

Appendix V : Product Yields Obtained in  
Olefin Containing 1/3 CO/H<sub>2</sub> Feed.

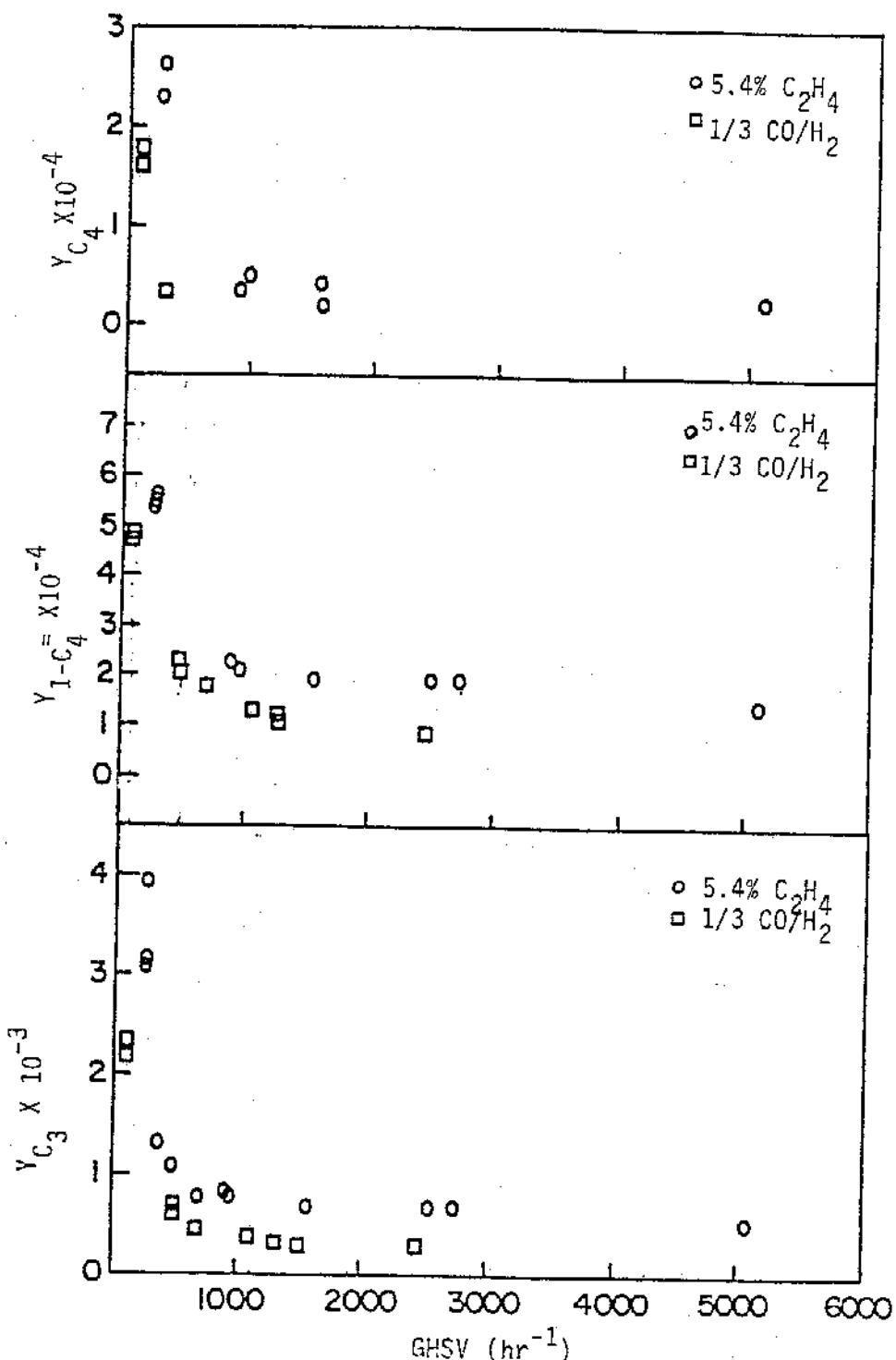


Figure V-1 Propane(bottom), 1-butene(middle), and n-butane (top) product yields for the Fe catalyst using the ethylene containing and pure 1/3  $CO/H_2$  feed at 7.8 atm. and 250 C.

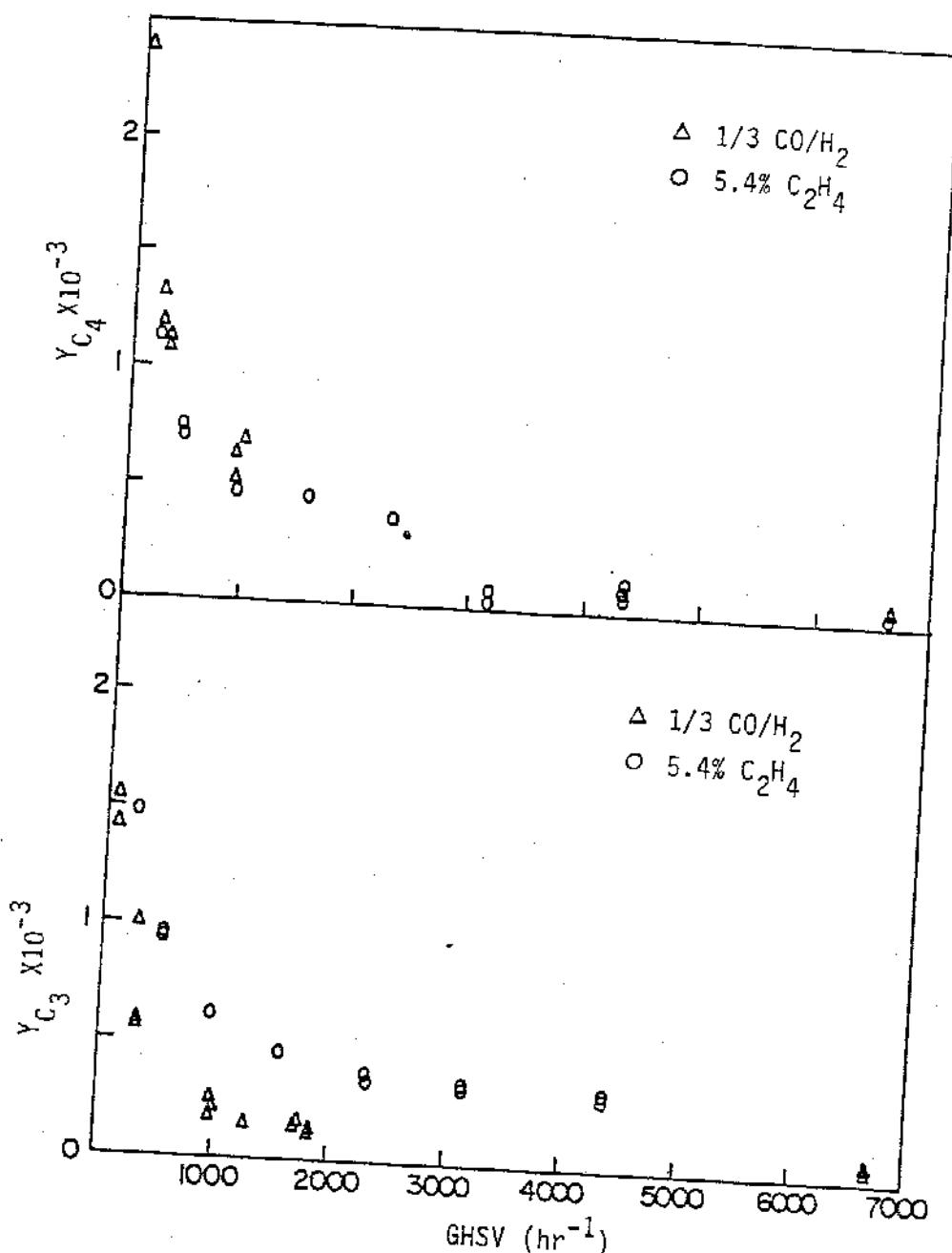


Figure V-2 Propane(bottom) and n-butane(top) product yields for the FeCo catalyst using the ethylene containing and pure  $1/3 \text{ CO}/\text{H}_2$  feed at 7.8 atm. and 250 °C.

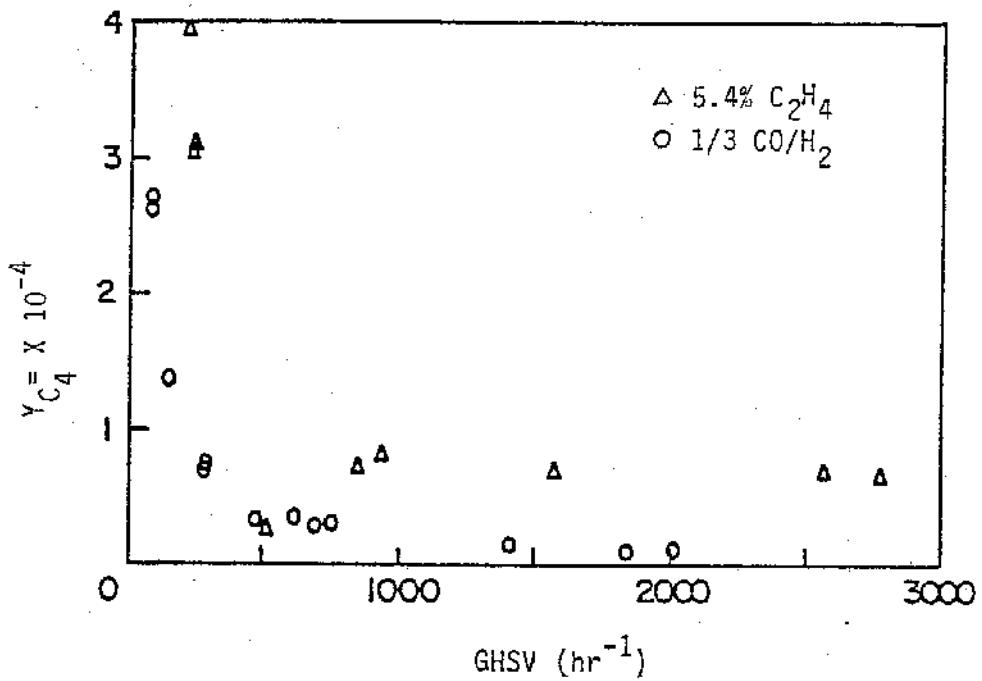


Figure V-3 1-Butene product yield for the FeCo catalyst using the ethylene containing and pure 1/3  $CO/H_2$  feed at 7.8 atm. and 250 °C.

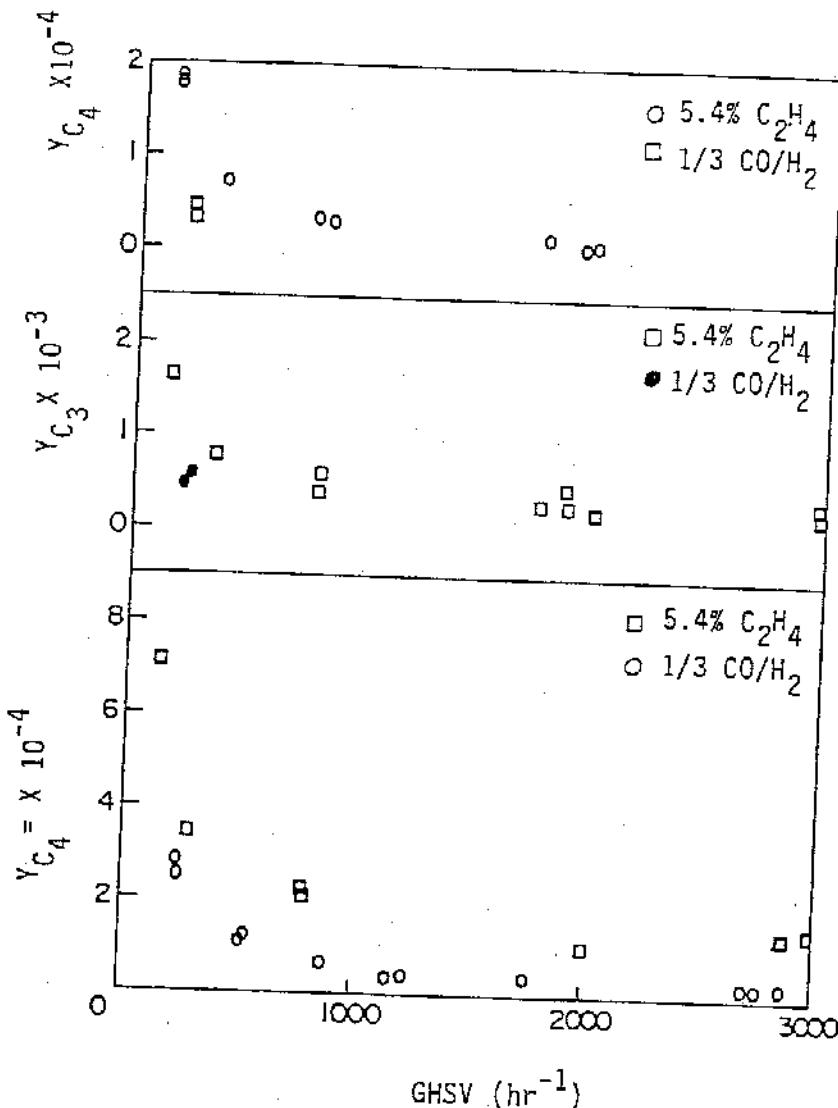


Figure V-4 1-Butene (bottom), propane (middle), and n-butane (top) product yields for the Co catalyst using the ethylene containing and pure 1/3 CO/H<sub>2</sub> feeds at 7.8 atm. and 250 °C.

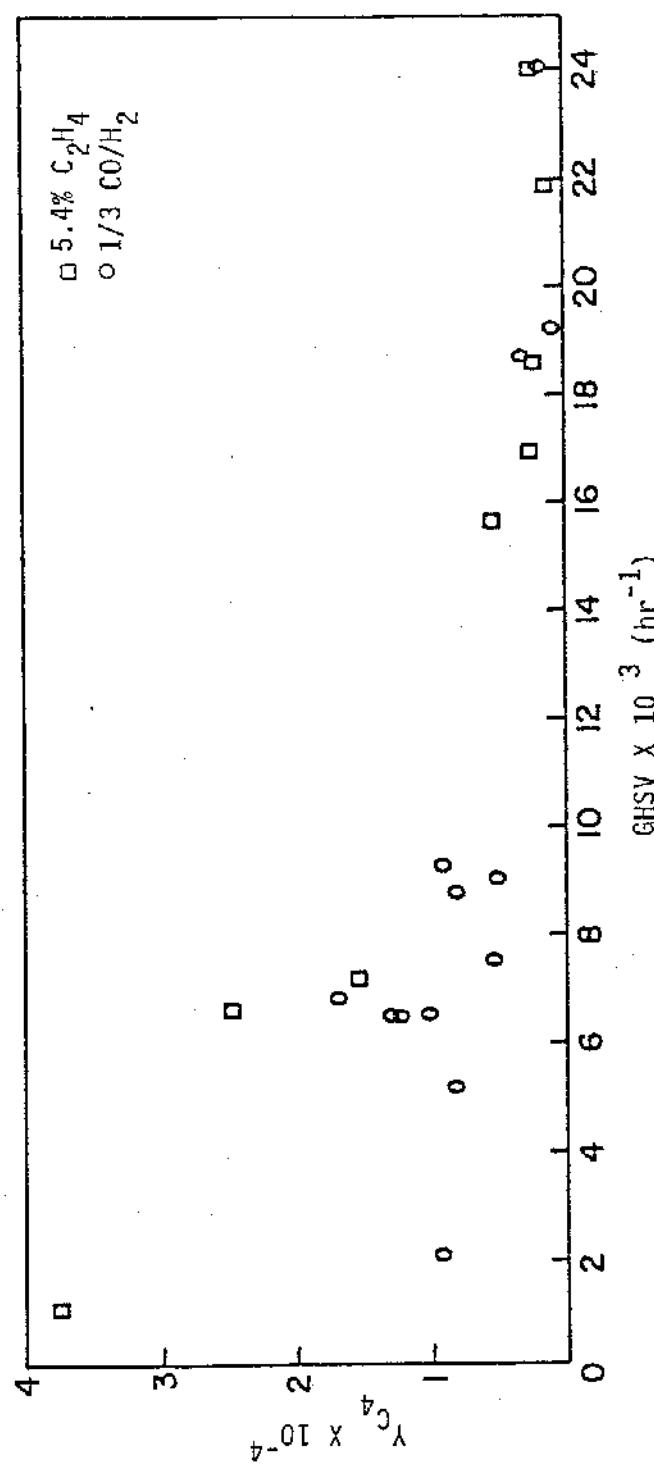


Figure V-5 n-Butane product yield for the Co catalyst at 1 atm. and 250°C using the ethylene containing and pure 1/3 CO/H<sub>2</sub> feed.

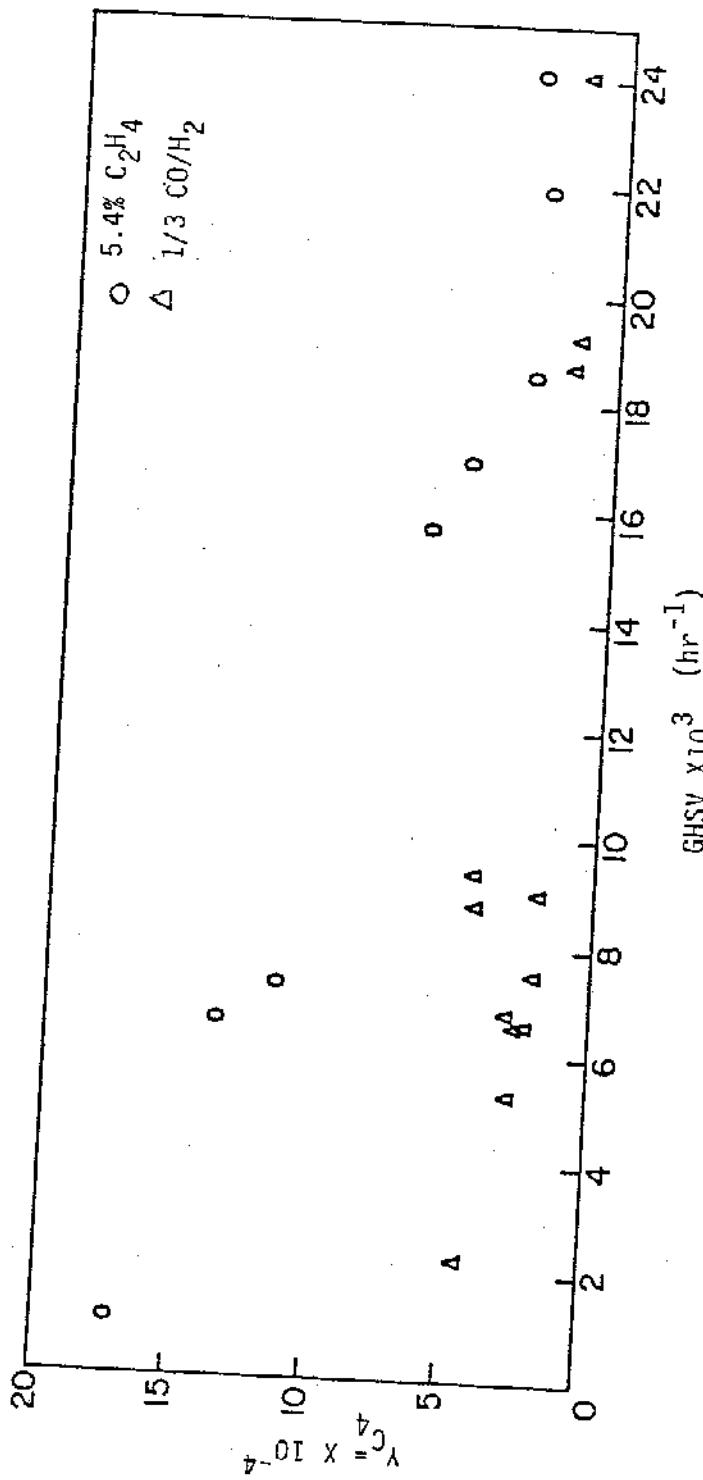


Figure V-6 1-Butene product yield for the Co-catalyst at 1 atm. and 250°C using the ethylene containing and pure 1/3  $\text{CO}/\text{H}_2$  feed.

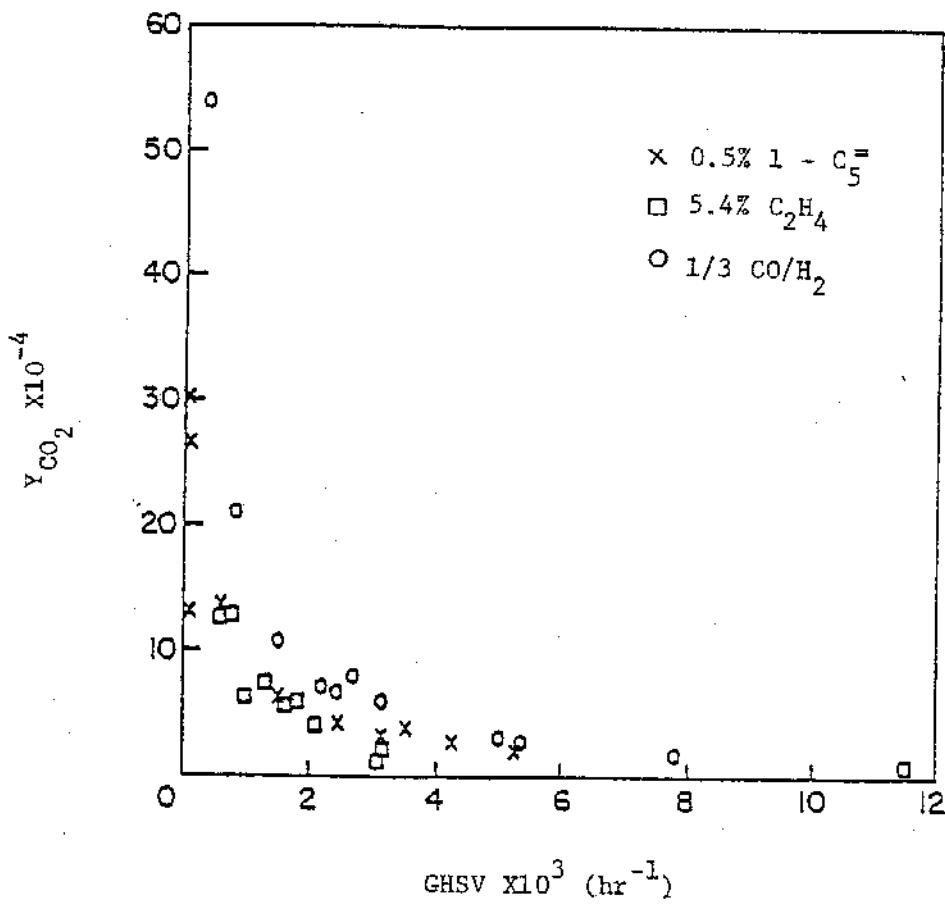


Figure V-7  $\text{CO}_2$  Product Yield versus the GHSV for the Fe Catalyst Using the Olefin Enhanced and Pure 1/3 CO/H<sub>2</sub> Feeds at 7.8 atm. and 250°C

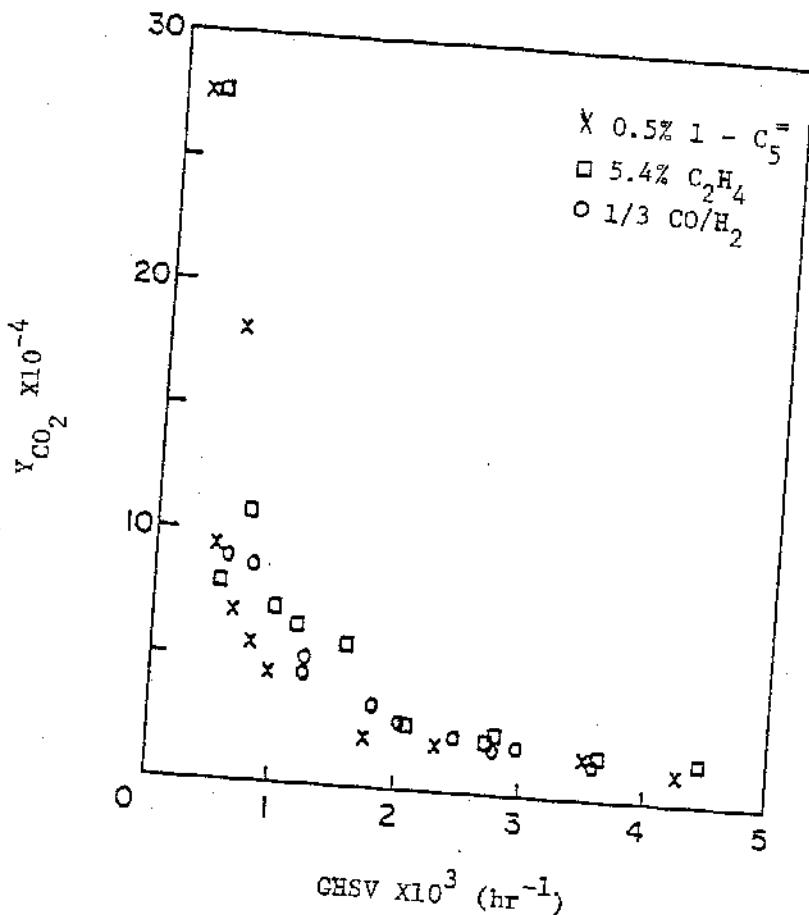


Figure V-3  $\text{CO}_2$  Product Yield versus the GHSV for the Fe Catalyst Using the Olefin Enhanced and Pure 1/3 CO/H<sub>2</sub> Feeds at 1 atm. and 250°C

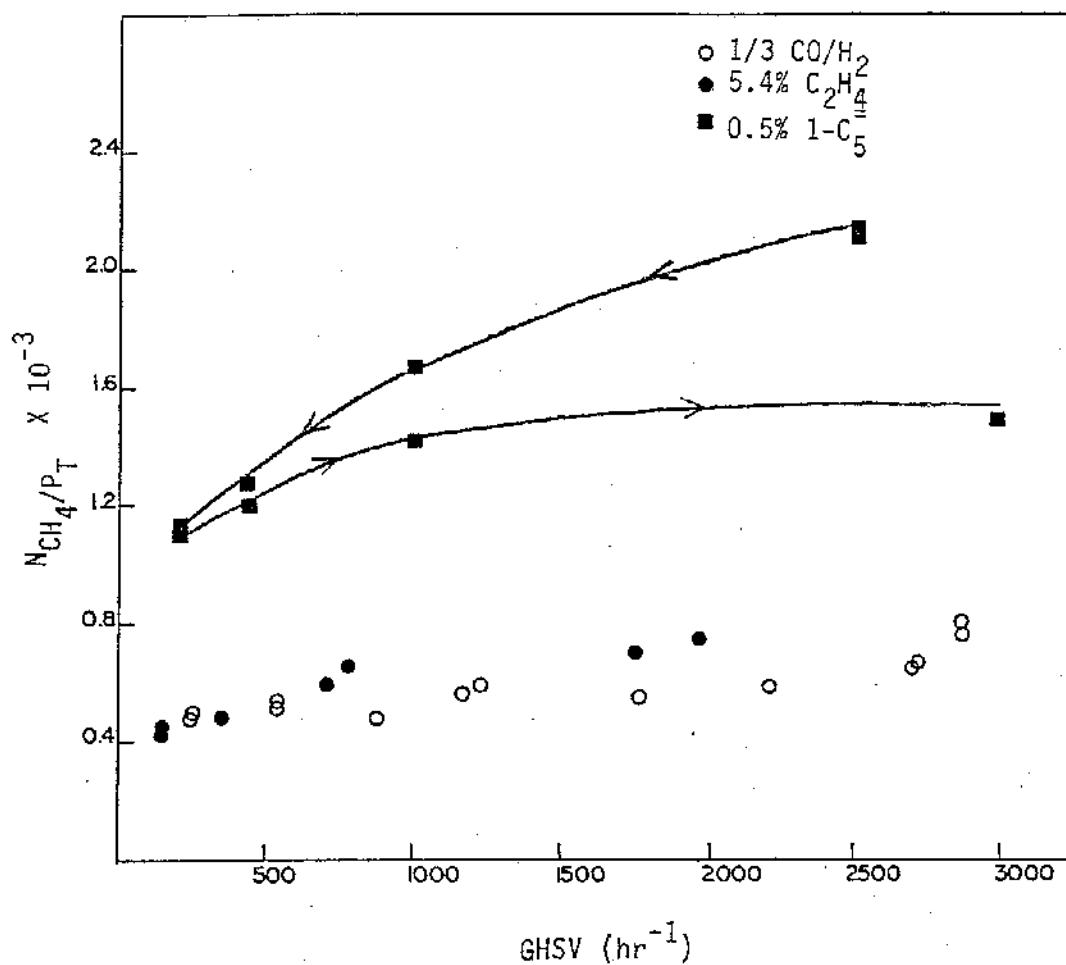


Figure VI-1  $N_{CH_4}$  versus the GHSV for the Co catalyst at 7.8 atm and 250°C for all three feed mixtures.

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