Reddy, C.M., Pearson, A., Xu, L., McNichol, A.P., Benner,B.A., Wise, S.A., Klouda, G., Currie, L.A., and Eglinton, T.I., *Radiocarbon as a tool to apportion sources of polycyclic aromatic hydrocarbons and black carbon in environmental samples*, Env. Sci. and Technol. , 2002; v36, 1774-1782

To det. the relative inputs of polycyclic arom. hydrocarbons (PAHs) and black carbon (BC) in environmental samples from the combustion of fossil fuels and biomass, the authors have developed two independent anal. methods for detg. the 14C abundance of PAHs and BC. The 5730 yr half-life of 14C makes it an ideal tracer for identifying combustion products derived from fossil fuels (14C-free) vs. those stemming from modern biomass (contemporary 14C). The 14C abundance of PAHs in several environmental Std. Ref. Materials was measured by accelerator mass spectrometry after extn. and then purifn. by HPLC and preparative capillary gas chromatog. This method yields pure compds. that allow for a high degree of confidence in the 14C results. The PAHs data were then used to compare and evaluate results from an operationally defined thermal oxidn. method used to isolate a BC fraction. The 14C compns. of PAHs and BC were very similar and suggest that the thermal oxidn. method employed for isolating BC is robust and free from interferences by non-BC components. In addn., these data indicate that both the PAHs and the BC species derive mostly from fossil fuels and/or their combustion products.