

**Abstract** (provided by SMM)

Mesitylene reacts with molybdenum hexacarbonyl to give the yellow octahedral complex  $[1,3,5\text{-C}_6\text{H}_3(\text{CH}_3)]\text{Mo}(\text{CO})_3$  in low yield (26.3%). The infrared spectrum of  $[1,3,5\text{-C}_6\text{H}_3(\text{CH}_3)]\text{Mo}(\text{CO})_3$  shows symmetric C=O stretching at  $1946\text{ cm}^{-1}$  with intensity of 0.674 and asymmetric stretching at  $1879\text{ cm}^{-1}$  with intensity of 0.689. Based on the intensities of the two carbonyl peaks, the calculated C-Mo-C bond angle is  $76^\circ$ .

(where red is what you did, green is what you got, and blue is what you think based on the results)