

Industrial Chemistry

Chemistry

The named processes, their conditions, and the compromise in each.

Conditions, and why they are chosen.

Process	Conditions	Compromise
Haber (NH_3)	450°C, 200 atm, Fe	Lower T gives more yield but is too slow
Contact (H_2SO_4)	450°C, 1–2 atm, V_2O_5	High pressure adds little; costs much
Cracking	Zeolite, 450°C	Produces alkenes for polymers
Chlor-alkali	Electrolysis of brine	Cl_2 , H_2 and NaOH together

In the Haber process the forward reaction is exothermic, so a low temperature favours yield — and the rate becomes uneconomic.