

# High-Temperature Cracking of Pentene to Ethylene and Propylene over H-ZSM-5 Zeolites: Effect of Reaction Conditions and Mechanistic Insights

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**Table S1.** Product yields from pentene cracking over quartz sand under various temperatures

Reaction Temperature (°C)	methane (wt%)	ethane (wt%)	ethylene (wt%)	Propylene (wt%)	butene (wt%)	hexene (wt%)	heptene (wt%)	total aromatics (wt%)
500	0.00	0.00	0.01	0.03	0.14	0.02	0.00	0.00
550	0.02	0.03	0.03	0.06	0.21	0.02	0.00	0.00
600	0.09	0.16	0.20	0.26	0.52	0.02	0.02	0.03
650	0.55	0.86	1.18	1.61	2.24	0.19	0.19	0.06
700	1.34	1.89	3.75	3.86	5.43	0.60	0.48	0.45
750	2.68	3.60	9.51	10.40	6.11	1.05	0.91	1.30