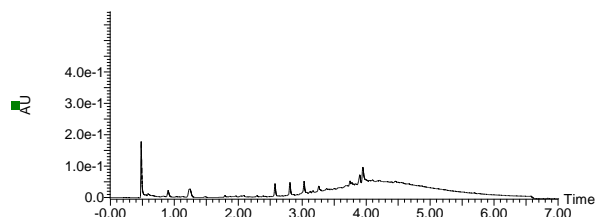
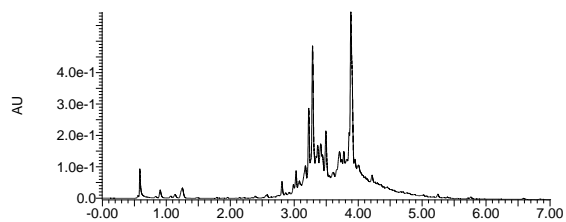
52. *Pavonia cauliflora*



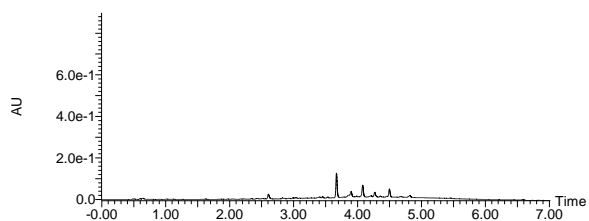
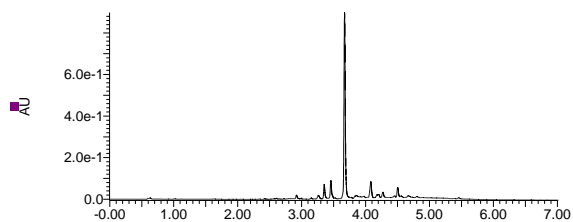
53. *Marcgravia umbellata*



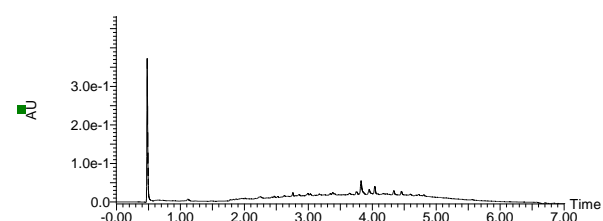
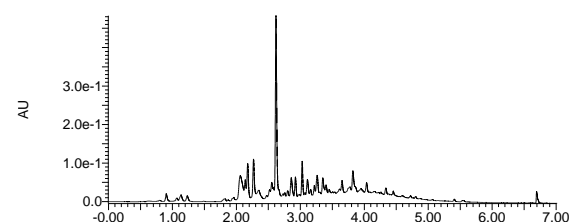
54. *Medinilla magnifica*



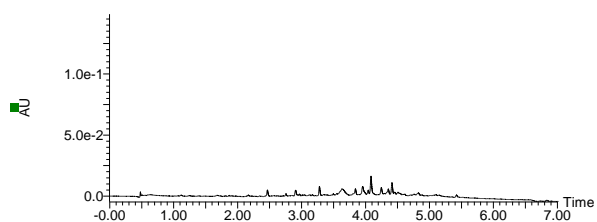
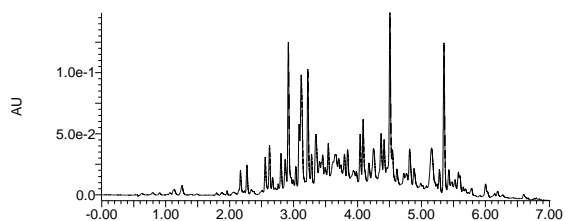
55. *Artocarpus sp.*



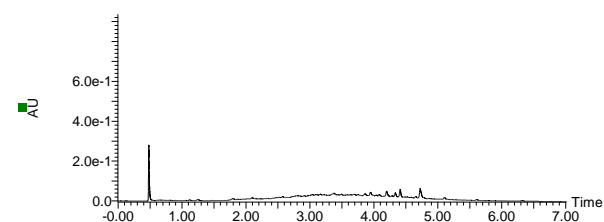
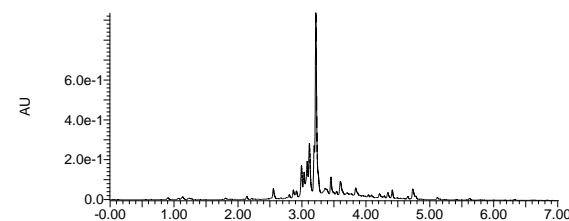
56. *Acca sellowiana*



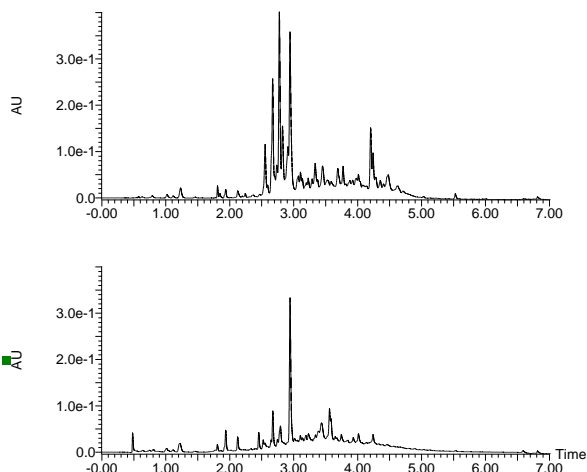
57. *Callistemon citrinus*



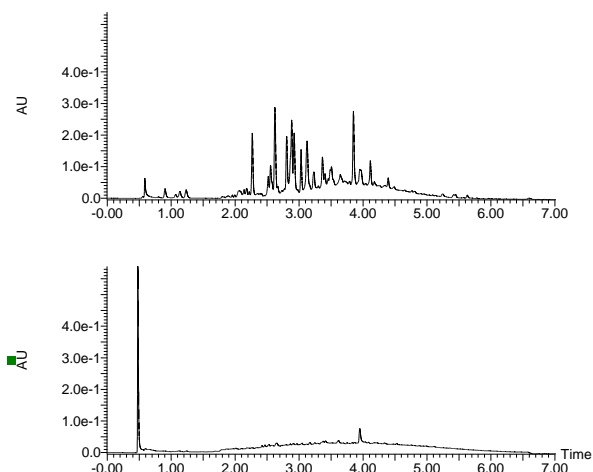
58. *Melaleuca squarrosa*



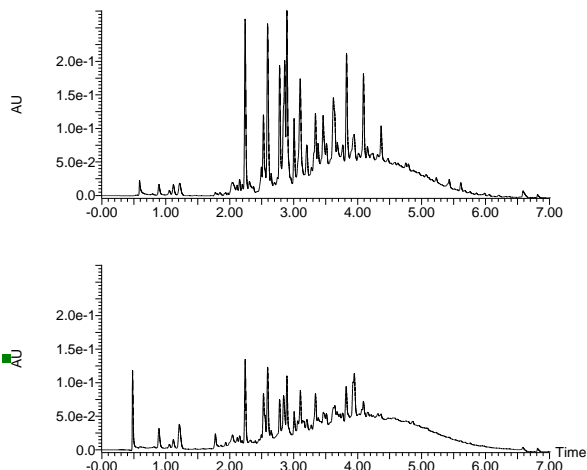
59. *Myrtus communis*



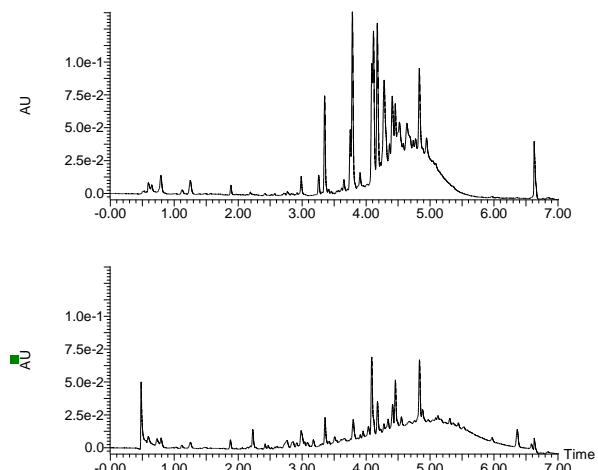
60. *Psidium cattleianum*



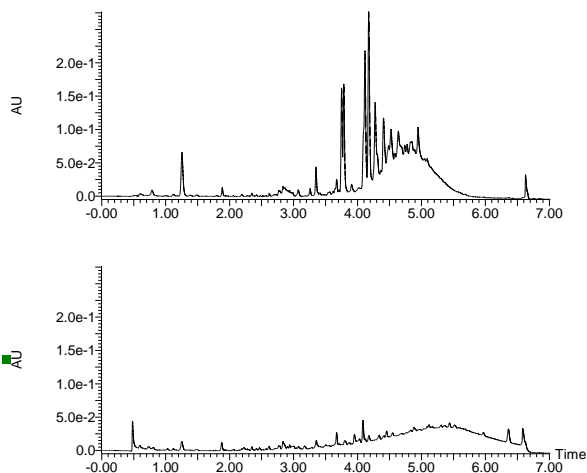
61. *Psidium cattleianum*



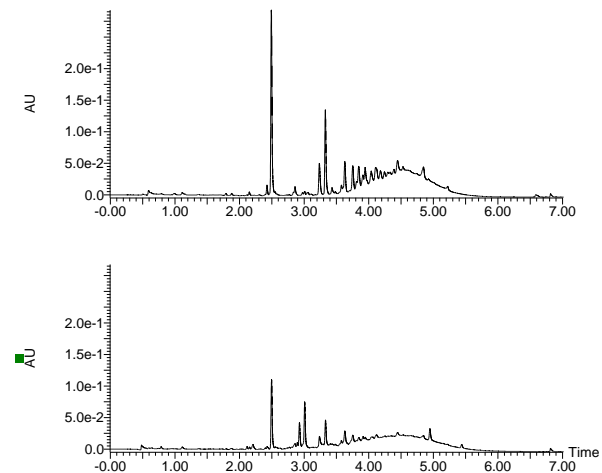
62. *Nepenthes maxima*



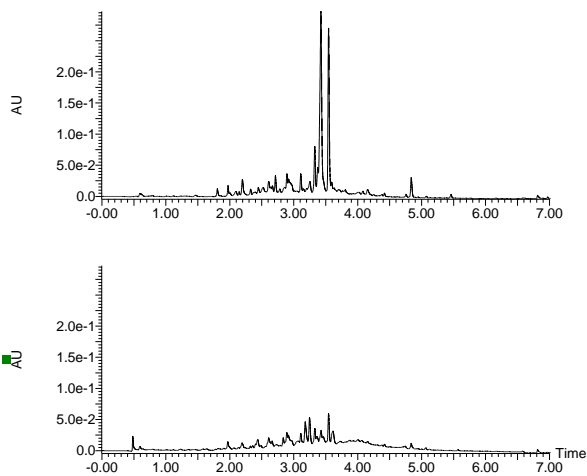
63. *Nepenthes maxima*



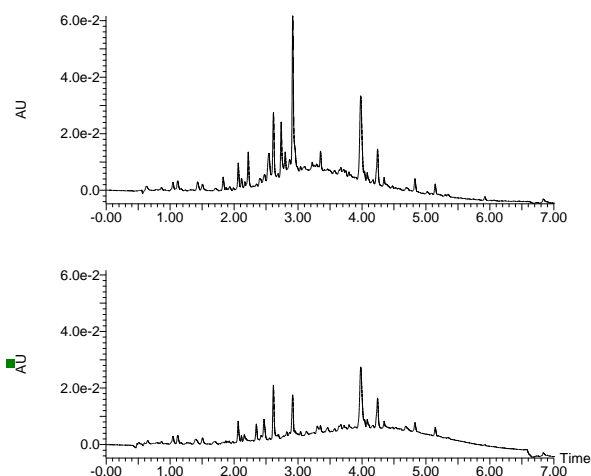
64. *Biophytum sensitivum*



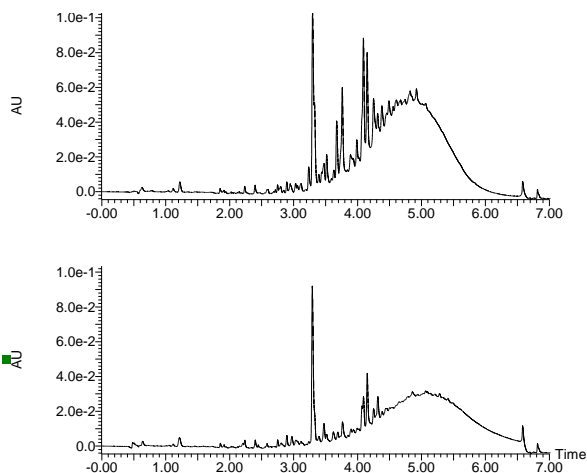
65. *Phyllanthus juglandifolius/grandifolius*



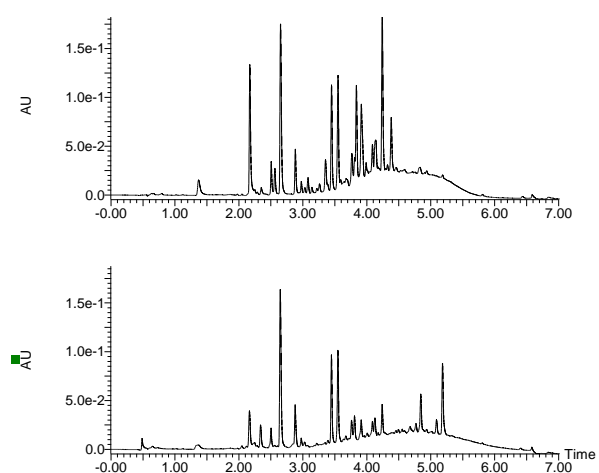
66. *Podocarpus macrophyllus*



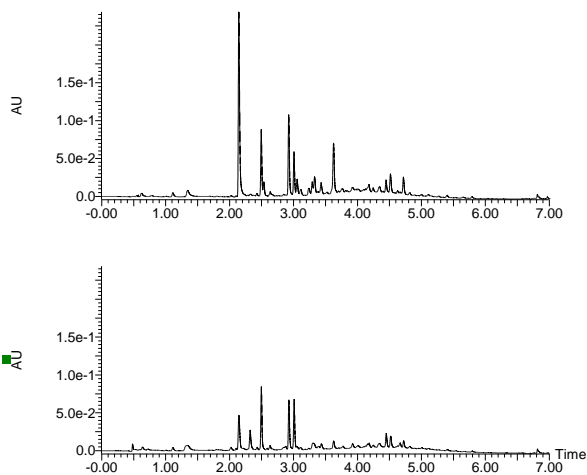
67. *Coccoloba uvifera*



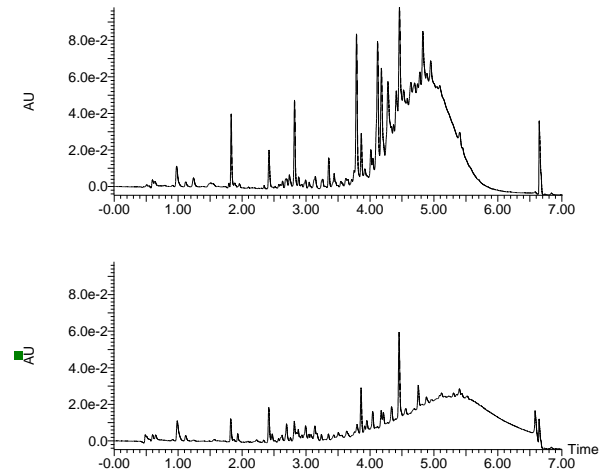
68. *Microgramma mauritiana*



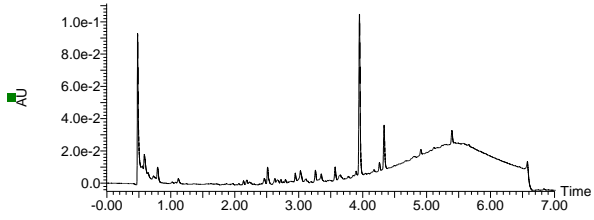
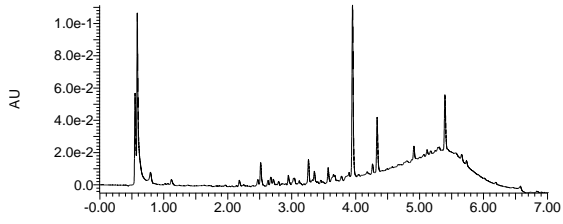
69. *Microgramma vacciniifolia*



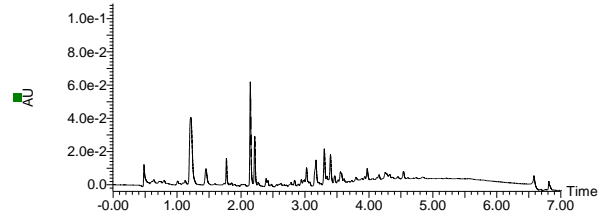
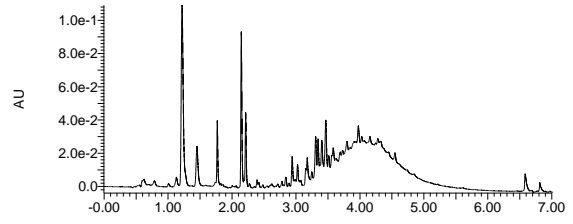
70. *Ruprechtia salicifolia*



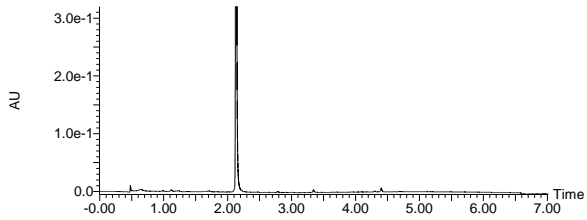
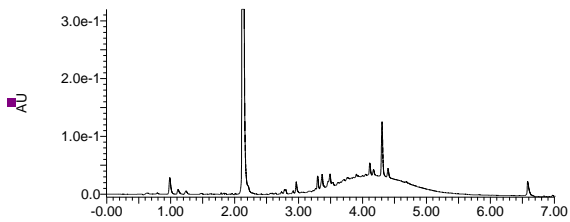
71. *Portulaca alata*



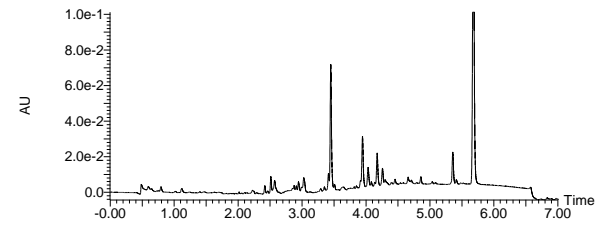
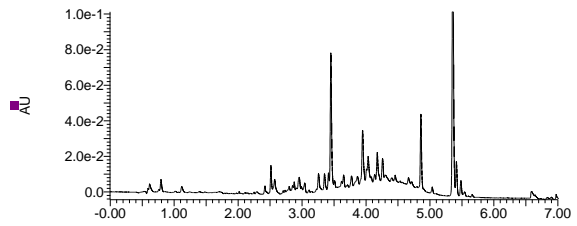
72. *Aegiceras corniculatum*



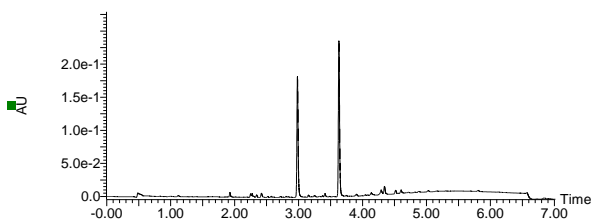
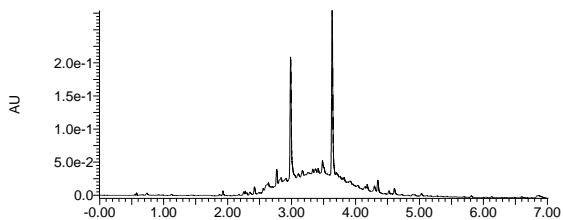
73. *Ardisia crenata*



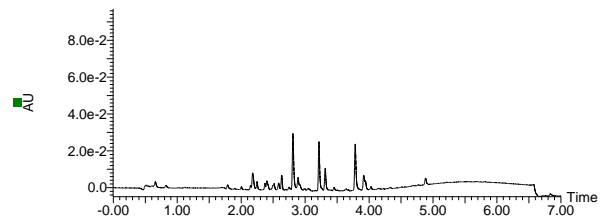
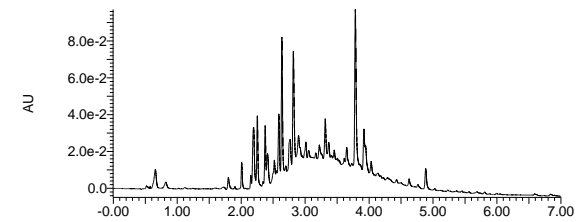
74. *Cyclamen africanum*



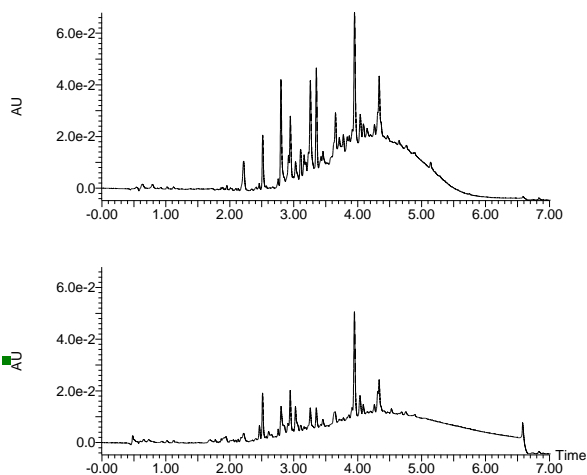
75. *Pellaea ovata* (pieces)



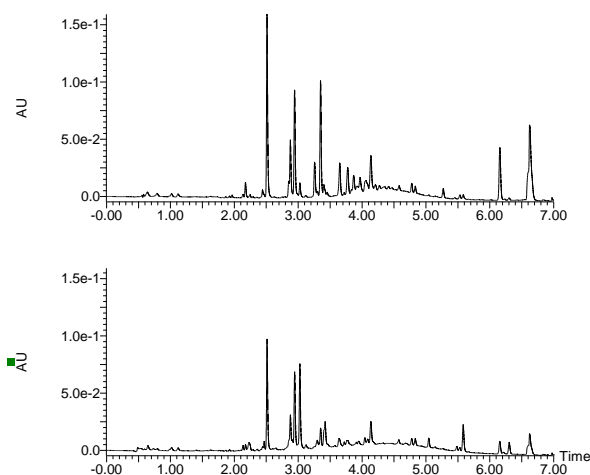
76. *Pellaea ovata* (leaflets)



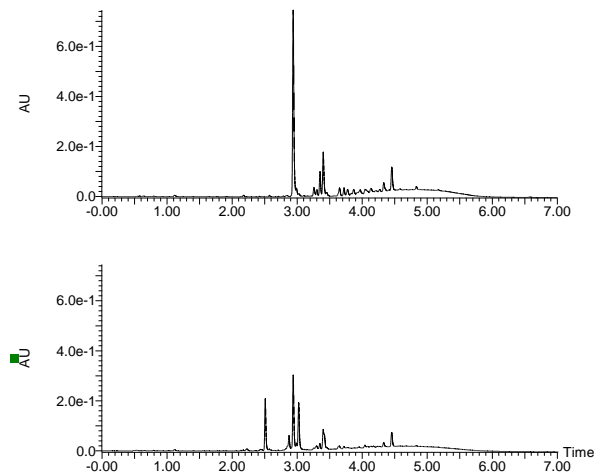
77. *Rhizophora mangle*



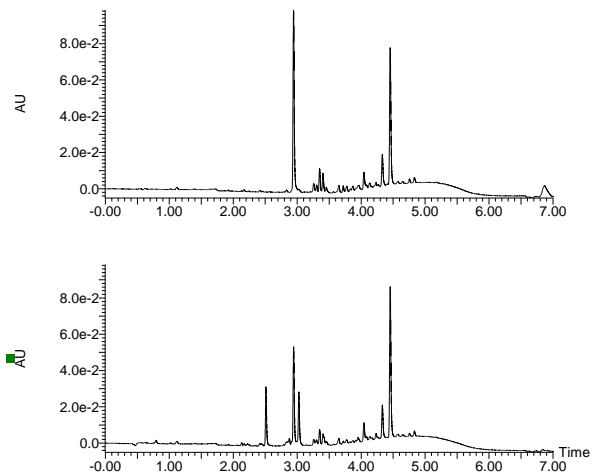
78. *Eriobotrya japonica*



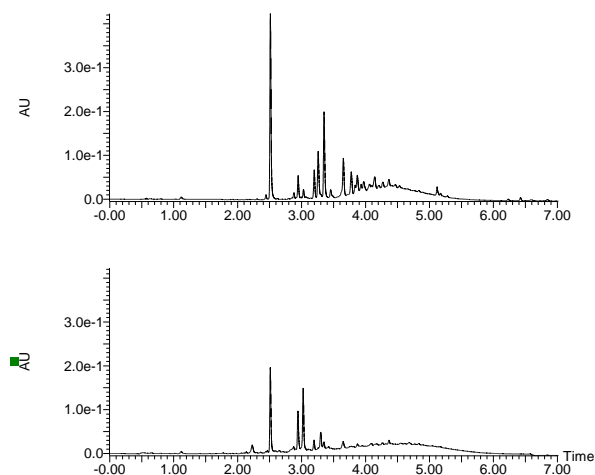
79. *Osteomeles schweriniae*



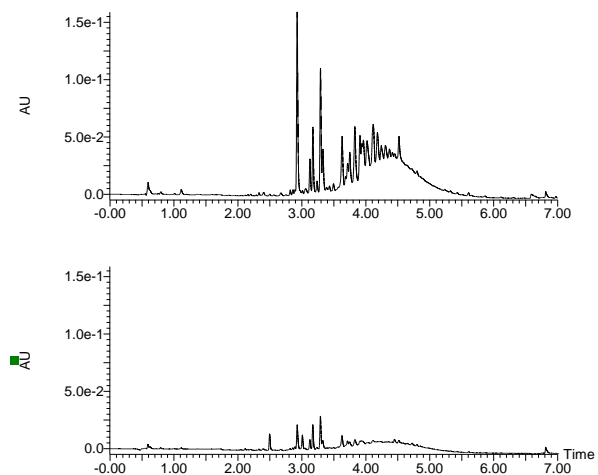
80. *Osteomeles schweriniae*



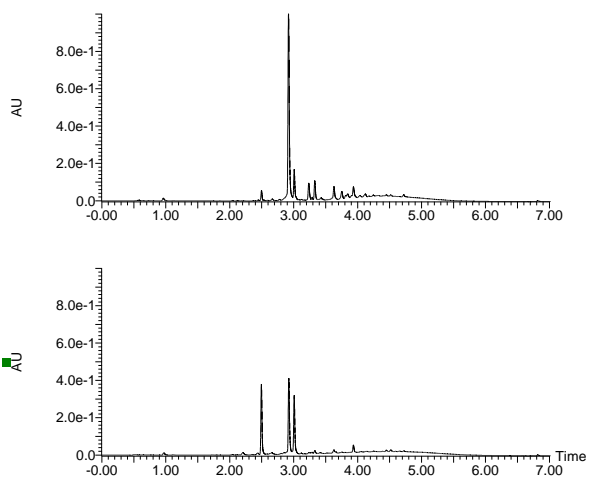
81. *Rhaphiolepis indica var. umbellata*



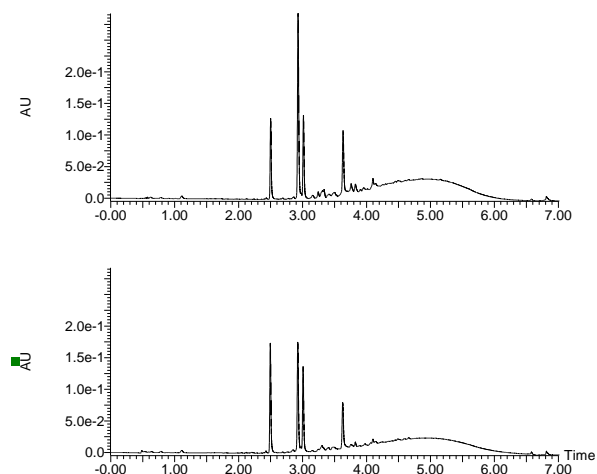
82. *Coffea arabica*



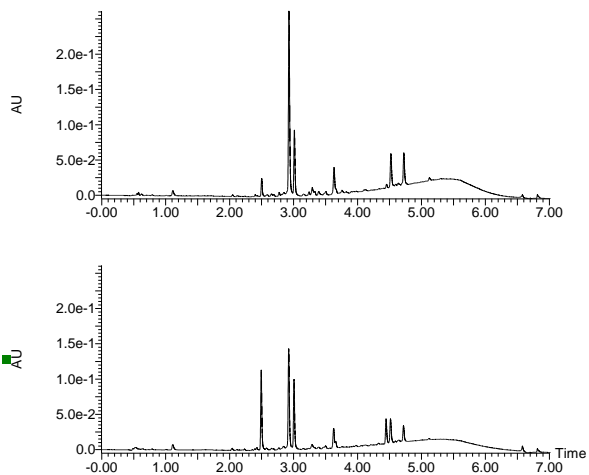
83. *Hoffmannia refulgens*



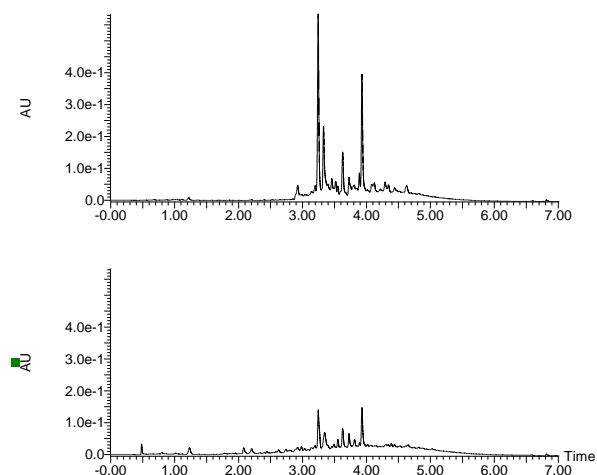
84. *Ixora coccinea* (leaves)



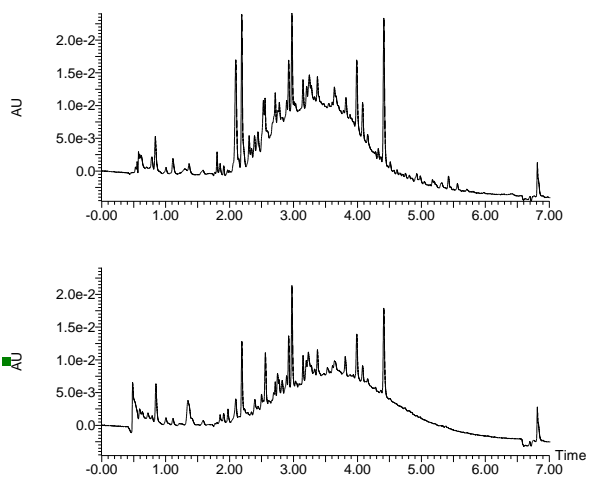
85. *Ixora coccinea* (flowers)



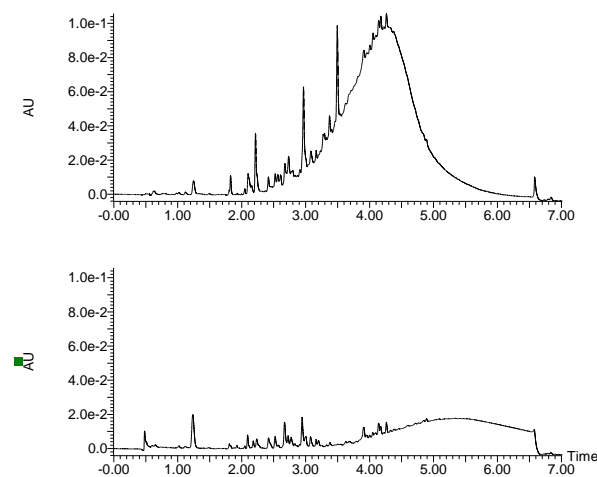
86. *Dimocarpus longan*



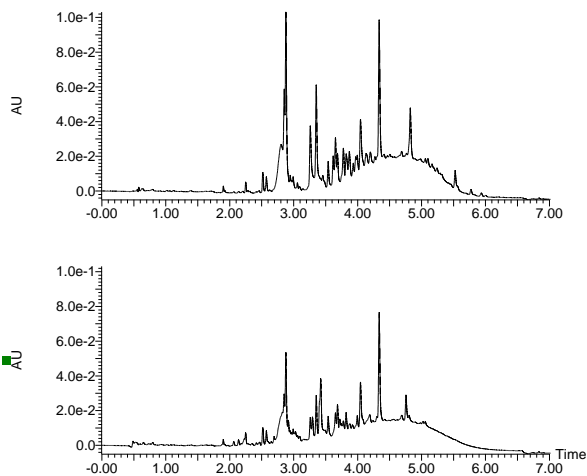
87. *Nephelium conratum*



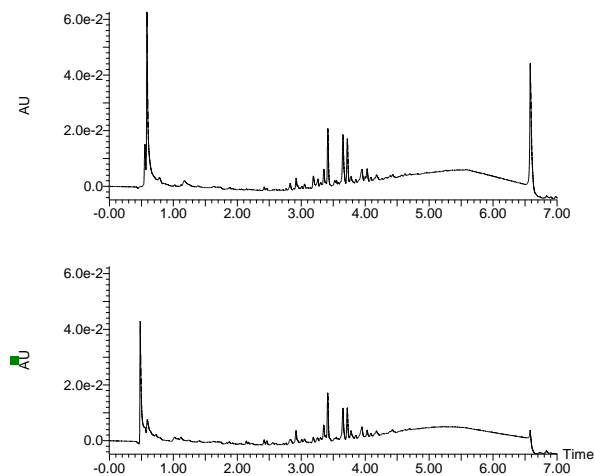
88. *Sideroxylon inerme*



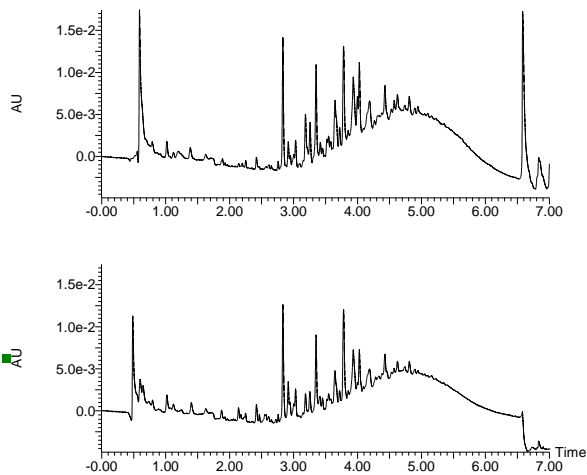
89. *Sarracenia purpurea*



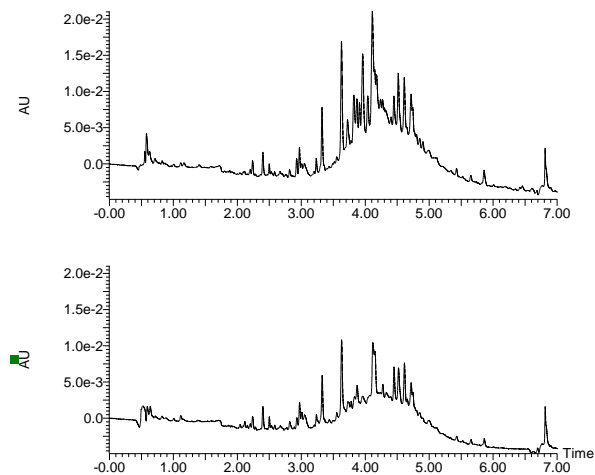
90. *Strelitzia reginae* (leaves)



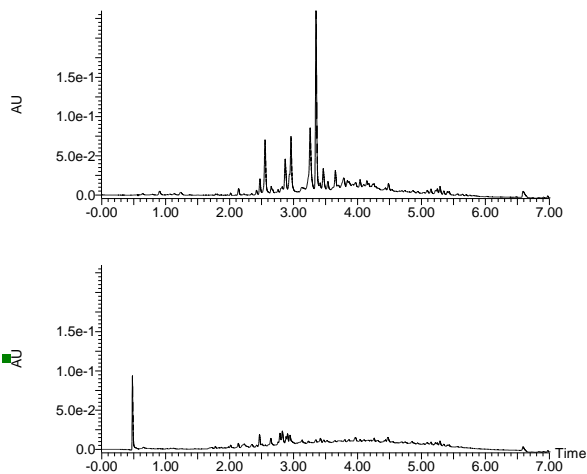
91. *Strelitzia reginae* (flowers)



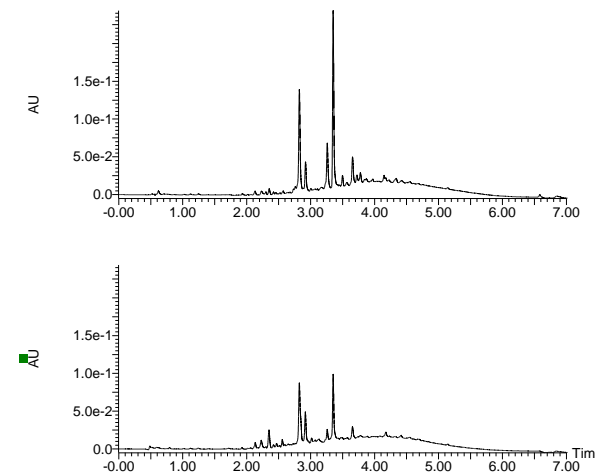
92. *Tectaria macrodonta*



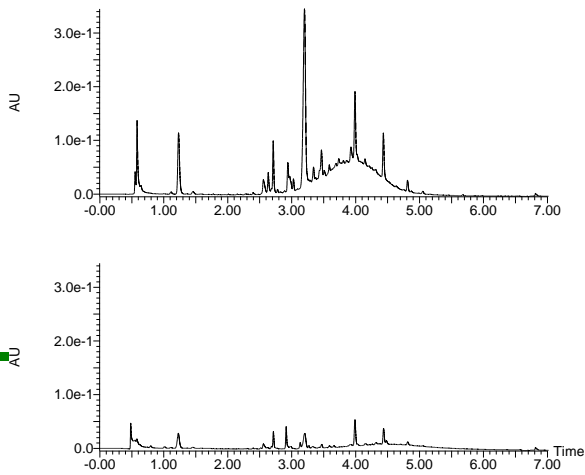
93. *Camellia japonica* (leaves)



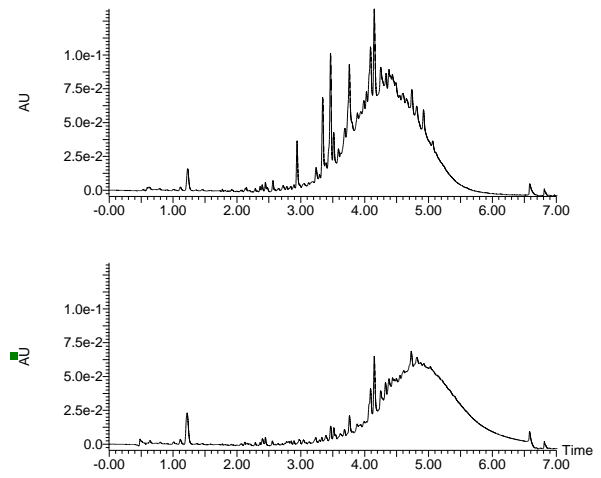
94. *Camellia japonica* (petals)



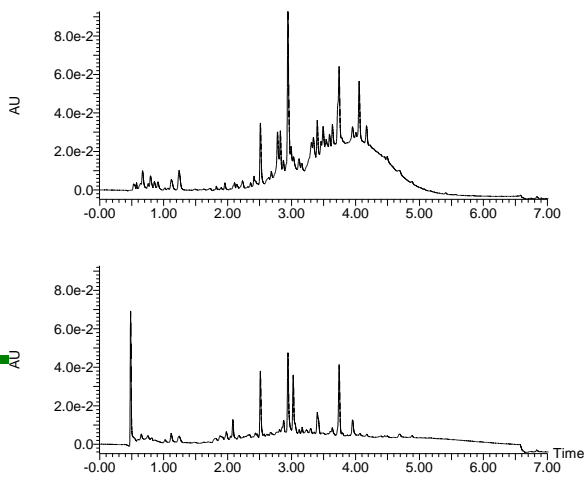
95. *Cissus javana*



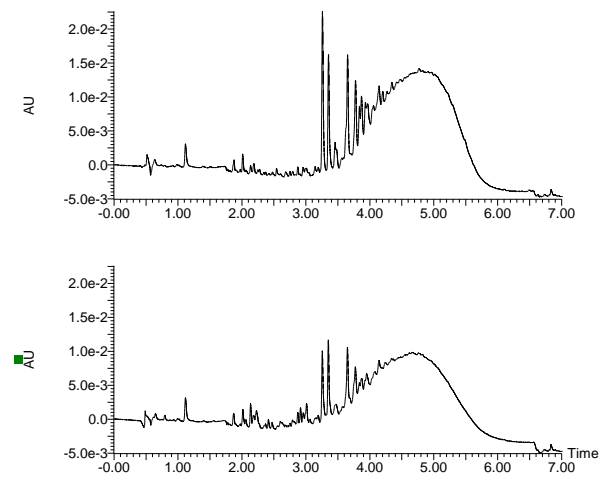
96. *Leea guineense*



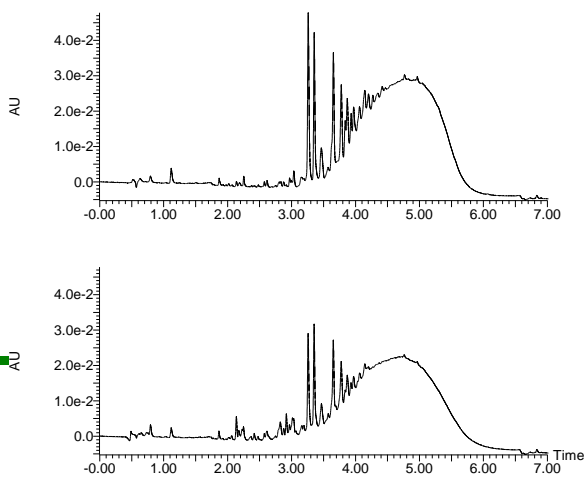
97. *Rhoicissus sp.*



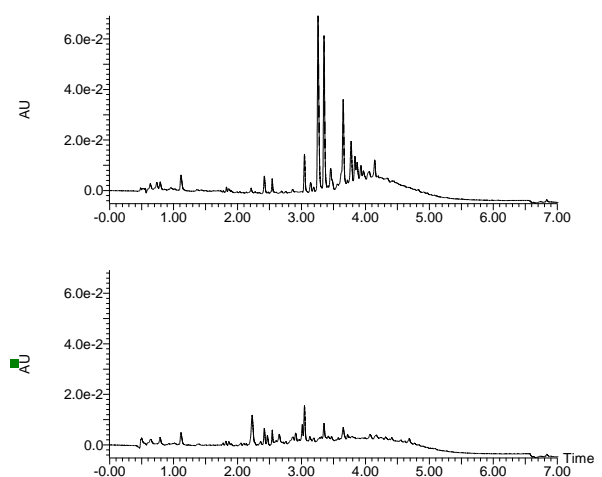
98. *Encephalartos ferox*



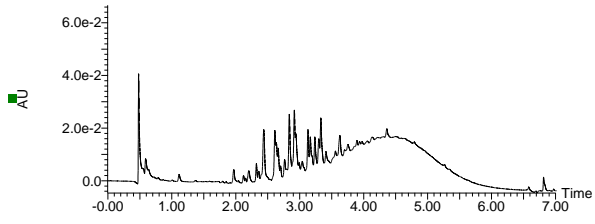
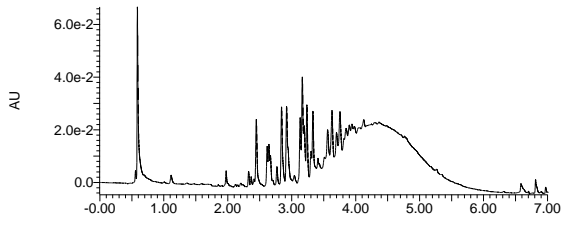
99. *Macrozamia communis*



100. *Zamia furfuracea*



101. *Alpinia purpurata*



102. *Elettaria cardamomun*

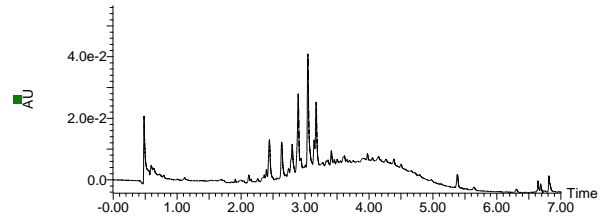
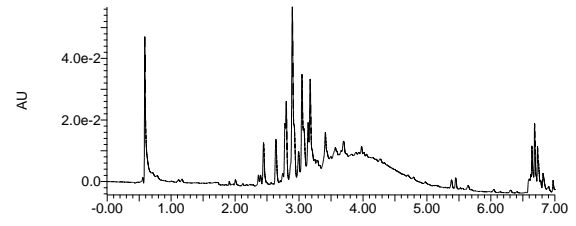
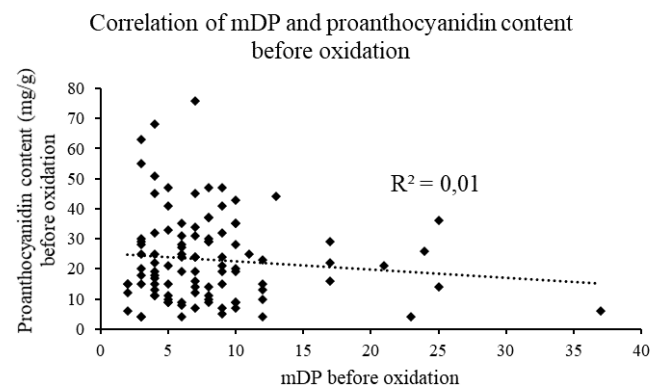
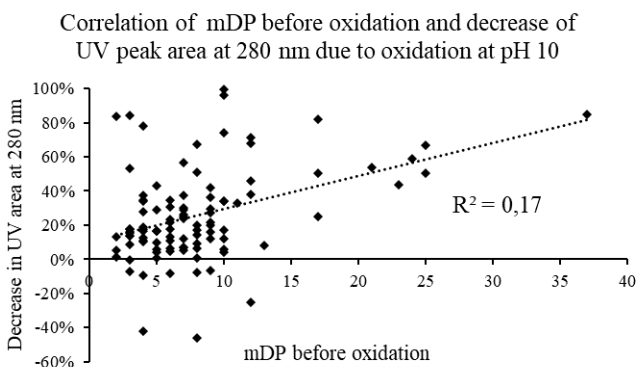
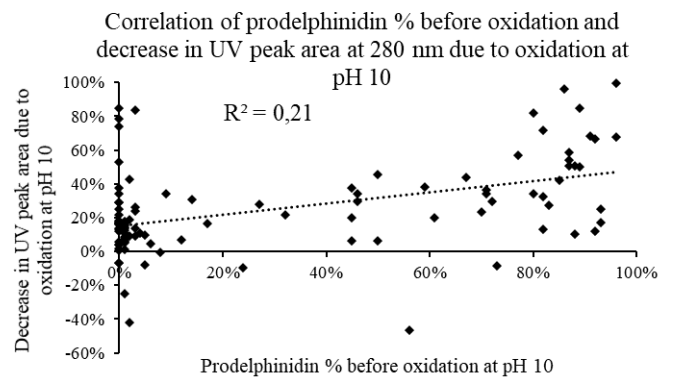
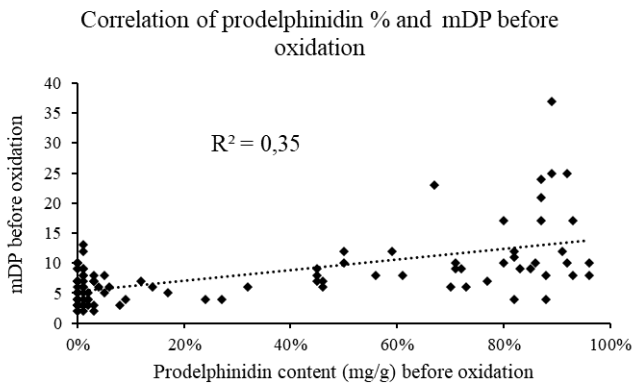
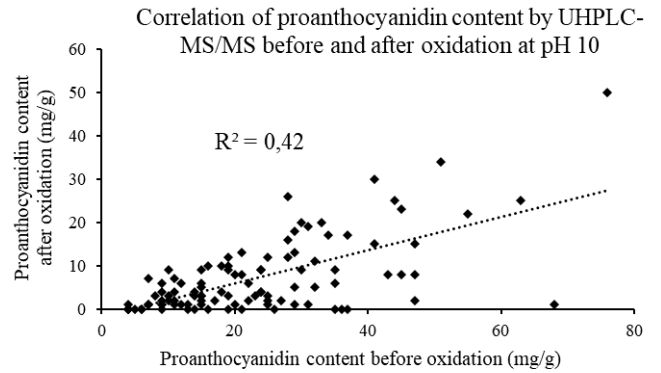
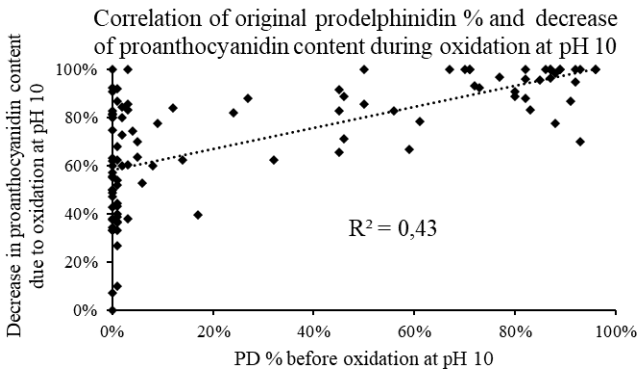
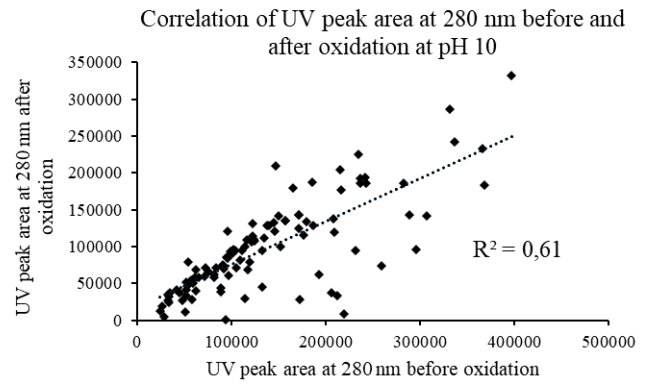
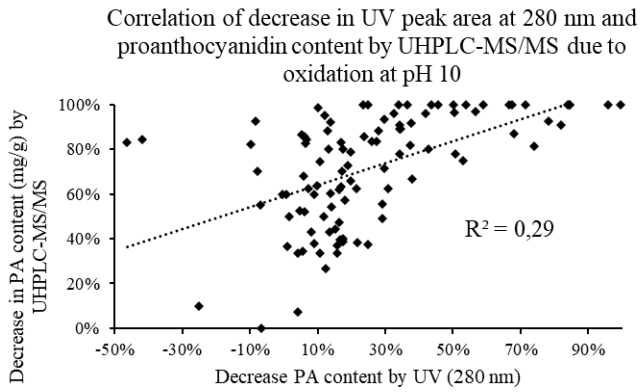
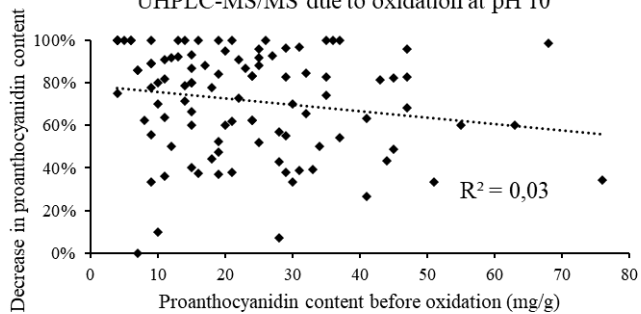


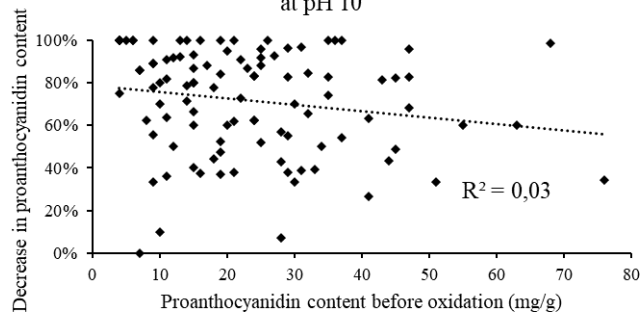
Figure S2. Correlations of different measured parameters without categorizing the 102 proanthocyanidin rich plant extracts.



Correlation of proanthocyanidin content before oxidation and decrease in proanthocyanidin content by UHPLC-MS/MS due to oxidation at pH 10



Correlation of original proanthocyanidin content and decrease in proanthocyanidin content due to oxidation at pH 10



Correlation of proanthocyanidin content before oxidation and decrease in UV peak area at 280 nm due to oxidation at pH 10

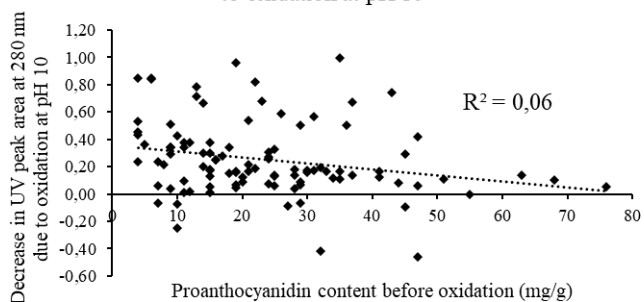


Figure S3. Correlations of different measured parameters for category A proanthocyanidin rich plant extracts.

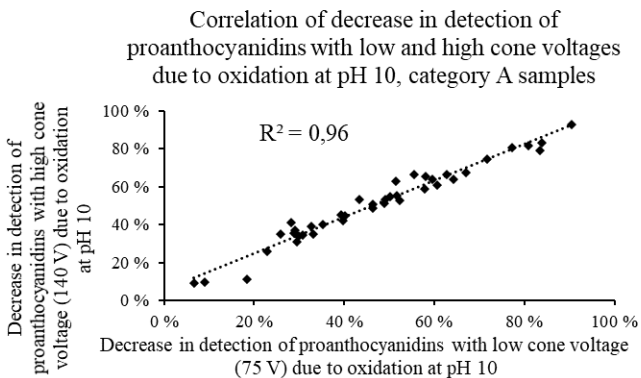
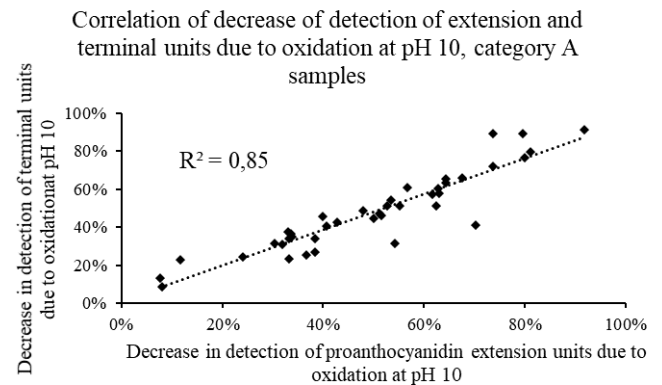
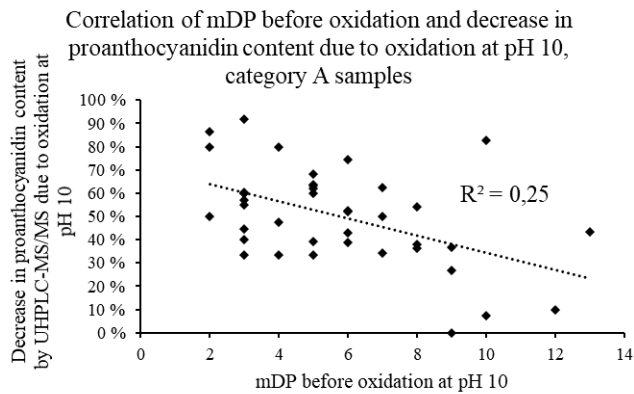
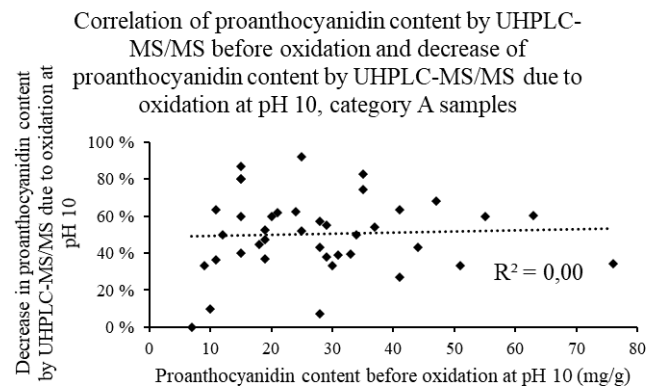
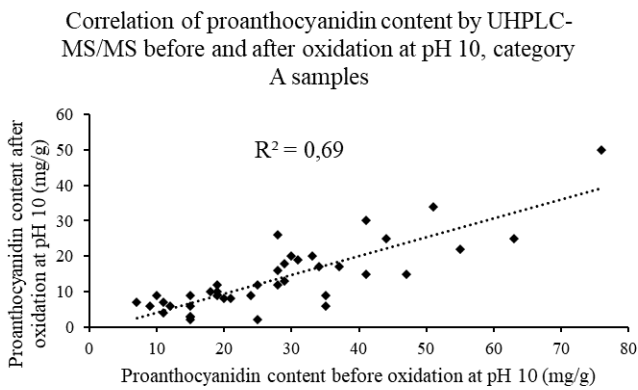
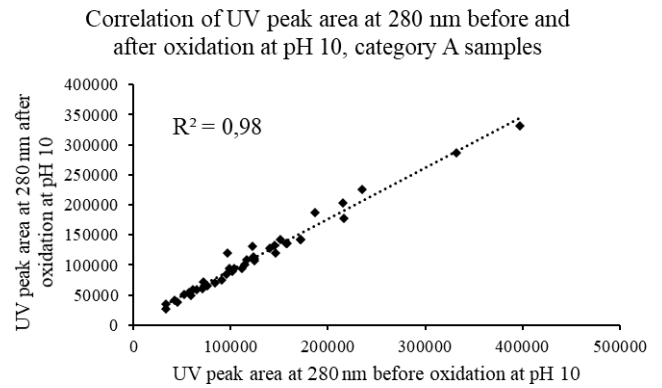
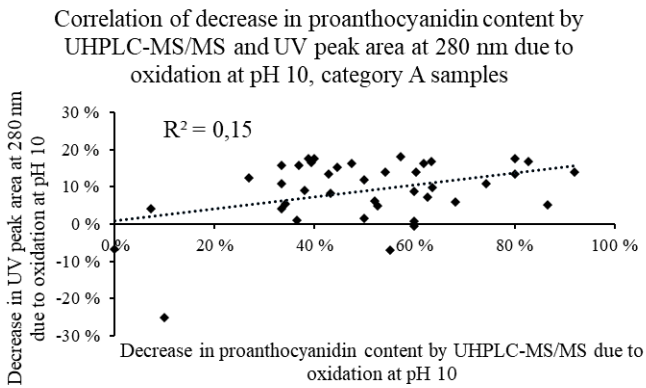


Figure S4. Correlations of different measured parameters for category B proanthocyanidin rich plant extracts.

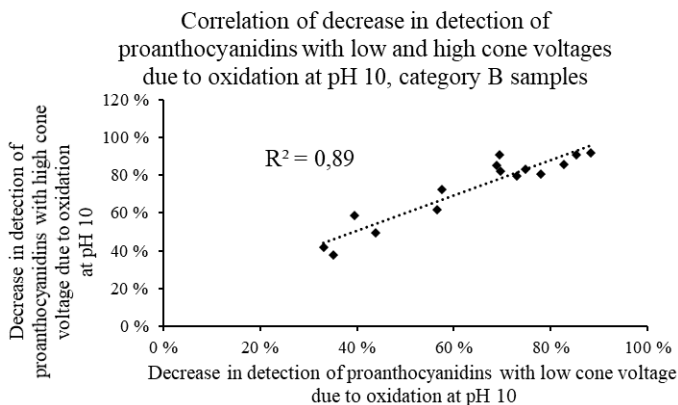
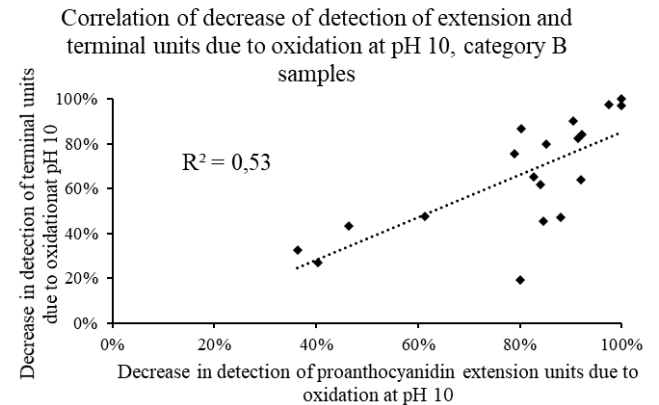
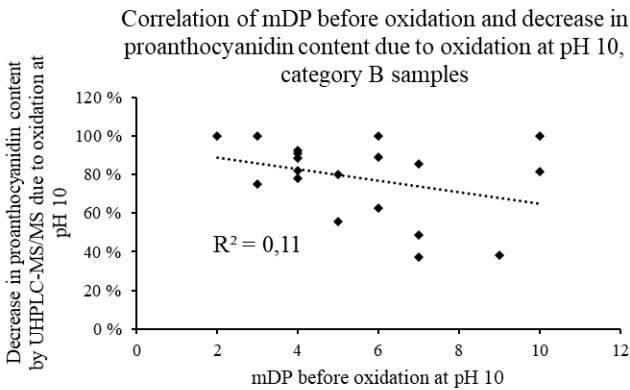
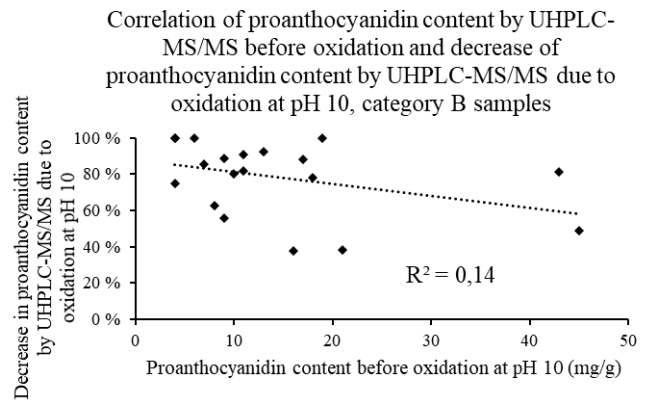
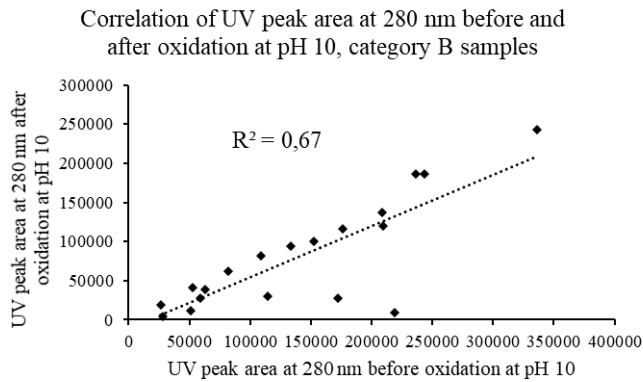
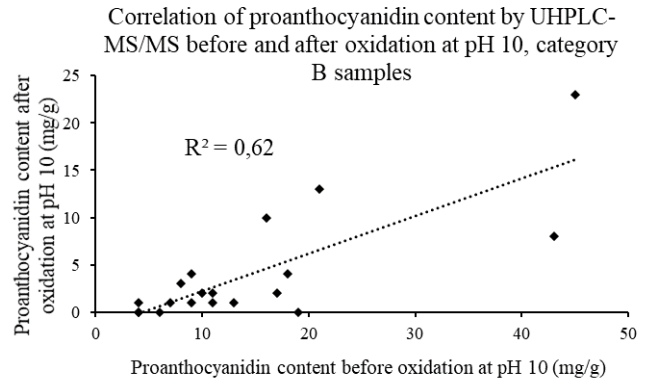
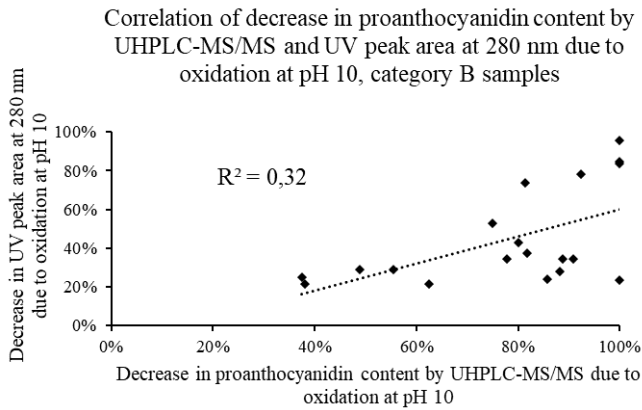


Figure S5. Correlations of different measured parameters for category C and D proanthocyanidin rich plant extracts.

