

**Title** Oil extraction rates of soya bean using isopropyl alcohol as solvent  
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#### **Abstract**

The extraction rates of soya flakes and soya brokens were determined using azeotrope of isopropyl alcohol (IPA) at 4.15, 6.35, and 7.75 ml/min flow rates. Prior to the IPA extraction, soya flakes and soya brokens were hydrated to the optimum moisture content of 13.4% and 12.6% wet basis (wb), respectively. Oil recovery from soya flakes and soya brokens was increased up to 8.4% and 10.2% with increasing flow rates in 16 and 24 h, respectively. The maximum oil recovery in soya flakes was 95.6% of total oil compared to 79.1% in soya brokens at the highest flow rate. IPA resulted in about 1.5–4.7% higher oil recovery from soya flakes and about 4.8–13% higher oil recovery from soya brokens than *n*-hexane extraction. The IPA extraction rates were compared to *n*-hexane extraction and mathematical models were developed. The proposed modified model better predicted the extraction of oil from the soya flakes whereas the extraction of oil from the soya brokens was better fitted to the log model.