

449e Biological and Chemical Conversion of Soybean Oil to Polyols

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An advantage of using enzymes for producing polyols from soybean oil is the ability to selectively remove saturated fatty acids from the oil and to add oxygen functionality at locations other than the ester or unsat. moieties. Over a dozen new polyols derivatives have been synthesized using selective enzymes and using chemical conversions. Several of these derivatives have been demonstrated in urethane formulations--some having performances better than the petroleum-based controls. Product syntheses and urethane performances are reviewed.