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(54) Title: BROAD MOLECULAR WEIGHT DISTRIBUTION POLYMER PRODUCT FROM LOOP REACTORS WITH INTERNATIONAL THERMAL GRADIENTS

(57) Abstract: A method for producing a polyolefin with a wide molecular weight distribution can comprise: polymerizing one or more monomers in the presence of a catalyst system in a loop reactor to produce a polyolefin product having a polydispersity index of 2.5 to 8, wherein the loop reactor comprises two or more reactors in series, and wherein the loop reactor has a loop thermal gradient of 50°C to 150°C and/or a standard deviation of inter-component thermal gradients along the loop reactor of 10°C to 50°C.



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