

Figure S1. N₂ adsorption–desorption isotherm of the synthesized MCM-41 obtained at 77 K.

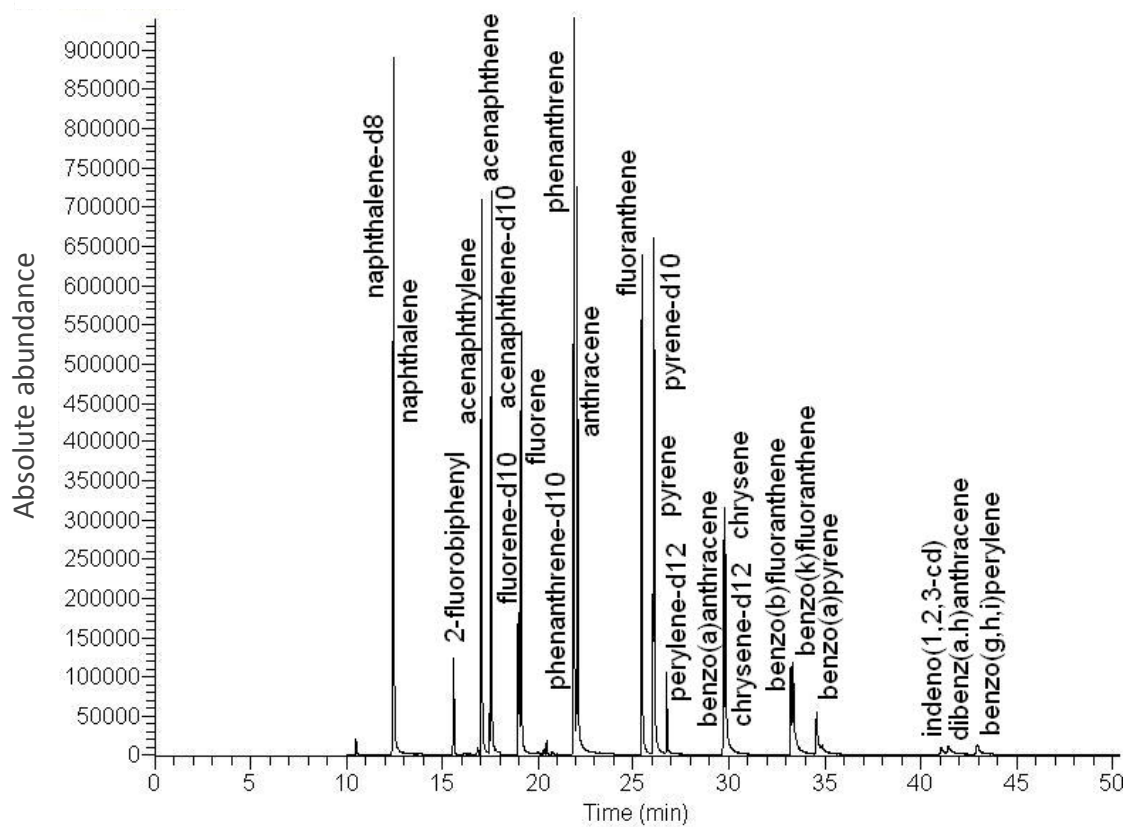


Figure S2. GC/MS chromatogram of the PAH external standard.

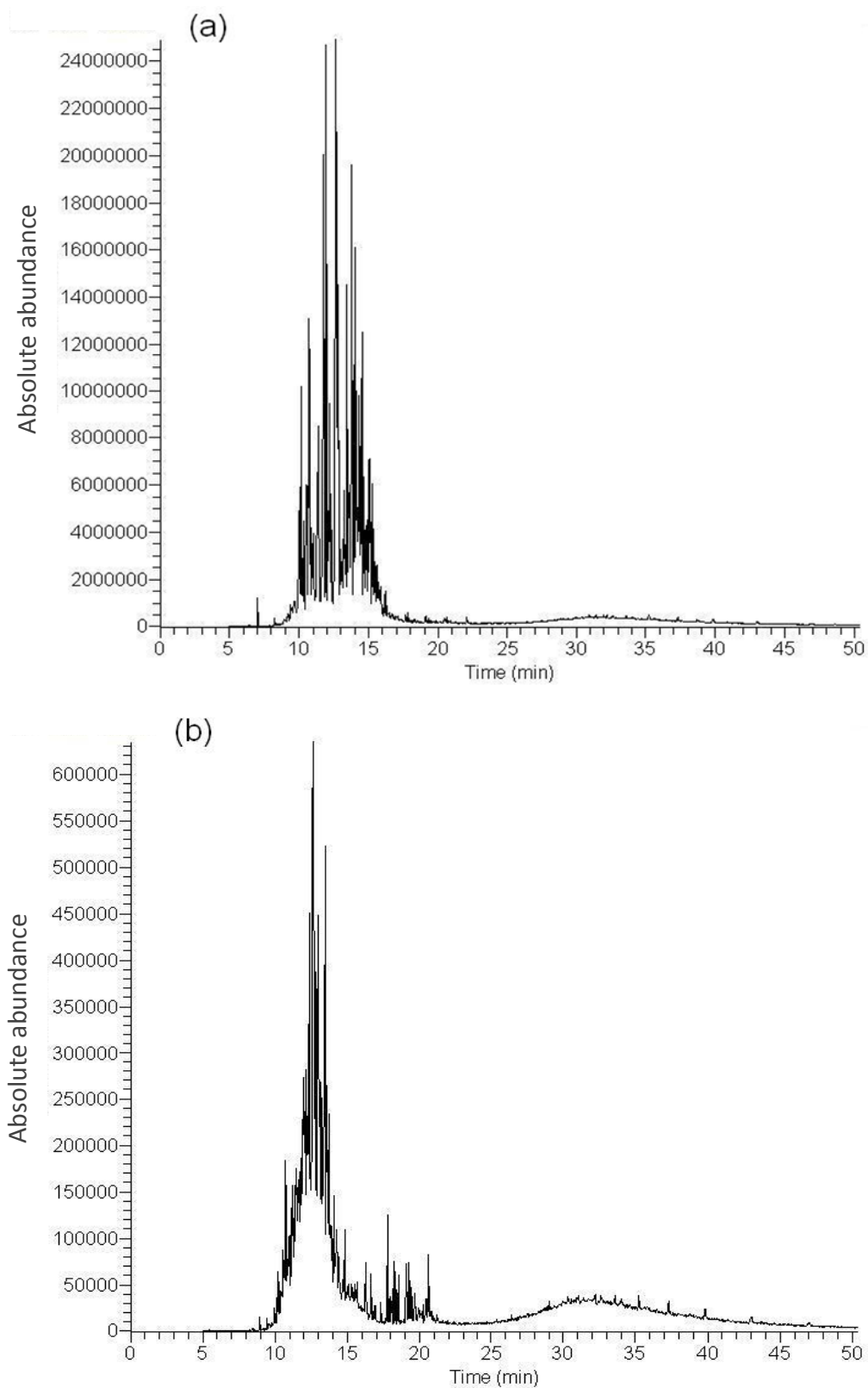


Figure S3. Two-stroke motorcycle exhaust sampled by XAD-2 in (a) TIC mode and (b) SIM mode.

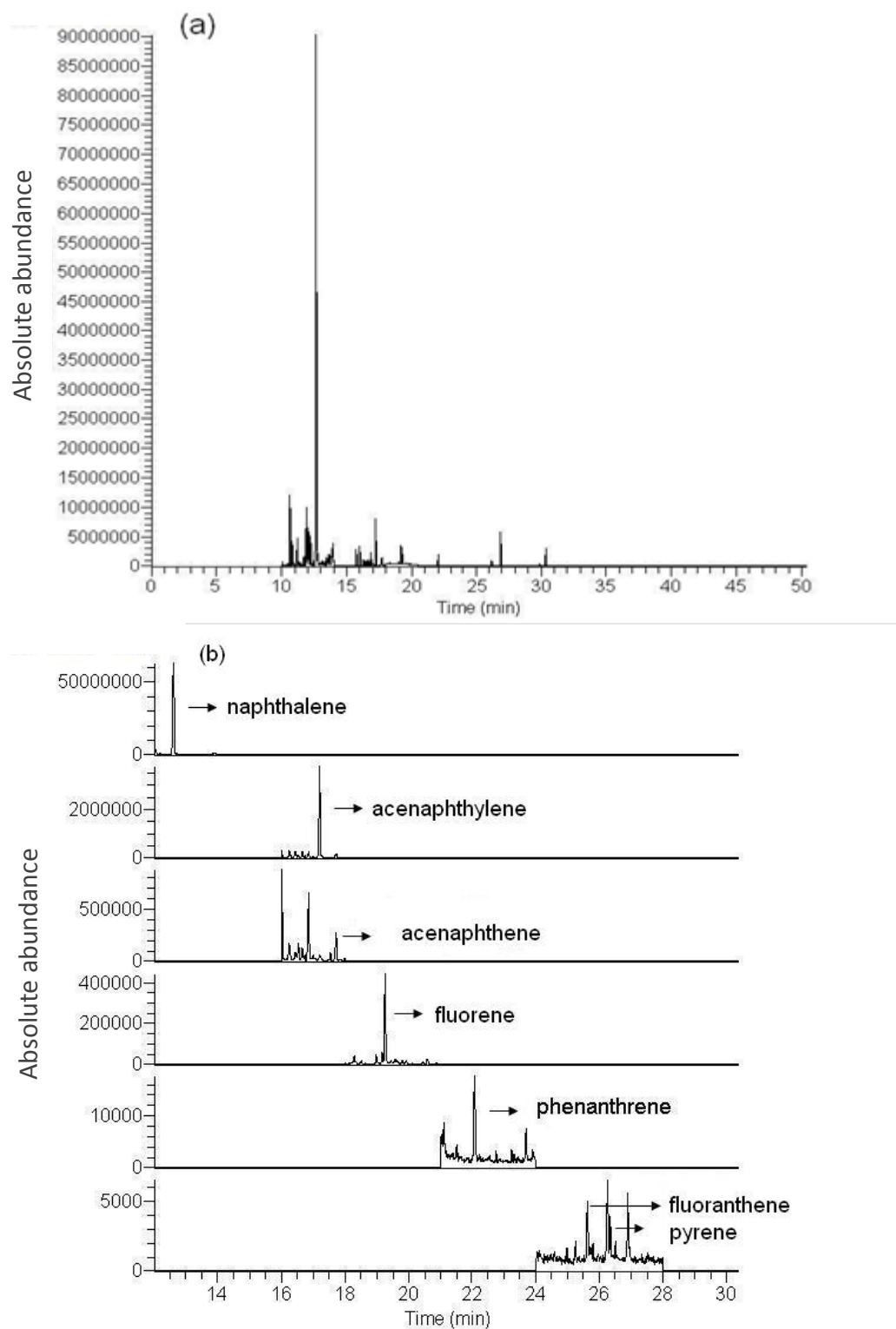


Figure S4. Four-stroke motorcycle exhaust sampled by XAD-2 in (a) TIC mode and (b) SIM mode for the seven target PAHs.

Appendix

The recovery of each target PAH and surrogate was calculated using the following equation:

$$R_s = \frac{A_s \times Q_{is}}{A_{is} \times \overline{RRF}_s \times Q_s} \times 100\%$$

where

A_s is the area of the primary quantitation ion for the target PAH or surrogate;

A_{is} is the area of the primary quantitation ion for the internal standard;

Q_s is the amount of the target PAH or surrogate, in ng;

Q_{is} is the amount of the internal standard, in ng; and

\overline{RRF}_s is the mean RRF for the target PAH.

The mean RRF for each unlabeled target PAH, surrogate standard, and internal standard is calculated as follows:

$$\overline{RRF} = \frac{1}{n} \sum_{i=1}^n (RRF)_i$$

where

$(RRF)_i$ is the RRF calculated for solution “ i ”, and

n is the number of data points derived from the reproducibility test.